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HEALTH INSURANCE IN PRACTICE: FIFTEEN CASE STUDIES FROM DEVELOPING COUNTRIES

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ABSTRACT

As a companion piece to HFS Major Applied Research Report No. 3, this document details organizational and economic factors for 15 case studies of insurance programs in developing countries. It provides insight into the structure of the insurance schemes, their framework, how they work, what they cost, and the conditions under which they are effected.

The 15 approaches are grouped into five categories:

- Community-Based Risk Sharing/Rural Health Insurance (Zaire, Thailand, Guinea Bissau)
- Social Security Coverage Extension (Panama, Costa Rica, Ecuador, Mexico)
- National Insurance Systems (Korea, Chile, China)
- Limited Catastrophic Coverage (Philippines, Kenya)
- Pre-Payment Plans (Uruguay, Dominican Republic, Philippines)

Each case study addresses three objectives: 1) the scheme's organization and how it pertains to insurers, consumers, providers, and employers; 2) the scheme's economic considerations, such as cost control and moral hazard; and 3) a summary of each scheme's advantages and weaknesses, and its probability for use as an effective health insurance model for other developing countries.

TABLE OF CONTENTS

LIST OF EXHIBITS viii

FOREWORD xii

EXECUTIVE SUMMARY xiii

1.0 INTRODUCTION 15
- 1.1 OVERVIEW 15
- 1.2 OBJECTIVES AND RESEARCH QUESTIONS 15
- 1.3 ANALYTICAL FRAMEWORK 16
  - 1.3.1. Approach 1: Community-Based Risk Sharing in Rural Areas 16
  - 1.3.2. Approach 2: Social Security Coverage Extension . 17
  - 1.3.3. Approach 3: National Health Insurance Systems . 17
  - 1.3.4. Approach 4: Limited Catastrophic Coverage . . . 18
  - 1.3.5. Approach 5: Public-Private Sector Linkages Through Pre-Payment Plans 19
- 1.4 FORMAT 19
- 1.5 DATA SOURCES 20

2.0 APPROACH #1: COMMUNITY-BASED RISK SHARING RURAL HEALTH INSURANCE . 21
- 2.1 CASE STUDY #1: ZAIRE COMMUNITY HEALTH INSURANCE SCHEMES . . 21
  - 2.1.1. Institutional Description 21
  - 2.1.2. Enrollees and Employers 22
  - 2.1.3. Managerial Characteristics 23
  - 2.1.4. Relations With Providers 26
  - 2.1.5. Financing and Expenditures 26
  - 2.1.6. Utilization 27
  - 2.1.7. Synthesis and Topics for Further Research 29
    - 2.1.7.1. Coverage Extension 30
    - 2.1.7.2. Equity 31
    - 2.1.7.3. Program Efficiency 31
    - 2.1.7.4. Revenue Generation 32
    - 2.1.7.5. Further Research 32
- 2.2 CASE STUDY #2: THAILAND HEALTH CARD FUNDS 33
  - 2.2.1. Institutional Description 33
  - 2.2.2. Enrollees and Employers 34
  - 2.2.3. Managerial Characteristics 36
  - 2.2.4. Relations With Providers 38
  - 2.2.5. Financing and Expenditures 39
  - 2.2.6. Utilization 39
  - 2.2.7. Synthesis and Topics for Further Research 40
- 2.3 CASE STUDY #3: COMMUNITY HEALTH INSURANCE IN GUINEA BISSAU . 41
  - 2.3.1. Institutional Description 42
  - 2.3.2. Enrollees and Employers 43
  - 2.3.3. Managerial Characteristics 43

2.3.4. Relations With Providers 44
2.3.5. Financing and Expenditures 45
2.3.6. Utilization 46
2.3.7. Synthesis and Topics for Further Research 47

3.0 APPROACH #2: SOCIAL SECURITY COVERAGE EXTENSION 50
3.1 CASE STUDY #4: COVERAGE EXTENSION THROUGH INSTITUTIONAL REFORM: HEALTH MINISTRY - SOCIAL SECURITY INTEGRATION IN PANAMA 50
3.1.1. Institutional Description 52
3.1.1.1. Legal Framework 54
3.1.1.2. Institutional Relations 54
3.1.2. Population Coverage 55
3.1.2.1. Coverage Extension 55
3.1.2.2. Equity of Access 57
3.1.3. Managerial Characteristics 59
3.1.3.1. Organization of Regional Service Delivery . 59
3.1.3.2. Resource Allocation 60
3.1.3.3. Cost Control 60
3.1.4. Relations With Providers 61
3.1.5. Financing and Expenditures 62
3.1.6. Utilization 65
3.1.7. Synthesis and Topics for Future Research 67
3.2 CASE STUDY #5: HEALTH MINISTRY-SOCIAL SECURITY INTEGRATION: EXTENDING BENEFITS AND COVERAGE: THE CASE OF COSTA RICA . . . 68
3.2.1. Institutional Description 68
3.2.2. Enrollees and Employers 71
3.2.3. Managerial Characteristics 72
3.2.3.1. The Company Medicine Program (Medicina de Empresa) 73
3.2.3.2. The Mixed Medicine Program 73
3.2.3.3. The Capitation Program 74
3.2.3.4. Family and Community Medicine Program . . . 74
3.2.3.5. The Cooperative Clinics 75
3.2.4. Relations With Providers 76
3.2.5. Financing and Expenditures 77
3.2.6. Utilization 83
3.2.7. Synthesis: Further Research 84
3.3 CASE STUDY #6: COVERAGE EXTENSION IN RURAL AREAS THROUGH PEASANT SOCIAL SECURITY IN ECUADOR 86
3.3.1. Institutional Characteristics 87
3.3.1.1. Legal Framework 87
3.3.1.2. Institutional Linkages 88
3.3.2. Enrollees 88
3.3.3. Managerial Characteristics 91
3.3.4. Relations With Providers 93
3.3.5. Financing 93
3.3.6. Utilization 94
3.3.7. Synthesis and Further Research 96

3.4 CASE STUDY #7: RURAL SOCIAL SECURITY EXTENSION IN MEXICO-IMSS-COPLAMAR 98
3.4.1. Institutional Description 100
3.4.2. Enrollees 101
3.4.3. Managerial Characteristics 103
3.4.4. Relations With Providers 104
3.4.5. Financing and Expenditures 106
3.4.6. Utilization and Impact 107
3.4.7. Synthesis and Further Research 108

4.0 APPROACH #3: NATIONAL INSURANCE SYSTEMS (EMPLOYMENT-BASED WITH INTENTION OF NATIONAL COVERAGE) 112
4.1 CASE STUDY #8: HEALTH INSURANCE IN KOREA 112
4.1.1. Institutions 112
4.1.2. Enrollees and Employers 113
4.1.3. Management 116
4.1.3.1 Premiums, Benefits, and Equity 116
4.1.3.2. Costs 117
4.1.3.3. Cost Control 118
4.1.4. Relations With Providers 118
4.1.4.1. Open Provider Network 118
4.1.4.2. Provider Compensation 119
4.1.5. Financing 120
4.1.5.1. Revenue 120
4.1.5.2. Expenditures 121
4.1.6. Utilization 122
4.1.7. Conclusion 123
4.2 CASE STUDY #9: OVERVIEW OF HEALTH CARE FINANCING IN CHILE . 124
4.2.1. ISAPREs 124
4.2.1.1. Enrollees and Employers 125
4.2.1.2. Managerial Characteristics 129
4.2.1.3. Relations With Providers 130
4.2.1.4. Financing and Expenditures 131
4.2.1.5. Utilization 131
4.2.1.6. Synthesis: Further Research 131
4.2.2. FONASA: Institutional Description 133
4.2.2.1. Enrollees and Employers 134
4.2.2.2. Cost Control Measures and Relations With Providers 135
4.2.2.3. Financing and Expenditures 136
4.2.2.4. Utilization 137
4.2.2.5. Synthesis: Further Research 139
4.3 CASE STUDY #10: HEALTH INSURANCE IN CHINA 139
4.3.1. The Impact of Economic Reforms on Health Insurance 139
4.3.2. Institution 140
4.3.3. Membership 141
4.3.4. Benefits and Pattern of Delivery 144
4.3.5. Financing, Expenditures, and Cost Control 145
4.3.6. Utilization 150
4.3.7. Conclusion 150

5.0 APPROACH #4: LIMITED CATASTROPHIC COVERAGE 151
5.1 CASE STUDY #11: THE PHILIPPINE MEDICARE SYSTEM 151
5.1.1. Institution 151
5.1.1.1. Medicare Programs 1 and 2 151
5.1.2. Membership 151
5.1.3. Management 153
5.1.4. Relations With Providers 154
5.1.5. Financing and Expenditures 155
5.1.5.1. Revenue 155
5.1.5.2 Expenses 157
5.1.5.3. Financial Solvency 157
5.1.6. Utilization 157
5.1.7. Conclusion 162
5.2 CASE STUDY #12: KENYA - NATIONAL HOSPITAL INSURANCE FUND (NHIF) 163
5.2.1. Administration 164
5.2.2. Membership 164
5.2.3. Benefits 165
5.2.4. Financing 165
5.2.4.1. Revenue Collection 165
5.2.4.2. Expenditures 166
5.2.5. The Claims Process 167
5.2.5.1. Reimbursement 168
5.2.6. Conclusion 169

6.0 APPROACH #5: PRE-PAYMENT PLANS (GOVERNMENT/SOCIAL SECURITY LINKAGES TO PRIVATE PROVIDERS) 171
6.1 CASE STUDY #13: SOCIAL SECURITY - PRIVATE SECTOR LINKAGES IN URUGUAY - INSTITUCIONES DE ASISTENCIA MEDICA COLECTIVA (IAMC) 171
6.1.1. Institutional Description 171
6.1.1.1. Institutional Linkages and Legal Framework 172
6.1.1.2. Organizational Characteristics 174
6.1.2. Enrollees and Employers 175
6.1.2.1. Population Coverage 175
6.1.3. Managerial Characteristics 178
6.1.3.1. Benefits and Premiums 178
6.1.3.2. Cost Containment 179
6.1.4. Relations With Providers 180
6.1.5. Financing and Expenditures 181
6.1.5.1. Financing 181
6.1.5.2. Expenditures and Financial Equilibria . . . 181
6.1.6. Utilization 183
6.1.7. Synthesis and Topics for Further Research 183

6.2 CASE STUDY #14: HMO AS SOCIAL SECURITY SUBSTITUTE: PUBLIC - PRIVATE COLLABORATION IN THE DOMINICAN REPUBLIC - SEGURO MEDICO PARA MAESTROS 185
6.2.1. Institutional Description and Population Coverage 186
6.2.2. Managerial Characteristics 187
6.2.3. Relations With Providers 189
6.2.4. Synthesis and Topics for Further Research 191
6.3 CASE STUDY #15: PHILIPPINE MEDICARE-HMO TIE-UP 192
6.3.1. Institution 192
6.3.2. Membership 192
6.3.2.1. Eligibility and Participation 192
6.3.2.2. Marketing the Tie-Up 193
6.3.3. Management 194
6.3.3.1. Benefits 194
6.3.3.2. Cost-Control Measures 194
6.3.4. Relations With Providers 195
6.3.5. Financing and Expenditures 198
6.3.6. Utilization 199
6.3.7. Conclusion 199

APPENDIX A 200

BIBLIOGRAPHY 233

LIST OF EXHIBITS

EXHIBIT 1-1: Social Financing Case Study Matrix 18

EXHIBIT 1-2: Case Study Format 19

EXHIBIT 2-1: Bwamanda Health Insurance Plan Membership Rates 1986-1989 22

EXHIBIT 2-2: Distance and Insurance Membership 24

EXHIBIT 2-3: Financial Situation of Bwamanda Insurance Plan 1987-1989 . . 28

EXHIBIT 2-4: Bwamanda Insurance Plan: Per-Member Revenues and Expenses (Zaires) 29

EXHIBIT 2-5: Combined Financial Statement, 18 Village Insurance Plans, Guinea Bissau, 1988 46

EXHIBIT 3-1: Panama Model of Social Security - Health Ministry Integration 53

EXHIBIT 3-2: A Comparison of Coverage and Health Indicators in Partly Urbanized and Rural Districts: 1970 and 1980/86 56

EXHIBIT 3-3: Percent Distribution of Utilization of CSS Facilities by Uninsured Patients: Pre- and Post-Integration 57

EXHIBIT 3-4: Index of Stratified use of CSS Inpatient Services During Three Time Periods: Chiriqui and Central Provinces 58

EXHIBIT 3-5: CSS and MS Recurrent Expenses on Health Services in Integrated Regions, 1973-86 63

EXHIBIT 3-6: Revenues and Expenditures of CSS "Sickness and Maternity" Program, 1980-86 65

EXHIBIT 3-7: Azuero, Chiriqui, Veraguas: Per-Capita Physician Consultations According to Insurance Status During Three Time Periods 66

EXHIBIT 3-8: Government Institutions and Organizations Concerned with the Health Sector, Costa Rica, 1984 69

EXHIBIT 3-9: Indicators of the Coverage of the Costa Rican Social Security Fund and Cost Per Person Covered, Costa Rica, 1970-1990 71

EXHIBIT 3-10: Distribution of CCSS Health Personnel by Region 72

EXHIBIT 3-11: Distribution of Social Security Contributions 77

EXHIBIT 3-12: CCSS Illness and Maternity Program Expenditures and its Relationship to the GNP 78

EXHIBIT 3-13: Financing Revenues by Source (Percentages), Costa Rica, 1975-1986 79

EXHIBIT 3-14: Distribution of CCSS Expenditures, Costa Rica, 1981-1986 80

EXHIBIT 3-15: Cost of Outpatient Services in CCSS Hospitals and Clinics by Type of Facility, Costa Rica, 1986 81

EXHIBIT 3-16: Hospitalization Costs, CCSS, Costa Rica, 1986 82

EXHIBIT 3-17: Distribution of Hospital Expenditures (Percentages), Costa Rica, 1986 83

EXHIBIT 3-18: SSC Coverage: Selected Years 89

EXHIBIT 3-19: No. of SSC Dispensaries and Ratio to Community Organizations and Affiliates by Region, 1989 90

EXHIBIT 3-20: SSC Coverage of Rural Population by Region, Descriptive Statistics, 1986 91

EXHIBIT 3-21: SSC: Personnel by Category, 1989 93

EXHIBIT 3-22: A Comparison of Cost, Productivity, and Quality Measures, SSC and MSP Primary Health Services, 1985 94

EXHIBIT 3-23: Estimates of SSC Coverage by Type of Service, 1989 95

EXHIBIT 3-24: Number of IMSS-COPLAMAR Clinics and Hospitals, Selected Years 101

EXHIBIT 3-25: IMSS-COPLAMAR: Indicators of Population Coverage, Selected Years 102

EXHIBIT 3-26: IMSS-COPLAMAR: Rural Clinic Personnel by Category, 1986 105

EXHIBIT 3-27: A Comparison of Per-Capita Health Care Costs for Selected Public and Social Security Providers, 1987 . . . 107

EXHIBIT 3-28: Comparison of Health Care Coverage, Resources, and Expenditures, Selected Public and Social Security Providers, 1987-88 108

EXHIBIT 3-29: Utilization of Selected Services, 1981-86 109

EXHIBIT 3-30: Incidence of Selected Infectious Diseases, 1983-88 110

EXHIBIT 4-1: Medical Insurance Coverage in Korea 115

EXHIBIT 4-2: Claim Review Activities, 1987 120

EXHIBIT 4-3: Estimate of National Health Expenditures 122

EXHIBIT 4-4: ISAPRE Enrollment, 1981-90 127

EXHIBIT 4-5: ISAPRE Enrollment by Organizational Type, 1991 128

EXHIBIT 4-6: ISAPRE Revenues and Expenditures, 1990 132

EXHIBIT 4-7: Subsidy Levels for Medical Examinations 137

EXHIBIT 4-8: Care Given by FONASA and ISAPRE Providers, 1985-89 138

EXHIBIT 4-9: Membership and Expenditure 143

EXHIBIT 4-10: Estimated Health Sector Expenditures 149

EXHIBIT 4-11: Health Expenditure Ratios 149

EXHIBIT 5-1: Medicare Program Coverage 152

EXHIBIT 5-2: Schedule of Benefits for Medicare Clients 153

EXHIBIT 5-3: Source of Funds for Health Care Expenditures, 1985 156

EXHIBIT 5-4: Financial Performance: Medicare, SSS, GSIS 159

EXHIBIT 5-5: Beneficiaries Served and Utilization Rates 161

EXHIBIT 5-6: Company-Financed Health-Related Benefits in Collective Bargaining Agreements, 1985 162

EXHIBIT 5-7: Comparison of NHIF Claims by Hospital Category, FY 1985 and 1988 168

EXHIBIT 5-8: National Hospital Insurance Fund Proposed Reimbursement Schedule 170

EXHIBIT 6-1: Estimates of Health Coverage by Source of Finance and Provider, 1987 176

EXHIBIT 6-2: Distribution of Institutional Coverage of Population by Household Income, 1982 178

EXHIBIT 6-3: Distribution of Total Health Care Expenditures by Subsector, 1985 182

EXHIBIT 6-4: SEMMA Financing and Service Delivery Structure 187

EXHIBIT 6-5: Premiums and Benefits for Selected IGUALAS, 1990 188

EXHIBIT 6-6: Philippine Medicare HMO Tie-Up and Regular Medicare Benefits 196

FOREWORD

This Small Applied Research Paper is a companion document to Major Applied Research Report No. 3, *Extending Coverage and Benefits of Social Financing Systems in Developing Countries* (March 1993). Report No. 3 discusses concepts of the social financing of health services and the history of health insurance in the U.S. It also gives an overview of health insurance institutions, and addresses issues such as cost containment and insurance mechanisms.

This document details organizational and economic factors for 15 case studies of developing countries that seek to extend health insurance coverage among their populations.

The Health Financing and Sustainability (HFS) Project provides technical assistance and conducts applied research, training, and information dissemination to developing countries in health economics, health sector policy development, and health services management. The Applied Research (AR) component of the project provides opportunities to increase knowledge of the complex issues underlying health financing problems, and augments the supply of qualified individuals who can contribute to policy analysis and reform. HFS is emphasizing the following policy areas for applied research activities: cost recovery, productive efficiency, social financing, and private sector development in the health sector.

As part of the project's AR component, HFS will complete up to 30 small applied research (SAR) activities over the life of the project, from 1989 through 1994. These include studies undertaken by developing country researchers, HFS researchers, or academics at universities in the United States. The objectives of the SAR program are to carry out practically oriented research in developing countries, and to encourage the development of local capacities to undertake research.

Most SAR activities are initiated through proposals to the HFS Project. The proposals are evaluated by HFS staff, including criteria such as: practical policy orientation, resource and time requirements, and appropriateness to the HFS research agenda. Most proposals for SAR activities accepted by HFS undergo several revisions, as the researchers refine their research objectives, hypotheses, and methodologies, based on suggestions and comments from the HFS staff. Once approved, SAR activities are overseen by HFS task managers who work closely with principal investigators to monitor the timeliness and quality of the work, and facilitate logistics.

Other small applied research studies are done in conjunction with technical assistance or major applied research activities of the HFS Project. In these cases, the SAR contributes to the technical guidance provided to clients, or adds to the body of knowledge on topics of health financing and economics.

As with all HFS research, drafts of small applied research reports are reviewed by HFS staff. Drafts are then evaluated by external technical reviewers selected on the basis of area of substantive and/or geographic expertise.

Holly Wong
Applied Research Coordinator

EXECUTIVE SUMMARY

By exploring 15 case studies of health insurance programs, this research paper a companion document to Major Applied Research Report No. 3, *Extending Coverage and Benefits of Social Financing Systems in Developing Countries*, examines institutional and economic factors in a variety of approaches to extend health insurance coverage in developing countries. The information gathered in this document provides insight into how to structure health financing mechanisms in like situations worldwide.

The 15 approaches, which address 14 countries, are grouped into five categories:

- Community-Based Risk Sharing/Rural Health Insurance (Zaire, Thailand, Guinea Bissau)
- Social Security Coverage Extension (Panama, Costa Rica, Ecuador, Mexico)
- National Insurance Systems (Korea, Chile, China)
- Limited Catastrophic Coverage (Philippines, Kenya)
- Pre-Payment Plans (Uruguay, Dominican Republic, Philippines)

Each case study seeks to address three objectives. First, the organizational features of each scheme are examined to determine how they pertain to insurers, consumers, providers, and employers. This discussion includes details on risk sharing, utilization, financing, expenditures, and other factors. Second, each insurance scheme is analyzed from the perspective of economic considerations, such as the identification and performance of cost-control measures, moral hazard issues, and the challenges of adverse selection. Third, each case study uses information from the two analyses previously discussed to summarize its individual advantages and weaknesses, as well as its probability for being used as a national insurance model in other developing countries or low-income groups.

The insurance schemes presented here are quite varied. They range from the highly experimental, such as the effort to link social and private insurance in the Philippines, to an evolving system of social financing to support health care in Kenya.

By following similar formats, these case studies analyze key variables and invite many comparisons while highlighting obvious differences. Generally, the studies begin with a description of the program's organization, legal scope, and institutional linkages, then explore numerous variables such as premia, quality control, and equity, and conclude with a summary and suggested issues for further study. Some cases, such as that of Chile, are presented with a detailed account of more than one scheme.

Together with HFS Major Applied Research Report No. 3 (March 1993), *Extending Coverage and Benefits of Social Financing Systems in Developing Countries Phase I, Review of Concepts and Literature and Preliminary Field Work Design*, by Gerard M. La Forgia, Charles C. Griffin, and Randall R. Bovbjerg, this small applied research paper provides an in-depth study of insurance schemes in developing countries, their framework, how they work, what they cost, and the conditions under which they are effected.

1.0 INTRODUCTION

1.1 OVERVIEW

This volume consists of 15 case studies that examine the institutional, and to a lesser extent, the economic characteristics of health insurance in developing countries. The case studies focus on coverage extension efforts through health insurance. It is important to note that the case studies do not constitute an exhaustive inventory of all social financing mechanisms currently in existence in developing countries; rather, they examine a cross-section of approaches to extend health insurance coverage.

Through synthesizing empirical evidence available from developing countries on economic and institutional issues related to health insurance, the case studies complement the general discussion presented in Major Applied Research Report No. 3. By analyzing the key descriptive variables related to the what, who, how, how much, and under what conditions of health insurance schemes in developing countries, the case studies provide important lessons, practical advice, and, perhaps, potential solutions for policymakers in their search for alternative health financing mechanisms.

1.2 OBJECTIVES AND RESEARCH QUESTIONS

The objectives for each case study are three-fold; each corresponds to a set of research questions.

OBJECTIVE 1: Describe the institutional and organizational features of insurance schemes that seek to extend insurance coverage to low-income groups and/or cover a broader range of health problems. Examine these characteristics as they pertain to four sets of actors: insurers, consumers, providers, and employers.

> Research Questions: How is the scheme organized? How is it linked to government, semi-public entities, the private sector? To benefits, cost control measures, and premia? How are risks shared: sick-healthy, rich-poor, urban-rural, formal sector-informal sector? Does the scheme have any equity or efficiency objectives? What services are covered? What is the population coverage? What are demographic, socioeconomic, and labor force characteristics of its members relative to the non-member population? What are the characteristics of enrolled firms? What are the provider payment arrangements? How is the scheme financed? Does it receive a government subsidy? What are its expenditures (benefits, administrative costs, other)? What is the scheme's utilization by service, provider type, and membership group? How do utilization rates of members compare to non-members? What are the general socio-economic and institutional conditions that affect the emergence or feasibility of a particular scheme?

OBJECTIVE 2: Analyze the institutional mechanisms constructed by a variety of insurance schemes to deal with economic problems inherent in health insurance. These problems include: adverse selection, moral hazard, cost escalation, catastrophic coverage, loading costs. and equity issues.

Research Questions: How have insurance systems handled the problem of adverse selection, or how have they suffered by not adequately addressing it? How have insurance plans controlled unnecessary use of public and private sector providers? How have they attempted to control prices and expenditures of public and private sector providers? What cost-control measures appear to perform best? Under what conditions? How have systems covered or failed to cover catastrophic care, and how has this problem manifested itself? What compromises between pure catastrophic coverage (inpatient care) and clinical services have been made? What approaches have been used to reduce loading costs, especially the administrative costs of extending coverage to informal sector, rural workers, and their families? How have changes in social financing policies affected equity both within insurance systems and between those who are covered and not covered?

OBJECTIVE 3: Based on the analysis derived from (1) and (2), specify the determinants of success for insurance schemes in developing countries. Identify the advantages and disadvantages of a particular scheme. Recommend specific policy issues and topics for further study.

Research Questions: What is innovative about the scheme? What are its principal strengths and weaknesses in terms of institutional characteristics and in dealing with the economic problems of insurance? Can the scheme serve as an insurance extension model for other low-income population groups, regions, or countries? If so, under what conditions?

1.3 ANALYTICAL FRAMEWORK

The 15 case studies are divided into five categorical approaches to social financing in developing countries. Exhibit 1-1 presents a breakdown of the case studies by general approach, distinguishing feature, title, and country. Although some overlap occurs, for analytical purposes the schemes within each category (or approach) share a number of institutional features. In other words, in terms of the descriptive variables under study here, considerably less variance exists for the schemes within than among the categories. The classification is not an attempt at developing a typology of insurance mechanisms evident in developing countries. Given that data on economic and financial characteristics of the schemes (and their affiliates) are often incomplete, such an effort would be premature. A general description of each approach follows.

1.3.1. Approach 1: Community-Based Risk Sharing in Rural Areas

These case studies examine three rural health insurance mechanisms: health zones in Zaire, health card funds in Thailand, and village health insurance in Guinea Bissau. These experiences share a number of characteristics. Funded through individual or family contributions, they are pre-payment mechanisms that aim to finance primary level services, the provision of essential drugs, and some secondary-level care (in Zaire) to subscribers who reside in rural areas. All schemes are linked to and often organized by government providers. However, in Guinea Bissau and Thailand, village health committees manage the schemes, collecting premia and paying providers.

1.3.2. Approach 2: Social Security Coverage Extension

Four case studies explore the extension of social security health benefits to lower-income population groups that do not directly contribute to (and thus are unaffiliated with) the regular social security systems.[1] The four cases are drawn from Latin America, but represent two distinct coverage extension models: (1) institutional reform: integration of social security and health ministry health service system in Panama and Costa Rica, and (2) extension through creation of a separate and less generous health service system in rural areas: Ecuador and Mexico. All extension efforts are based on the principle of social solidarity,[2] but government financial participation can be considerable.

1.3.3. Approach 3: National Health Insurance Systems

Some governments have attempted to organize, restructure, and at times, dismantle and reassemble the various institutions that constitute the health sector. Although the result of diverse social policies, the principal aim of restructuring has been to reduce or at least reorient the role of government in the financing and provision of health services. Three case studies examine the emerging mosaic of insurance schemes in Korea, Chile, and China. Although difficult to compare, these insurance systems share some features. Many of the schemes in the emerging system tend to be employment-based, and taken together, their ultimate goal is universal coverage. Moreover, each country has or seeks close links to the private sector. Korea is reorganizing the previous free-market approach to guarantee greater access and equity. Chile is promoting private health insurance schemes to reduce government subsidies and provision. China seeks to shift responsibility for the financing and provision of health care to individuals, private and collective enterprises, and providers.

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[1] The case studies do not include an examination of regular social insurance systems prevalent throughout Latin America, and to a lesser extent, in Asia. As noted earlier, the overall focus on the review of experience is on coverage extension. With few exceptions, social security regimens have a poor record of coverage extension beyond salaried workers in urban areas. Moreover, Security-based health care has been reviewed by Mesa-Lago (1989, 1985); McGreevey (1990); Ron et al. (1990); and Zschock (1983).

[2] See Chapter 3 of Research Report No. 3 for a definition of the social solidarity concept.

EXHIBIT 1-1
SOCIAL FINANCING CASE STUDY MATRIX

APPROACH	DISTINGUISHING FEATURE	SCHEME	COUNTRY
(1) COMMUNITY-BASED RISK SHARING/RURAL HEALTH INSURANCE	Facility/sub-regional-based	▲ Health Zones	Zaire
	Village-based	▲ Health Card Funds	Thailand
	Village-based	▲ Village Health Insurance	Guinea Bissau
(2) SOCIAL SECURITY COVERAGE EXTENSION	Institutional reform	▲ Integration of SS/MOH ▲ Integration of SS/MOH	Panama Costa Rica
	Rural Coverage Extension	▲ Peasant Social Security ▲ IMSS-COPLAMAR	Ecuador Mexico
(3) NATIONAL INSURANCE SYSTEMS (employment-based but with intention of national coverage)	Organizing and Rationalizing the System	▲ Multiple Insurance Systems: (employees, civil servants and teachers, occupational self-employed, regional self-employed)	Korea
	Privatization	▲ ISAPRE - FONASA	Chile
	Evolving Public-Private Mix	▲ Employee, Labor, Collective, Rural, Private	China
(4) LIMITED CATASTROPHIC COVERAGE	Mandate to extend coverage and benefits	▲ Medicare	Philippines
		▲ National Hospital Insurance Fund	Kenya
(5) PRE-PAYMENT PLANS (Government/social security linkages to private providers)	Strong government-private linkages	▲ IAMC	Uruguay
	Social Security Substitute	▲ Teachers HMO (SEMMA)	Dominican Republic
	Experimental	▲ Medicare-HMO Tie-up	Philippines

1.3.4. Approach 4: Limited Catastrophic Coverage

As discussed in Report No. 3, in theory, health insurance is best applied to protect individuals against largely uncertain or unpredictable events in which the cost of treatment is high. However, many insurance schemes cover both predictable events with relatively low costs (e.g., medical consultations) and costly unpredictable events (e.g., long-term hospitalization). Two schemes,

examined in this subsection, are the exceptions: Medicare System of the Philippines and the National Hospital Insurance Fund of Kenya. These schemes provide coverage for inpatient care only. Both seek to extend population coverage and benefit levels.

1.3.5. Approach 5: Public-Private Sector Linkages Through Pre-Payment Plans

The final set of case studies examines insurance schemes that link private sector provision with government and social insurance financing. Each of the schemes examined involves the use of private Health Maintenance Organizations (HMOs) to provide care, and to some extent, share the financial risk of this provision. Two of the schemes are relatively recent innovations: the Medicare-HMO tie-up in the Philippines, and Teachers' Health Insurance in the Dominican Republic. The remaining design, Medical Care Collectives in Uruguay, date to the mid-1800s.

1.4 FORMAT

Depending on the availability of information, each case study follows a similar format consisting of seven sections. Each section addresses one or more research question. Exhibit 1-2 displays the format of each case by section title and topics. Again, it is important to note that not all case studies follow this format consistently. The authors have attempted to summarize and build upon previous efforts, bringing together data from often diverse and not readily available sources. Often, information on one or more features of a particular scheme was unavailable. Annex Exhibit A-1 summarizes and compares key descriptive variables of all schemes analyzed in the case studies. (Some case studies discuss more than one scheme.)

EXHIBIT 1-2
CASE STUDY FORMAT

SECTION NO.	SECTION TITLE	TOPICS COVERED
1.0	INSTITUTIONAL DESCRIPTION	General organization description, legal framework, inter-institutional linkages.
2.0	ENROLLEES AND EMPLOYERS	Coverage, equity of coverage, characteristics of enrollees and firms.
3.0	MANAGERIAL CHARACTERISTICS	Benefits, premia, cost containment measures.
4.0	RELATIONS WITH PROVIDERS	Provider linkages and payment systems, quality control.
5.0	FINANCING AND EXPENDITURES	Revenues, expenditures, copayments, administrative costs, financial equilibria.
6.0	UTILIZATION	Evidence of moral hazard and adverse selection, utilization of members vs. non-members, utilization control measures.
7.0	SYNTHESIS AND FURTHER RESEARCH	Overall strengths and weakness, lessons learned, policy issues.

1.5 DATA SOURCES

The content of the case studies relies predominately on secondary sources supplemented by data published in statistical and financial reports related to a particular scheme, social security system, or country health insurance system. Although no field work was conducted for the purposes of this study, some authors had conducted previous research on health insurance in several countries under study here and were able to draw on primary data sources (Ecuador, Chile, Dominican Republic, Panama, Costa Rica, and Zaire). In other countries, in addition to published accounts, authors benefitted from unpublished materials supplied by researchers familiar with the schemes (Thailand, Korea, China, Kenya, Philippines, Uruguay, and Mexico).

2.0 APPROACH #1: COMMUNITY-BASED RISK SHARING RURAL HEALTH INSURANCE

2.1 CASE STUDY #1: ZAIRE COMMUNITY HEALTH INSURANCE SCHEMES

Zaire's health care relies on a decentralized system of 306 health zones, each comprised of a secondary hospital and primary health centers serving a population of about 100,000. The health zones receive minimal financial support from the Department of Public Health; instead, most rely heavily on user fees, community financing, and donor contributions to finance health services. In a few cases, health zone managers have introduced community-based health insurance schemes to promote risk-sharing and increase the total amount of resources available to the health sector. This case study summarizes the experience with health insurance in two rural health zones: Bwamanda and Bokoro.[3]

2.1.1. Institutional Description

The Bwamanda Health Zone is located in the Equateur Region of Zaire. In 1989, the population was estimated at about 135,000. A 156-bed hospital and 22 health centers/posts provide health services. There are no recognized private providers of modern services in this primarily rural area.

One distinguishing factor about the Bwamanda Health Zone is its links to a Belgian-supported development project: the Center for Integrated Development (CDI). The management capacity, technical, and financial assistance provided by the CDI since 1969 allows for more sophisticated financial and administrative systems than may be feasible elsewhere. Community outreach is also made easier by the multiple channels of communication established by the project for its agriculture, nutrition, and infrastructure development components, as well as health.

The objectives of the health insurance program, started in 1986, are two-fold: to increase access to health care and to improve the hospital's financial situation. Medical staff felt that high fees were a barrier preventing some people from seeking care. At the same time, user fee revenues were insufficient to pay the hospital's operating costs, forcing Bwamanda Hospital to rely on donor subsidies which would not be sustainable in the long run.

Like Bwamanda, the Bokoro Health Zone is primarily rural, located in the Bandundu region of Zaire, north of Kinshasa. In 1988, the population of Bokoro was estimated to be 110,000. A 78-bed reference hospital serves the area, together with a network of primary care facilities.

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[3] The information in this section draws heavily from research by Shepard, Vian and Kleinau (World Bank PRE Working Paper S489, 1990) and Moens (1988). The report by Shepard, et al. contains information on six additional community health insurance plans as well as data about traditional savings associations which offer loans for health needs. This report focuses only on Bwamanda and Bokoro because data are most extensive for these zones.

In contrast to Bwamanda, a significant organizational characteristic of Bokoro is the existence of an active private health sector with many competitors, especially for ambulatory care. Bokoro's health insurance system dates from 1985 and was started for many of the same reasons as Bwamanda: to increase financial access to services, reduce the severe financial burden on families caused by a patient referral to the hospital, and increase revenues available to finance health services.

The health insurance programs in Bwamanda and Bokoro do not have any legal status, nor are there official regulations governing their operation. In fact, the Government of Zaire has yet to officially recognize the existence of the health zones themselves as administrative entities.[4] The insurance programs have institutional links to government in that they are offered through the government-sponsored public health care system, although the financing is derived from non-government sources.

2.1.2. Enrollees and Employers

The Bwamanda Health Insurance Plan enrolled over 81,000 members in 1989, or about 60.2 percent of the zone's population. This percentage enrollment was slightly lower than the previous year's (62 percent), although sufficient to ensure financial stability of the program. Exhibit 2-1 shows the evolution of membership from 1986 through 1989.

EXHIBIT 2-1
BWAMANDA HEALTH INSURANCE PLAN
MEMBERSHIP RATES 1986-1989

	1986	1987	1988	1989
Total Members Enrolled	32,750	58,100	80,595	81,142
Total Population	118,612	125,480	130,000	134,680
Percentage Enrolled	27.6%	46.3%	62.0%	60.2%
Percent Change	------	18.7%	15.7%	- 1.7%

Source: Shepard, et al. (1990), p. 14

The insurance program does not apply to the 4.6 percent of the population who are salaried employees and their families, all of whom are entitled to health care services paid by the employers. These employers are billed directly by the

[4] For example, the health zones still cannot open bank accounts in their own names, but must conduct financial transactions through accounts opened in the name of the chief medical officer. This has not prevented the zones from performing their functions, but is not a desirable position from a financial control standpoint.

hospital, and are charged higher rates than the customary rates for non-insured patients who are not employed in the formal sector.[5]

Concerning the characteristics of the enrolled population relative to the general population, a patient survey found that insured patients were more likely to be female and less educated. Otherwise, few differences were noted.

Insurance coverage in Bwamanda is generally not equitable on the basis of geography. Evidence compiled by Shepard, et al., indicates that the probability of enrollment in the insurance program decreases with distance from the hospital, i.e., people who live furthest away from the hospital are least likely to enroll in the insurance plan. This was true in three out of four years of the plan's operation, as illustrated in Exhibit 2-2. In 1988, however, enrollment declined less with distance than the other years, probably due to two factors: a stepped-up awareness campaign led by the health center nurses, and the incentive of a differential co-payment that was proportionately less for people living further away.[6]

In Bokoro, enrollment is much lower. In 1989, only 4,000 people were insured, representing 4.5 percent of the zone's population. In contrast to Bwamanda, virtually all enrollees in the insurance plan are employees. Most formal employers in the zone (including health services, missions, and agricultural processing companies) enrolled their employees in the plan. The most likely reason for the enrollment of only employees is that the premium in Bokoro is extremely high compared to that of Bwamandaalmost 10 times higher (1,200 Z in Bokoro, compared to 125 Z in Bwamanda)making it unaffordable to the majority of the population.

2.1.3. Managerial Characteristics

Bwamanda's health insurance plan is designed principally to cover the costs of hospitalization, although other benefits include dental extractions, ambulatory surgery, and chronic care treatment at the health center level (the latter benefit was added in 1988).

In 1989, the premium price was 125 Zaire ($0.35) per person. Enrollment occurs once per year, during the harvest season when people have the most cash income available to pay.

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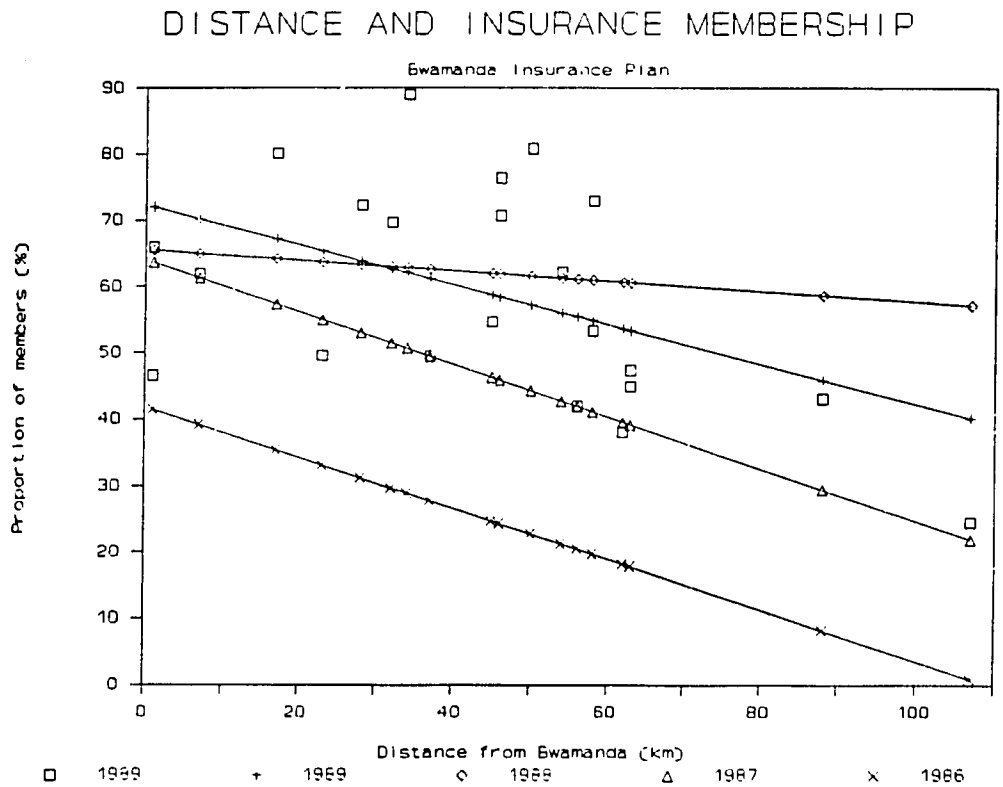
[5] In one sense, these employed workers could be considered insured, since their employers pay the full costs of their health services. Employers are billed directly by the hospital for these services. However, no premiums are involved, and no limits exist on covered services, maximum utilization per employee, maximum allowable charges by the hospital, etc. Among health staff in Bwamanda, the term "insured" only refers to residents who purchased community insurance at the premium of 125 Zaire.

[6] For example, in 1988 people who lived over 50 km. away from the hospital were charged only five percent copayment, while people living within 25 km. had to pay a 20 percent coinsurance. While the analysis by Shepard, et al. has shown that the experiment did increase *enrollment* of people living further away (as illustrated in Exhibit 2-2), it did nothing to alleviate the relative underutilization of services by distant residents, and was therefore abandoned in 1989.

EXHIBIT 2-2



If one family member joins, all members of the family are obliged to join. This arrangement is meant to reduce the probability of adverse selection and insurance fraud (whereby one member's card will be shared by the whole family). The premium price is set to be affordable, as well as covering expected plan costs. Before deciding on the premium price, it is compared to the price of a common food crop, such as soybeans, to determine affordability. Premium price is very low (about 0.2 percent), compared to Zaire's per capita GNP of $150 in 1987. Looking at zone-specific income indicators, however, the premium is more costly. In a survey conducted in 1987, about half the 518 households studied had reported revenue of less than 7,500 Zaire per year (about $58) for seven to eight household members, or about 1,000 Zaire per person. If these data are accurate, the premium costs about 12.5 percent of per capita revenue.

Coinsurance is a required part of the insurance plan except in the case of deliveries, which are provided free of charge to all insured women who have received prenatal care. In 1989, plan members paid 20 percent of the customary charge for hospitalization, while the insurance plan paid the rest.

Bwamanda Hospital uses a system of prospective payment, with set charges per type of admission or patient ward. Patients can be admitted to six clinical services, including pediatrics, internal medicine, intensive care, surgery,

obstetrics, and gynecology. Each of these services has from one to four subdepartments or wards, bringing the total number of "case types" to 14. The hospitalization charge is all-inclusive, covering nursing, doctor visits, laboratory, X-rays, pharmacy, operating room time, housekeeping, etc. Hospitalization charges vary from 1,500 Z (pediatric ward) to 10,000 Z (emergency surgery ward); consequently, coinsurance payments range from 300 to 2,000 Z. This system of setting all-inclusive fees prospectively is an additional control on costs because it reduces the likelihood that the hospital would provide unnecessary services to get extra reimbursement.

The control system at Bwamanda Hospital relies on registration notebooks and insurance cards with stamps and signatures to verify membership and reduce the possibility of insurance fraud. Residents enroll in the insurance plan at the health center closest to them. A stamp printed with the name of the health zone and price of the premium is then affixed to the individual's medical identity card. The medical card records the person's name, village, enrollment number, and significant health events (vaccinations, prenatal consultations, etc.). A second stamp, with a different color of printing, is placed on the family health card (created at the time of the health zone medical census), which stays at the health center. The health center nurse signs his or her initials over the stamp on the medical card, taking care that the signature also touches the card, to avoid cases of fraud where unsold stamps are stolen and affixed to cards, or stamps are moved from one person's card to another.

The health center nurse also registers information about each enrollee in special notebooks, organized by village. After the enrollment period, these notebooks are then forwarded to the hospital, where they are used to verify whether the bearer of the insurance card is really the person who enrolled in the insurance program. The person may be quizzed about the names or ages of other family members as part of the verification process.

During the enrollment period, health zone administrative staff make frequent trips to the health centers to collect revenue and distribute stamps. Each center may be visited up to 12 times during this six to eight-week period.

The hospital insurance coverage is only activated in cases where the patient was referred to the hospital by a health center or health post. The referral slip from the health center indicates the insurance member number. This mandatory referral policy is a further deterrent to excessive utilization.

The Bokoro Health Zone originally intended to provide comprehensive inpatient and outpatient care for all clinical services. In 1989, however, the plan only covered curative ambulatory care episodes of illness. For each insured patient, the initial visit, up to four follow-up visits, most drugs, and laboratory exams are covered in an "episode." If a referral to the hospital is required, the referral consultation is covered by insurance, although hospitalization is not. Preventive care services, chronic care drugs, treatment of sexually transmitted diseases, and deliveries are all excluded from the insurance program (although tuberculosis and leprosy treatments are provided free of charge through separate programs).

As noted previously, the premium charge in Bokoro is 1,200 Z per person per year. Once again, if one person joins, all family members are required to join. The plan requires a 25 percent coinsurance, which would normally provide some controls to limit excess utilization; in Bokoro, however, most members are employees whose employers not only pay the insurance premium, but reimburse any copayments as well. For this reason, the policy of coinsurance may not have its intended effect of minimizing moral hazard (although empirical evidence is not available to verify this in practice).

The minimum standard charge for an ambulatory care episode of illness for uninsured patients is 180 Zaire. Health centers in Bokoro, however, can decide to charge more and may ask for up to 500 Zaire. This means that coinsurance payments range from 45 Z to 125 Z, which is paid by the patient at the time services are received and later reimbursed by the employer.[7]

The system of enrollment and verification of membership at time of treatment is not as sophisticated in Bokoro as in Bwamanda. Unique identification numbers are not used, and no controls exist that would prevent non-enrolled persons from borrowing an insured person's enrollment form.

2.1.4. Relations With Providers

In both Bwamanda and Bokoro, the health insurance plans are offered by the providers of the health care, i.e., the health zones themselves. In Bwamanda, there is some effort to separate the insurance plan as "financer" from the hospital as "provider." Bwamanda Hospital bills the health insurance plan for services provided to plan members, and at the end of the year separate financial statements are produced for the hospital and insurance plan. In Bokoro, there is no billing, and finances of the plan are commingled with those of other health center operations.

Quality of care is generally good in Bwamanda and Bokoro. Stock-outs are rare, several doctors and well-trained nurses are available (including some expatriates), and infrastructure is good in both zones.

2.1.5. Financing and Expenditures

Exhibit 2-3 shows the financial performance of the Bwamanda insurance plan from 1987 through 1989. The financial statements show that, in each year, the insurance scheme covered total expenses with revenue from premiums and interest on premium revenue. Premiums account for most of the insurance plan's revenue (82 to 94 percent), while interest earned on premiums contributes the remainder. After paying expenses, each year the plan is left with a positive balance,

[7] Even where the employer reimburses the employee for the coinsurance, there may be some reduction in moral hazard due to the timing of the employer's payment. For example, they may find it inconvenient to have to pay up-front and be reimbursed later. Greenberg, et al. (1988) present some evidence that even reimbursable out-of-pocket payments may reduce utilization of services (Greenberg, et al., 1988).

although margins have declined over time (31 percent in 1987, dropping to 17 percent in 1988 and only 4.7 percent in 1989). The excess funds presumably remain in the plan's bank account earning interest and serve as a cushion against extraordinary expenses.

Benefit expenditures, also shown in Exhibit 2-3, fall mostly in the category of hospital charges, as expected (89 percent in 1989). Chronic care at the health center level accounts for an additional six to seven percent of health insurance benefit expenditures. Finally, plan administrative costs are estimated at four to six percent of expenditures. Exhibit 2-4 shows per-member revenue and expenses.

Analysis of the financial statements of the Bwamanda Hospital and health centers in the zone found that the insurance plan had improved the cost recovery performance of the hospital. For example, while in 1985 the hospital had recovered only 48 percent of operating costs through user charges, with the insurance plan rates of 65 percent and 79 percent cost recovery were achieved in 1986 and 1988, respectively.[8] Cost recovery at the health center level was more difficult to evaluate because of changes in accounting procedures which limit the comparability of data in different years. The insurance plan payments only accounted for about 3.1 percent of total operating revenue for the centers in 1988, and 4.8 percent of revenue in 1989.

The Bokoro Health Zone was not able to produce financial statements to show the revenues and expenses of the health insurance plan.

2.1.6. Utilization

Data from Bwamanda show strikingly that insured persons and persons with company-paid health benefits are much more likely to use hospital services than uninsured residents of the zone. A 1989 records review showed that 77 percent of hospital patients were insured, compared to only 60 percent of the zone's population who are enrolled in the insurance program. In addition, 17 percent of patients were employees of companies, whereas only five percent of the population is employed in the formal sector or entitled to company benefits through a family member's employment. The hospital record review showed that salaried workers and dependents were hospitalized at a rate of 10.5 percent, compared to a hospitalization rate of 3.6 percent for insurance plan members, and only 0.5 percent for zone residents without insurance coverage or employer benefits. Insured patients were 1.9 to 6.7 times more likely to be admitted to the hospital than uninsured patients; employed patients and their dependents were 3.3 to 19.7 times more likely to be hospitalized.

[8] These rates exclude depreciation expense and expatriate staff salaries. Data from 1987 and 1989 were incomplete or not available. See tables and full discussion in Shepard, et al., 1990, pages 20-22.

EXHIBIT 2-3
FINANCIAL SITUATION OF BWAMANDA INSURANCE PLAN
1987 - 1989
Current Zaire, with adjustments (see note)

	1987		1988		1989*	
	Current Zaire	% of Expen.	Current Zaire	% of Expen.	Current Zaire	% of Expen.
REVENUE						
Premiums (unadjusted)	1,785,060		4,023,100		10,177,250	
Adjusted**	2,065,314	118.9%	4,851,859	101.0%	11,011,785	98.6%
Interest	460,692	26.5%	935,755	19.5%	710,596	6.4%
ADJ. PREMIUM & INTEREST:	2,526,006	145.4%	5,787,614	120.5%	11,722,381	104.9%
EXPENSES						
Hospital care	1,671,500	96.2%	4,226,055	88.0%	9,915,491	88.8%
Health center care	0	0.0%	346,250	7.2%	622,582	5.6%
Total care:	1,671,500	96.2%	4,572,305	95.2%	10,538,073	94.3%
Vehicle; stationary	N/A		N/A		198,920	1.8%
Staff bonus payments	N/A		N/A		338,295	3.0%
Administrator (10%)	N/A		N/A		22,800	0.2%
Membership clerk (50%)	N/A		N/A		72,000	0.6%
Total administration:	65,378	3.8%	229,885	4.8%	632,015	5.7%
TOTAL EXPENSES:	1,736,878	100.0%	4,802,190	100.0%	11,170,088	100.0%

NOTES:
* Expenses and interest in 1989 are extrapolated from 5.5 months of data.
** Premium revenue is received in a lump sum early in the year (on average in March), while expenses are evenly distributed throughout the year. Thus a slight adjustment is needed within each year, to assure comparability of nominal Zaire. The premium revenue has been inflated by the following three-month inflation factors: 1987: 1.157; 1988: 1.206; 1989: 1.082

Source: Shepard, et al., (1990), p. 21.

EXHIBIT 2-4
BWAMANDA INSURANCE PLAN: PER-MEMBER REVENUES AND EXPENSES
(Zaires)

	1987	1988	1989
Total Members	58,100	80,595	81,142
Adjusted Premium Revenue per Member	35.55	60.20	135.71
Interest Revenue per Member	7.93	11.61	8.76
Total Revenue per Member	43.48	71.81	144.47
Hospitalization Benefits per Member	28.77	52.44	122.20
Health Center Benefits per Member	0	4.30	7.67
Administrative Costs per Member	1.12	2.85	7.79
Total Costs per Member	29.89	59.59	137.66

Source: Derived from Exhibits 2-1 and 2-3

Because of the high level of enrollment within the zone, higher use of hospital services by insured patients and patients with employer-paid benefits did not seriously undermine the financial solvency of the insurance system, although this would be a more significant problem at lower levels of enrollment.

As noted earlier, the most important utilization controls in Bwamanda include required referral from a lower level facility, which assures the medical appropriateness of the hospitalization, and a prospectively-established global charge per admission, which reduces the incentive of the hospital to provide unnecessary tests or keep the patient longer than necessary to obtain extra reimbursement.

Data from one health center in Bokoro illustrate very large differences in utilization among insured and uninsured residents, with five times as many episodes of illness treated among insured patients. Rates of treatment with antibiotics and injections show similar differentials: insured patients use two to nine times the services as uninsured patients. In Bokoro, almost no controls on utilization exist.

2.1.7. Synthesis and Topics for Further Research

The rural health insurance programs in Bwamanda and Bokoro attempt to serve similar populations with much different results. As such, these models provide important lessons for policymakers interested in extending insurance coverage to

underserved populations. Some of the key performance factors from the two cases are now discussed, especially factors which influenced coverage extension, equity, program efficiency, and revenue generation.

2.1.7.1. Coverage Extension

Factors which enabled the Bwamanda insurance plan to cover such a large portion of a basically poor, rural population included a low, affordable premium, acceptable quality of care provided from a known provider, and an initial investment in community education and outreach for enrollment.

The affordability of Bwamanda's premium is not serendipitous. Rather, medical staff take ability to pay into consideration when setting the premium by comparing the proposed rate to the price of common food commodities to assure affordability. Premiums are also collected once a year, during the harvest season, so that people can pay at a time when they are most likely to have cash available. In Bokoro, on the other hand, the premium of 1,200 Zaire per person (almost 10 times higher than Bwamanda's) was too high to be affordable to average residents. A survey of patients in Bokoro indicated a willingness to pay of about 100 to 200 Zaire, much less than the actual premium.

A second important factor which facilitated the high enrollment rate in Bwamanda was a pre-existing high quality service delivery network. Quality of care, as measured by the regular supply of pharmaceuticals, presence of highly qualified staff, and adequate infrastructure and equipment was good in both Bwamanda and Bokoro even before insurance was introduced. This inspired confidence in the system, although in the case of Bokoro it still was not enough to overcome the barrier of a high premium price. The lesson here is that consumer confidence and perception of adequate quality of care is a necessary precondition before people will be willing to purchase insurance. Shepard, et al., suggest that it may be possible to provide external assistance at the start to improve the quality of care being provided through an insurance plan, which may in turn inspire consumer confidence and increase enrollment. Then, with the increased financial resources made available through the insurance program, quality improvements could be made sustainable.

Another success factor in Bwamanda was the attention paid to education of consumers. There was a widespread campaign to sensitize the population, including many village meetings, trips to the field by zone-level supervisory health staff, and meetings of all zone staff to discuss approaches to the community awareness campaign. An added incentive in Bwamanda was a commission of three percent of premiums which was paid to health workers who helped with enrollment. In Bokoro, there were no incentives to staff for achieving high levels of enrollment within their catchment areas.

A final coverage issue concerns the range of benefits offered. The two Zairian insurance plans differed in the benefits offered, with Bwamanda offering primarily inpatient services and Bokoro covering ambulatory curative care. Clearly, consumers see the benefit in having insurance coverage for ambulatory care: a patient survey in Bwamanda found that 81 percent of insurance plan members would like to pay an increased premium to cover outpatient care. At the same time, Bwamanda's nurses have voiced opposition to increasing coverage to

include outpatient care, arguing that people would greatly overuse the system. One lesson from Bwamanda is that while people may prefer coverage for ambulatory care, voluntary insurance plans can still convince people to pay for inpatient insurance, if adequate time and resources are dedicated to community outreach and education.

2.1.7.2. Equity

Bwamanda's experimentation with differential coinsurance rates depending on distance from the provider provides lessons for policies concerned with equity. Troubled by the low hospitalization rates found in population groups living the furthest away from the hospital, Bwamanda medical staff set out to achieve greater equity in utilization of services within the whole zone. Since residents from further away face higher travel costs, the insurance plan tried providing these residents with a special "price break" in terms of a lower copayment at the time of hospitalization to encourage them to use hospital services with greater frequency. The incentive was enough to encourage more distant residents to purchase insurance, but their hospitalization rates did not change. The net effect was a cross-subsidy benefitting the people who were already more likely to use the hospital services: distant residents paid a greater portion of premiums, but did not receive proportionately greater services. Other plans which attempt to use price differentials to overcome the barrier of geographic distance should try to target insurance revenue specifically to these populations, or combine financial incentives with direct provision of ambulance services to ensure access.

2.1.7.3. Program Efficiency

The Bwamanda insurance plan is reasonably efficient, with less than six percent of premium revenues spent on administration. A major portion of this expense (54 percent) is incentive payments to staff who assisted with enrollment of residents. The health zone administrative staff consists of dedicated professionals who are skilled in management, including the director of the CDI Medical Service, a Belgian physician who has worked 14 years in Belgium and has an MPH from the University of North Carolina. The presence of such dedicated and skilled staff is probably an important factor in the successful design and implementation of the insurance plan.

The system of stamps, unique identification numbers for members, and signed enrollment register books seems sound and is not too cumbersome. It would be interesting to experiment in Bwamanda to see if additional cost savings could be obtained by spending more on administration. Additional spending on community education and membership drives could increase net revenues by upping enrollment, and by increased spending to detect and avoid inappropriate hospitalizations and fraudulent use of insurance may yield cost savings by reducing benefits paid.

The Zaire experience shows that much better financial accounting systems are needed to be able to measure performance and estimate the financial viability of community insurance systems. Even in systems where the insurance provider is also providing the health care services, financial records must be kept separate to allow calculation of benefits costs, administrative costs, and other information needed to measure efficiency and revenue generating success of plans.

Utilization and cost controls in place in Bwamanda and Bokoro provide evidence that it is possible to reduce the effects of adverse selection and moral hazard. Both health zones had coinsurance (20 to 25 percent), and required that all family members join if one person joined. Bwamanda also required that patients be referred, and medical need be established before a patient was admitted. In Bwamanda, the lower hospitalization rate among insured residents, compared to employed residents who did not face charges of premiums or copayments, may provide evidence that coinsurance does reduce the risk of moral hazard.

By combining the functions of provider and insurer, both Bwamanda and Bokoro avoided some administrative costs and reduced their financial control requirements. Where providers work independently of insurers, for example, providers are sometimes motivated to maximize reimbursement by providing many services (some of which are unnecessary) to patients. Insurers then react to this by creating approval procedures, claims review requirements, and other bureaucratic processes to try to limit services delivered and reimbursement paid out. The Zaire health zones avoided many of these problems by structuring direct insurance systems where the insurer is also the provider. Further, Bwamanda's system of prospective reimbursement based on a set charge per hospitalization for each service also may have contributed to keeping benefits costs low, since the hospital had little incentive to provide extra, unnecessary services to patients since it would not receive greater payments.

2.1.7.4. Revenue Generation

Financial statements from Bwamanda show that the insurance plan was able to cover all costs and generate a surplus in several years of operation. The plan also enabled Bwamanda Hospital to improve its revenue base, moving from 48 percent cost recovery in 1985 to 79 percent in 1986. One lesson learned is that Bwamanda benefitted greatly from having a place to invest the premium revenue, both to assure that the revenue was cushioned against high inflation and to earn interest revenue. Bokoro had more difficulties finding ways to invest and protect premium revenue. The Integrated Development Center in Bwamanda also served as a financial guarantor of the insurance plan, in the event that health care demand was underestimated, and premium prices were set too low to cover costs. Shepard, et al., argue that a financial guarantor is very important for new insurance systems, which can fail unless the population can be protected against insolvency of the insurance plan in the first year, while the plan is trying to get its prices right and obtain accurate estimates of utilization.

2.1.7.5. Further Research

A logical step in Zaire would be to try to replicate the entire experience of Bwamanda in another health zone in Zaire by providing adequate technical assistance, financial support, and training. Unfortunately, this option is not possible currently due to political unrest in that country. Policy issues raised in the two Zaire case studies and need to be researched further include:

- What factors are needed to ensure the financial viability of a rural health zone to provide insurance coverage for outpatient services? What planning and analysis need to take place to design benefits packages and establish control procedures to enable outpatient services to be covered?

- What alternative policy options can help promote service utilization by residents who live far away from service delivery points, within a zone-wide insurance program?

- How can public health zones or districts be linked up with "financial guarantors" (public or private) to start health insurance programs? How can policies help facilitate financial and technical assistance for community-based insurance programs within a decentralized management organization?

- What are appropriate channels of training for health zone managers interested in starting insurance plans? What should the government and donors do to help health zone managers learn from one another, for example, in the design of information systems for insurance programs, or the development of procedures to reduce risk of moral hazard, adverse selection, and insurance fraud?

2.2 CASE STUDY #2: THAILAND HEALTH CARD FUNDS

In Thailand, prepaid financing mechanisms for primary health care include funds for health cards, drugs, nutrition, sanitation, and multipurpose health development. Based on the model of traditional savings clubs, or "*Wong* Shares," these funds have been promoted by the Ministry of Public Health (MOPH) since the early 1980s as a way to encourage community development in rural areas and contribute additional financial support to health services provision. This case study examines the Thailand community financing models in more detail, focusing especially on health card funds.[9]

2.2.1. Institutional Description

Thailand's public health care system, administered by the MOPH, relies on a network of 483 hospitals, 7,800 health centers, and community health posts extended to almost 59,000 villages. About 70 percent of Thailand's population of 54.5 million live in rural areas. Roughly two-thirds of the population are engaged in agricultural production; 50 percent are employed full-time in agriculture.

The National Socio-economic Development Plan of 1961-1966 first encouraged the creation of village health development committees in Thailand to promote environmental sanitation. Community mobilization continued in the late 1970s, when Thailand began implementing its Primary Health Care Program. Village health workers (VHVs) and village health communicators (VHCs) were selected by the communities and trained by the government via the MOPH. At first, the government

[9] The case study draws heavily from several sources: Myers (1987); Adeyi (1989); and Wibulpolprasert (1991). Charles Myers also provided helpful comments on an earlier draft.

attempted to finance drug supply at this level by establishing revolving drug funds managed by the VHVs. This system, however, was not sustainable: most of the VHVs ran out of drugs within six months, and there was some resistance to the financing scheme on the part of the population (who felt they should not have to pay for government-provided drugs).

In 1980, a modified type of drug fund was initiated. While the drug funds were once again started with capital provided by the MOPH, this time each community elected a fund committee and manager, and fund shares were sold to community members. The new drug funds were highly successful at generating revenue through drug sales, and favorably viewed by the rural population. Building on this positive experience, other funds evolved, including nutrition, sanitation, health card, and multipurpose funds.

The health card fund is the PHC fund which is closest to a rural health insurance system. The government supported the creation of these funds both to develop a sustainable source for financing basic curative and preventive health care services, and to strengthen community management capabilities. Health card funds evolved from the "Maternal and child health development funds" created in 1983 to support activities in the MCH area including the Expanded Programme on Immunization (EPI) and family planning. In addition to unlimited MCH/EPI services, health cards generally entitle bearers to a specified number of curative care episodes at the health post or center, the first point of contact with health services.[10] The health cards also entitle the insured to faster referral services, called "green channel" or "express way," at district hospitals or other referral facilities. Free pharmaceuticals at referral centers are sometimes covered by the fund, as well. Revenue from health card purchases is used to reimburse service providers, provide loans to card holders, and fund community development activities.

Although start-up capital is provided by the MOPH, health card funds are owned by the shareholders (i.e., card purchasers). The funds are an officially-recognized part of the Thailand public health system; in fact, the "Health Card Project" in Chiang Mai (and six other provinces) was incorporated into the Sixth National Health Development Plan in 1987 as a pilot model for a comprehensive national health insurance system (Adeyi, 1989).

The Health Card Project was most active during the years 1984-86 when it was promoted heavily in all provinces. Subsequently, government interest and promotional activities have fallen off; however, the Project still exists in areas which have received external assistance and continued promotion efforts, such as the provinces of Chiang Mai in the north and Rayong in the east.

2.2.2. Enrollees and Employers

All types of primary health care funds cover 20 to 46 percent of all rural villages in Thailand. According to survey results cited by Wibulpolprasert, the

[10] The sub-district level health center is the key unit in the health card system, since not many health posts are functional in Thailand at present. Patients are most often referred to the district or provincial hospital, depending on the catchment area where they live.

lowest coverage is for health card funds (30 percent of rural villages, or 19,030 funds in 1987, dropping to 20 percent of rural villages or 10,685 funds in 1988), while drug funds are the most common (46 percent coverage, or 27,135 funds in 1987, although, in 1988, 32 percent of all drug funds were incorporated into multipurpose funds). Earlier data cited by Myers estimated that drug funds covered 45 percent of villages (50 to 60 percent of the rural population) while health card funds covered 10 percent of villages (about three percent of the rural population).

In terms of actual households covered by family health cards, recent evidence (1991) shows that coverage rates range from 21 percent of rural households in Chiang Mai province and 18.2 percent in Rayong province to only two percent in two other provinces.

The relatively high level of coverage in the Chiang Mai province can be compared to 1985 data from the Health Card Project which reported 5,632 health card funds covering about 9.7 percent of villages and 25 percent of villagers in the covered villages. The report estimated that coverage of over 70 percent of villagers is needed for the premium revenue of a health card fund to cover direct costs (Thailand Country Paper, EDI 1987).

At first, there seemed to be much interest in health card funds; however, recent evidence shows "contractions" in the market for health cards (Adeyi 1991). According to Myers, there are three principle reasons for the reduction in enrollment rates since 1986: 1) continuation of the system of low income cards (LICs) which allow a large portion of the populationsome of whom are not really low incometo obtain free care; 2) relatively low fee schedules faced by people who do not purchase the health cards; and 3) lack of promotion of the health card funds, to the point where surveyed individuals stated that their reason for not buying a health card was that they didn't know who sold them.

LICs are intended for poor households, and entitle the family to free care at public health facilities. The assumption is that households which own LICs will not want or need to purchase health cards. Recent evidence suggests that 17 percent of households in Thailand own LICs. However, many households who are *not* poor still own LICs (in the survey by Adeyi, 40 percent of LICs were owned by non-poor households), and further, many households owning LICs still purchase health cards (35 percent of households with health cards also owned a LIC). The latter phenomenon may be explained by the perceived benefits of reduced waiting time which only the health cards offer. Adeyi suggests that membership in the health card funds could still be increased if LIC eligibility requirements and certification procedures were tightened and better enforced. This is within the control of health card fund management in some areas, for Adeyi found that in one subdistrict the Village Health Card Committee recommended who should receive LICs, then forwarded the list to MOPH officials for approval. Abuse of the selection process was cited as the cause for excessive numbers of LICs being approved.

Adeyi's survey of card ownership in six villages in the Mae Na Subdistrict of the Chiang Mai Province found no association between socio-economic status and card ownership. The author interpreted this finding to suggest that the non-poor are not more willing to pay for health insurance coverage than the poor. Another

study by Thavitong in 1986 also found evidence that richer households purchase health cards (Myers, 1987). While the richest households prefer to use private providers, average expenditures on health care services are approximately equal for all income groups.[11] Little documentation is available concerning the employment status or labor characteristics of the insured population.

Concerning fees facing the uninsured, median patient charges per illness without a health card in 1983 ranged from 10 Baht ($0.40) at the health center and 39 Baht ($1.56) at small district hospitals to 110 Baht ($4.40) at provincial hospitals. Charges at the health center level are mainly for pharmaceutical products. In real terms, these fees have not increased in the last nine years, although per capita income in Thailand has been increasing steadily 4 percent average annual growth rate 1965-1988 (World Development Report, 1990). As a result, the option of "self-insuring" is attractive to many households who do not like the health card's required referral policy and limitations on inpatient coverage (*see Sections 2.2.3 and 2.2.4*). With relatively affordable patient charges for ambulatory care, rural communities in Thailand seem to be more concerned about avoiding the financial risk of catastrophic illness (estimated to be the leading cause of landlessness in the country) than having coverage for ambulatory care services. For this reason, the primarily ambulatory care coverage offered by the health cardat a relatively high cost of 200 Baht ($8) per year for an individualis less attractive.[12]

An additional problem with health card fund enrollment may be the timing of health card sales. Adeyi suggests that some health card funds are collecting premiums too long after the harvest seasons, thus failing to capitalize on the high revenue available to villagers just after the harvest. Community leaders interviewed by Adeyi agreed that if cards were sold sooner after the harvest, more households would purchase the cards.

Urban health cards have been tried but have proven less successful due to different characteristics of urban communities, although little documentation is available about these urban funds (Wibulpolprasert, 1991). For urban funds to work, private clinics may need to be incorporated into the system, since private clinics are often the provider of choice for urban populations.[13]

2.2.3. Managerial Characteristics

Funds in the Health Card Project area offer three types of health cards, each valid for one year. Prices and entitlements listed here are not universally applied; there is variety among funds in terms of actual benefits and terms offered.

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[11] Myers, personal communication. Of course, in terms of proportion of income, the poor spend more on health care than the rich in Thailand.

[12] Since individual health cards often cover four episodes, the average amount paid per episode is about $8 / 4 episodes, or $2.00. This is a lot higher than the charges per episode levied at the health center or the small district hospitals. The added benefits of being a health card owner, i.e., speedy referral service and access to loans, need to be valued highly enough that they balance the benefits package so it is desirable for people to join. As discussed in Sections 2.2.3 and 2.2.4, this is currently a serious problem for the funds.

[13] Myers, personal communication.

- **Green card (family).** Price: 300 Baht ($12 in 1988).
  This card entitles a family to a fixed number of curative care episodes per year (often six), as well as free MCH and immunization services. Sometimes the family card is limited to care for parents, children under 15, and two other household members. In one fund, family membership was limited to four, and larger families were obliged to buy an additional card. Occasionally the card is priced higher and additional curative care episodes are covered. The card also entitles the family to speedy service at higher levels in the health care system, if referral is required (the so-called "green channel" or "express way"). Finally, the card may entitle the bearer to a discount (often 10 percent) on drugs purchased at the community drug cooperative.

- **Red card (individual).** Price: 200 Baht ($8 in 1988).
  This card entitles an individual to a fixed number of curative care episodes per year (often four). Referral benefits and drug discounts are similar to the green card.

- **Blue card (MCH services).** Price: 100 Baht ($4 in 1988).
  This card covers MCH and EPI services only, for an unlimited number of visits.

Family cards seem to be the most popular, accounting for 96 percent of cards held in a sample of households surveyed in six villages in July 1988 (Adeyi 1989).

Prices are considered moderate and affordable by most rural residents, although socio-economic data are not available to support this assumption. One description of the Health Card Fund Project noted that cards are priced at less than the average household health expenditure for services, mostly in the private sector (World Bank 1987).

Terms of the different health cards show some variation among funds and provinces. In addition to the limit on the number of curative episodes covered, other restrictions are sometimes applied, including ceilings on allowable costs per outpatient visit (e.g., $2) or per inpatient stay (e.g., one fund limited coverage to $6 per stay, while others have ceilings of $80 to $100 per illness), and exclusions of certain types of illnesses (e.g., degenerative diseases, sexually transmitted diseases). In several funds, a higher family card price was charged to families where the wife was pregnant, or where the wife was pregnant and had one or more children under age five, than for all other households.

Incentives for non-use of cards have been incorporated in some health card funds. For example, some funds renew unused cards for another year while other funds offer a free medical check-up to people who haven't used their health card. There is no evidence that copayments or deductibles are employed.

Descriptions of the health card funds in Thailand have not discussed specific ways in which data are collected and reported, nor procedures for reducing the possibility of insurance fraud. However, Myers noted that providers' record-keeping seems to have improved in areas with health card funds in order to claim reimbursement from the funds for services rendered.

As mentioned earlier, fees paid by non-card holders at public facilities are not very high. This poses problems for the health card funds because it decreases people's incentives to purchase insurance. It is common for card holders to refrain from using the card for ambulatory care and to save the card instead for when they need inpatient care. Card holders then "pool" illness episodes, sometimes using up all six or eight covered episodes for one inpatient hospitalization. There may even be a secondary market developing for health cards for this purpose.[14]

2.2.4. Relations With Providers

The insurance system is indirect, in that the managers of the health card fund do not own or manage the health care facilities where services are provided. The health card funds are recognized and encouraged by the MOPH, however, which also manages the facilities delivering services. Private facilities do not participate in the health card system, generally.[15]

Providers are reimbursed once, at the end of the year. Since premiums are collected at the beginning of the year, the health card funds have a large capital base for making short-term loans to fund members during the year. Facilities are allowed to keep the reimbursement revenue and spend it on equipment or other non-salary expenses. The facilities also continue to receive their government budget for salaries, medicines, and other expenses. The additional revenue is supposed to be used to make quality improvements.

While repurchase and purchase of cards seems to be high in certain districts of the Chiang Mai Province (around 65 percent), interest in the health cards is much lower in other parts of the country, where somewhat higher prices prevail (Myers 1987). Quality problems have been noted even in Chiang Mai, including failure to reduce waiting time for card holders at referral facilities. One district hospital complained that health centers were making too many unnecessary referrals and refused to create a "green channel" for card holders to be seen more quickly. In other cases, high time and transportation costs for referrals meant that villagers opted out of the health card system, choosing to go to fee-charging private clinics instead.

Adeyi's research into factors associated with health card ownership revealed that quality considerations are very important. Card purchases were motivated by the desire for free treatments, reduced waiting time at referral centers, and subsidized drug purchases. The possibility of obtaining loans or realizing community development projects was not often cited as an incentive for

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[14] Myers, personal communication.

[15] There is one example of a private hospital joining the health card fund. Run by Seventh Day Adventists in the Chiang Mai Province, the hospital was very highly regarded by the population. Before the hospital began accepting health card patients, people were unwilling to purchase the health card because they only wanted to be treated at the private hospital. When the hospital finally arranged to enter the health card fund scheme, health card sales increased and the hospital was overwhelmed with patients. Unfortunately, because the health card fund's reimbursement was lower than the fees the hospital would have otherwise charged, the hospital lost money and was unable to continue in the system. This example highlights the need to reimburse providers at least as much as they would get otherwise from their fee revenue at a given level of utilization.

buying a card. For this reason, the problems in providing speedy referral services to card holders is of serious concern, and may be one cause for observed declines in health card fund membership.

2.2.5. Financing and Expenditures

Analyzing 1988 data, Wilbulpolprasert reports that the average size of health card funds is 9,631 Baht ($385). The total reported value of capital in health card funds in Thailand in 1988 was 182.99 million Baht ($7.3 million) in 1987.

Myers conducted a study of seven health card funds in 1984-85, looking in particular at financial viability. He concluded that the price of the family health card at that time ($8, compared to $12 in 1987-88) was too low to provide adequate provider reimbursement for the expected high utilization by card holders. Subsequently, one researcher calculated that even with the higher price of $12 per family card, assuming no adverse selection, resources generated by health card funds will be sufficient to cover 35 percent of direct recurrent costs of services, not including salaries (Myers, 1987).

Myers notes that since the 1984-85 study, health card funds have begun to charge higher prices while reducing the scope of benefits, to enable higher reimbursement of providers. Recent evidence from Chiang Mai province shows that health card revenue covered all non-salary recurrent costs incurred by providers.

Few financial data are available on the performance of individual health card funds. However, the 1984-85 health card study collected information on how fund capital was used in four funds during the first year of operation. The study observed two funds which allocated 15 percent of revenue to pay for fund management and another fund which proposed to pay fund managers three percent of profits on loans to card holders. The fourth fund did not list any fund management expenditures. All four funds reported spending 45 to 60 percent on reimbursement payments in year one. Remaining capital was used to provide loans to card holders and finance community development (e.g., maintenance of temples, libraries, or village halls).[16]

2.2.6. Utilization

Evaluations of health card funds in selected districts have revealed evidence of increased use of health services at all levels among card holders. This includes curative care, MCH services, and assisted deliveries at health facilities. One study remarked that health card funds are promoting utilization of health centers, a level of the health care system which used to be bypassed frequently as patients sought care directly from district hospitals or higher levels (Myers, 1987). Evidence also showed that in many cases health cards are not completely used, but that people do tend to save the card for hospital services (i.e., those services likely to be more expensive).

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[16] In the Mae Na Subdistrict of Chiang Mai, card holders could not borrow more than 1,000 Baht ($40) per year. Interest rates were set by the village health committee and were usually below bank rates (Adeyi, 1989).

Finally, some findings suggest that adverse selection may be occurring, with healthy people opting out of the health card funds.

2.2.7. Synthesis and Topics for Further Research

Myers summarizes some of the characteristics which are supportive of PHC funds (including health card fund) in Thailand. He includes in this list: 1) feelings of social obligation to the community and respect for authority (people will often join to demonstrate solidarity, or if asked by a person in a leadership position); and 2) similarities to informal savings and loans organizations (*Wong* shares) with which people are already familiar and which have reinforcing incentives such as compensation of fund managers and sale of shares. In addition to these general characteristics, some of the key issues for the future of health card funds in particular are how to raise enrollment and maintain quality.

It is most important to tighten procedures for awarding LICs so that households that can afford to pay for care have at least some incentive to buy a health card. Likewise, patient charges for the uninsured need to be raised to reduce the likelihood that people will self-insure or "pool" episodes to use them only for inpatient care.

Health card funds should also examine current levels of provider reimbursement to be sure that providers do not experience a net loss through the program (i.e., that the reimbursement for care to card holders is lower than the revenue which would have been received from patient charges). If provider reimbursement rates are at least equal to the average cost of services, health card funds could be extended to include private sector providers, which will in turn attract more subscribers.

As discussed earlier, the health card funds should be publicized so that people know where they can purchase a card. Promotion is an ongoing expense which must be included in calculations of the financial viability of any insurance program. In addition, some adjustments to health card fund administration are possible to increase membership, i.e., altering the health card sales period to coincide with end of harvest and time when households generally have the most revenue.

The quality-related benefit of the "green channel" of speedy service during referral visits is an important incentive for households to purchase health cards. Indeed, even households which might already qualify for free care under the government's LIC program sometimes choose to purchase a health card presumably to obtain this benefit. If the health card funds are not able to work with referral care providers to assure the "green channel" service, membership may go down, especially in areas where patients have the option of seeking care at private clinics.

Myers has argued that financial viability of the health card insurance system would be enhanced by expanding or integrating health card funds into multipurpose funds (i.e., funds that engage in multiple activities such as running a general store, drug cooperative, nutrition or sanitation activities, etc., all at the same time). This integration would allow the health insurance

program to benefit from the income-generating activities of the multipurpose fund by providing greater capital reserves which would serve as a cushion against large claims costs in any one year. Also, a combined fund would permit more efficient use of the scarce time and skills of experienced managers. In addition, Myers believes that a multipurpose fund would be able to spread risk over a greater number of insured members, thus lowering the insurance cost per member, and encourage higher enrollment of richer households (who might be primarily interested in the revenue-generating benefits of fund membership rather than the health insurance).

A necessary condition for the success of multipurpose funds is good management. Intensive training and closer supervision may be needed to start-up multipurpose funds which have a health insurance component.

Finally, as Thailand's per-capita income increases and people become more and more interested in coverage for inpatient care, it is perhaps a good time to introduce an insurance program which includes this type of benefit. The German government is currently supporting experimentation with models of risk-pooling at a higher level in the Thailand health care system, i.e., tertiary care coverage, building on the community-based approach of the health card system. Another possibility to explore would be linking the inpatient insurance program to the social security system, which would provide a strong institution to help manage the larger subscriber catchment area, enrollment, and more complicated reimbursement/financial management procedures.

Topics for further research suggested by the Thailand case study include:

- Testing the hypothesis that a health insurance system integrated into a multipurpose fund with other revenue-generating objectives and activities is more likely to succeed than an independent health card fund;
- Experimentation with insurance programs which offer inpatient care coverage, particularly linkages with the social security system, and
- Financial analysis of a sample of health card funds to determine the costs of current reimbursement levels and fund management. Analysis of the costs and benefits of continuing the current practice of investing the health card fund capital in loans to card holders. Development of alternative investment strategies such as higher provider reimbursement and quality of care improvements to encourage membership retention and expansion.

2.3 CASE STUDY #3: COMMUNITY HEALTH INSURANCE IN GUINEA BISSAU

The small, mostly rural country of Guinea Bissau is located on the west coast of Africa. Guinea Bissau's health system has 18 hospitals and 122 ambulatory health centers which serve a population of under one million. In addition, at the base of the system is a network of about 450 village health posts (VHPs) which are financed through collective funds known as "*abotas*." Functioning as locally-managed community insurance plans covering basic

ambulatory care, the *abotas* provide many lessons in community prepayment program operations and sustainability.[17]

2.3.1. Institutional Description

Guinea Bissau's system of VHPs evolved from the 1976 National Health Plan, which emphasized decentralization. The prepayment financing schemes for VHPs did not begin until 1980, the same time that user fees were introduced at other levels in the health care system. Although not stated explicitly in the documentation, community insurance may have been chosen as an alternative to user fees because fees were seen as difficult to manage at this lowest level of the system, and because people do not have cash available for much of the year due to the agricultural cycle.

VHPs are entirely locally managed and staffed, although they do receive Ministry of Health (MOH) support in start-up (i.e., construction materials, initial training, start-up supply of drugs), as well as supervision and refresher training. Ongoing drug supply is the responsibility of the village committee.[18] VHPs operate according to a "contract" between the village committee and the MOH; in the contract, the VHP agrees to implement a prepaid financing system, but retains the freedom to set fee levels, terms, and timing of payments (Eklund and Stavem, 1990).

Most VHPs are two-room structures made of local materials. Stocked with about 12 essential drugs, the VHPs can treat six common conditions and offer preventive care services as well. Usually VHPs are staffed with a village health worker and a midwife, and are open only two hours or so per day.

Social characteristics which are important in describing the health sector include the solidarity and social cohesiveness of Guinea Bissau's village structure, which may be a result of geography and politics. In particular, the country's long liberation war against the Portuguese may have increased solidarity among the people. Guinea Bissau is also characterized by many small villages (average size of 300), most of which are ethnically homogeneous. Economic problems have caused great financial hardship in the country during the 1980s, although economic growth has improved in recent years. Still, with a per capita income of $190, Guinea Bissau is one of the poorest countries in the world (World Bank Development Report 1990).

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[17] This case study draws heavily on research by Eklund and Stavem (1990) and Chabot, Boal, and Da Silva (1991).

[18] The village committee is a political and administrative entity that exists in every village. In smaller villages where VHPs have been created, the village committee manages the VHP; however, in larger villages a special health subcommittee may be created to help with management (Eklund and Stavem 1990).

2.3.2. Enrollees and Employers

About 80 percent of Guinea Bissau's population live in rural areas (approximately 760,000 out of a total population of 950,000 in 1988). Most of the population is employed in agriculture, fisheries, and forestry. No data are available on the percentage employed in the formal sector. An estimated 220,000 (23 percent of the total population) live in villages which have VHPs. Access isn't equally distributed, however. For example, three of the eight regions in the country contain 66 percent of the VHPs, but only 35 percent of the population. Biombo region has zero coverage (no VHPs), while in the Gambu region, 56 percent of the population have access to VHPs.

Eklund and Stavem have observed that larger villages are more likely to have a VHP than smaller villages. In one region, the average population in villages with VHPs was 555, while the average village size overall in the region was only 185.

In 1989, Eklund and Stavem conducted an in-depth study of 18 villages with VHPs. The total population was 9,725, or 540 inhabitants per village on average. Enrollment in the community insurance plan was high, with half of the 18 villages enrolling 100 percent of the population. On average, each village enrolled 90 percent of the population, for a total enrollment of about 8,750. No information was available on characteristics of enrolled versus unenrolled populations; however, other researchers have provided anecdotal evidence that adults who are not often sick may be reluctant to join the health insurance schemes.

2.3.3. Managerial Characteristics

The premium paid by villagers entitles them to primary care from the village health worker. This includes consultation, a limited number of drugs, and free referral to the next highest level services where required. The free referral to higher levels of the health care system, introduced in 1983, was seen as a "unique chance to integrate the VHWs into [the Ministry of Health's] total health care delivery system, without paying them any money, but simply by officially endorsing their referrals (Chabot, et al., 1991, p. 50).

People who decide not to enroll in the community insurance system may be refused care, or may have to pay an additional fee which is village-imposed.[19] Each village chooses its own strategy to deal with the problem of how to treat uninsured residents.

Premiums are set by each village committee, in consultation with the village population. Eklund and Stavem found that rates per adult male ranged from P.G. 20 to P.G. 500 (mean: P.G. 203, or $0.18) in the 18 villages studied. This translated to an annual per capita collection of P.G. 181 ($0.16), with a

[19] Eklund and Stavem (1990) noted the first case (where non-insured were allowed to obtain free care "once or twice" but then were obliged to join the insurance plan or be refused care), whereas Chabot, et al., noted the second case (where villages settled on a fee to be charged for care provided to the non-insured).

range of P.G. 28 to P.G. 981.[20] Many villages raised fees in 1989, not because the cost of drugs had risen, but because utilization had increased and more drugs were needed.

Communities show diverse preferences for payment systems. While Chabot, et al. (1991) found that most villages in one region contribute once per year, Eklund and Stavem's research found most villages require contributions twice per year. Payment systems observed in the 18 villages studied included:

- Adult men and women pay the same premium (10 villages);
- Lower premium for women (four villages);
- Only men pay the premium (two villages);
- Premium charged per household (two villages);
- Fixed premium per married adult, while single adults paid less (one village), and
- Children pay premiums as well as adults (two villages).

Only one village had implemented a coinsurance policy, requiring a P.G. 50 ($0.04) copay at the time of consultation.

In Guinea Bissau's community insurance system, the population decides for itself what it can afford to pay. Whatever the residents collect is used to pay for drugs purchased by the village committee at subsidized prices set by the MOH (*see Section 2.3.5*). When the drugs run out, however, the village is not given additional loans or free drugs. Through this experience, the villages learn that they need to set their initial premium sufficiently high so that their drug supply can last through the year. The voluntary increases in premiums which may result are obviously much more acceptable than increases imposed by an external agency.

Insured individuals are given a receipt that proves membership and entitles them (and dependents, if the plan is structured in that way) to free consultations, prescribed drugs, and referral care. The small village size allows the VHW to know almost everyoneincluding who is enrolled and who is not. This prevents insurance fraud (sharing cards, etc.) from being a great problem. Community pressure and "vigilance of village health workers and midwives, who dispense drugs only as needed based on diagnosis," also help to reduce moral hazard, according to Eklund and Stavem.

The funds from the community drug purchases are retained by the MOH, and do not have to be deposited in the national treasury.

2.3.4. Relations With Providers

Guinea Bissau's community levy is a direct insurance plan, since the provider is also the insurer. The village committee is responsible for both managing service delivery (by selecting and supervising the VHWs) and managing the insurance system (by fixing the premium, using the premium to purchase drug

[20] When one outlier is excluded (a village with a very high premium rate), annual collection average per capita drops to P.G. 134, or $0.12.

supply, and monitoring utilization). There is sufficient control in this system as long as the community is small and the village committee does not become too distant from the VHWs who are providing the drugs and services.

As mentioned earlier, patients who participate in the community insurance system at the VHP level are entitled to free referrals to higher levels in the system. These other levels do not bill the community insurance plans for referral services, however.

Quality of care in the VHPs is difficult to measure. Eklund and Stavem looked at how many drugs were in stock at the time of their visit to 18 VHPs. Most of the posts had received their most recent shipment within the last two months. The shipments had been meant to last eight months, but at the time of the study, an average of seven out of 12 drugs were already out of stock. Half of the health posts had run out of chloroquine, a common drug for malaria treatment. It seems that drug stock-outs may be common in the VHPs.

At the same time, VHPs are generally highly regarded. Waiting time is low, survey respondents felt they got "good treatment" and that staff were well qualified and polite.

2.3.5. Financing and Expenditures

Total reported revenue from community insurance programs throughout the country in 1988 was $3,623 (Eklund and Stavem, 1990, p. 10). At the same time, Eklund and Stavem found in their study that 18 villages reported $1,140 in premium collections, or about $0.12 per person. When projected to all 450 VHPs in the country (using an average population of 400), community insurance revenue should have been about $21,600. The cause of this variance between reported and projected revenue is uncertain. It may be due to inflated reporting by the communities surveyed, or underreporting on the national level.

Eklund and Stavem report that the VHP system costs about P.G. 795 per capita ($0.70): P.G. 580 for drugs ($0.51) and P.G. 215 for other costs ($0.19).

Exhibit 2-5 displays a combined statement estimated for the 18 villages studied. It provides some indication of the financial problems facing the insurance systems. As evidenced in the financial statement, the premium revenue covers only 19.8 percent of total expenses and 29.2 percent of drug costs. The government subsidy may be even greater if drugs are not purchased at lowest international prices or if distribution costs exceed 30 percent, as was assumed in this analysis.[21] In fact, Eklund and Stavem estimate that the government was subsidizing 90 percent of the true cost of drug supplies by 1989. This is because the government kept the drug prices charged to VHPs steady while the local currency was experiencing rapid depreciation. A previous World Bank report estimated that from one-third to 100 percent of drug costs were being recovered through the community insurance programs in Guinea Bissau (Block, et al., 1987). The new data from Eklund and Stavem show performance below this range, which

[21] The government subsidy is more likely a donor subsidy; the Chabot report states that donors provide much of the drug supply available to the public sector in Guinea Bissau.

indicates that premium price increases are not keeping pace with increases in drug costs.

2.3.6. Utilization

Little information is available on utilization statistics among insured populations as compared with uninsured. Using two different methodologies for estimating use of village health posts, Eklund and Stavem report an average of 2.37 consultations per person per year among the population studied (range: 0.73 - 4.61). Chabot, et al., (1991) cite a previous study of utilization in one region, which found 3.5 consultations per person per year at the health post level.

EXHIBIT 2-5

COMBINED FINANCIAL STATEMENT, 18 VILLAGE INSURANCE PLANS GUINEA BISSAU, 1988

REVENUE		% Expenses
Premiums	$1,140	19.8%
Total Revenue:	$1,140	19.8%
EXPENSES		
Drug cost	$3,900	67.6%
Other	$1,872	32.4%
Total Expenses:	$5,772	100.0%

Notes: Drug expense estimates drugs at international (UNIPAC) prices plus 30 percent distribution costs (Eklund and Stavem, p. 20 and Table 16). Other expenses include supervision and training.

Source: Eklund and Stavem 1990.

Researchers have found some evidence that utilization rates at the health post level are connected to the availability of drugs and the distance from a referral center. It is not surprising that the number of visits increases when drugs are available. What is less expected is that utilization at health posts decreases with distance to the nearest referral center; that is, the greater the distance from the health center, the less frequently people visit the VHP. We might expect to see the opposite, since the total cost (including travel cost and time) of visiting the health center increases with its distance, making the VHP a more desirable alternative. One possible reason for the observed relationship

between VHP utilization and distance is that people are interested in the VHP primarily as a way to obtain free referral to the health center level, and if the health center is very far away, people are less likely to want to go to it (or to visit the VHP to obtain a referral slip). Further research is needed in Guinea Bissau to explain these relationships and draw policy lessons from them.[22]

2.3.7. Synthesis and Topics for Further Research

Guinea Bissau's community health insurance system was designed as an alternative to user fees for financing primary health care services, especially drugs, at the health post level. User fees seemed difficult to manage at this low level in the health care system, and because people don't have cash available for much of the year, user fees might have reduced demand for basic health care services considerably. The community insurance plans seem to have avoided these problems by creating a financial mechanism that requires little administrative effort and encourages fairly high utilization levels for a cost-recovery program.[23]

One of the important lessons gleaned from the Guinea Bissau experience is that self-determination and a gradual implementation process that allows people to learn for themselves are critical to sustaining community insurance schemes. Over time, people learn the results of setting premiums too low; where these results are unacceptable, villages agree among themselves to raise premiums, which makes compliance to the new rates much higher. Also, the flexibility allowed in village selection of payment systems in Guinea Bissau shows respect for local values and probably has served to make the community insurance systems more acceptable to the population. Guinea Bissau's high enrollment rates prove that insurance systems don't have to be compulsory to avoid problems of adverse selection. Finally, factors such as the small villages and unique "social cohesiveness" found in Guinea Bissau permitted greater control and avoided many of the dangers of insurance fraud. The small scale of the programs also allowed greater efficiency, since the plans don't need elaborate records, billing, or systems to verify insurance status.

The biggest problems facing the community insurance plans are related to financing and drug supply. First, current operating subsidies are very large. As noted earlier, less than 30 percent of drug costs are recovered, and the situation may be getting worse as government drug prices are not adjusted for inflation and currency devaluation. Clearly, the community insurance schemes are not financially self-sustaining, but can people afford to pay more? Probably not until Guinea Bissau's standard of living improves, which will require increased economic growth.

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[22] Eklund and Stevem also examined the relationship between premium charges and utilization. They did not find any statistical evidence that villages which charged higher premiums had higher utilization rates per capita, as might be expected since higher premium rates would allow the VHP to purchase a larger supply of drugs.

[23] One unpublished World Bank study on pharmaceutical cost-recovery programs in Sub-Saharan Africa found that the majority of programs had average utilization rates of one visit or less per person per year.

Secondly, stock-outs are a serious problem within the VHPs. The posts cannot seem to keep enough drugs in stock for many reasons: weak supply and distribution system, poor accountability and control at higher levels of the health care system, lack of a method to convert premium revenue (paid in local currency) into the foreign exchange needed to purchase drugs, etc. The drug supply system must be strengthened, and supply managers must be made more accountable before the community insurance schemes can operate effectively.

Finally, there seem to be few cost-control mechanisms included in Guinea Bissau's community plans. Copayments seem uncommon, which may contribute to the problem of stock-outs by allowing some excessive or inappropriate consumption. Few plans seem to require family membership, which may lead to problems of adverse selection; however, since overall enrollment is very high (averaging 90 percent in 18 villages studied) the effects are minimal.

The curious fact of utilization rates which decrease with distance from the next closest referral center needs to be explored further. In fact, it may be helpful to examine the entire referral structure, focusing on how the financing systems and incentives at each level influence the operation of the referral system. Such a review may find that the objectives of the financing systems and referral systems are not working in concert and need modification. For example, the policy of free referrals from the VHPs may help the village health workers gain credibility, but may also be undermining the cost-recovery objectives of the user fee systems at higher levels. If this is true, it may be appropriate to introduce a referral fee to be paid not by the individual patient, but by the health insurance plan from the premium revenues. This would increase the accountability and "cost consciousness" of the VHWs, encouraging them to refer patients only when necessary. Similar models exist in the Zairian health zones of Kindu and Kasongo (Bitran 1986, 1987).

In conclusion, the Guinea Bissau community financing experience may be applicable to other countries wishing to extend insurance coverage for the most basic curative services and drugs provided by village health workers to the rural poor. The system is most appropriately applied in countries where the rural population live in small, cohesive, and stable villages, and where statutes permit decentralized management of finances for health care. The costs which can be covered through such a system should be seen as very limited, including mainly the cost of drug supply. The system also requires a well-functioning drug supply system with sufficient management expertise within the MOH to set and review drug prices regularly, and to monitor and evaluate the community insurance systems.

Topics for further research, as suggested by the Guinea Bissau experience, include:

- What are the problems a vertically integrated health care provider faces in trying to provide insurance coverage at only one level in the system (i.e., at the health post level, but not higher levels)? How can the insurance system be integrated effectively with other financing mechanisms and with the referral system which links the different levels in the health care system?

- What information is needed to monitor and evaluate community health insurance systems? Who should be responsible for monitoring and evaluation, and what level of decentralization is appropriate for data collection, analysis, and reporting? What methods should be used for data collection and analysis?

3.0 APPROACH #2: SOCIAL SECURITY COVERAGE EXTENSION

3.1 CASE STUDY #4: COVERAGE EXTENSION THROUGH INSTITUTIONAL REFORM: HEALTH MINISTRY - SOCIAL SECURITY INTEGRATION IN PANAMA[24]

During the early 1970s, Panama initiated a reform process that radically altered the institutional structure of the country's health sector. The then-military government commenced the unification of the service delivery systems of the two largest institutional actors: the Social Security Fund (CSS) and Health Ministry (MS). By 1977, all residents of the country's seven interior provinces, including the "transit" province of Colon, received health care in regionalized and integrated health service systems.[25] In that year, the integrated regions contained nearly 60 percent of Panama's population. The majority of Panamanians with little or no access to health care resided in the interior. Since coverage extension—mainly to low-income populations in rural areas—was arguably the principal rationale for Integration, the reform merits attention.

Under Integration, the uninsured population, generally low-income Panamanians not affiliated with CSS, were granted access to underutilized, higher quality CSS services. Previous to the reform, middle-income salaried workers and civil servants had exclusive access to CSS services. In addition, the government ordered CSS to provide resources to assist MS extend primary health coverage to unprotected population groups in the integrated regions. This was a major break with past CSS practices of directing resources to provide mostly hospital and specialist services to insured groups in urban areas. Finally, the CSS and MS sought to rationalize service delivery through eliminating service duplication and through unifying administration and material supply systems in all integrated regions.

Since the mid-1950s, a plethora of policy statements from international agencies together with agreements issued during regional meetings of Latin American health ministers and social security representatives have called for the Integration or at least "extensive coordination" of social security and health ministry health service systems. To date, only Panama and Costa Rica, albeit through different approaches, have attempted to unify the previous dual systems.[26]

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[24]This case study draws from LaForgia (1990) and is based on data collected in three integrated regions: Veraguas, Chiriqui, and Azuero (Herrera and Los Santos).

[25]The highly urbanized provinces bordering the Canal Zone, Panama, and Colon are often referred to as "transit" provinces. Taken together, the remaining seven provinces are known as the "interior."

[26] It was not the recommendations of international community that were uppermost in the minds of the Panamanians upon initiation of Integration. In Panama, Integration's origin was intricately bound to the military-led political process. It was Panama's military regime that set the conditions whereby Integration came to the fore as an important policy issue. It was part of a general regime goal to counteract the effects of uneven development within an overall process of state-sponsored development. Incorporation of disenfranchised, low-income Panamanians into the social, political, and economic mainstream was part of a military-defined "national integration" doctrine that also sought the incorporation of the Canal Zone into the nation-state. It was from these groups, especially those residing in the interior provinces, that the military constructed its base of political support.

From an insurance perspective, Integration is based on the social solidarity principle. It was part of a broader social policy that sought to distribute resources from relatively better-off, full-time salaried employees in the urban formal sector, to low-income groups particularly in the traditional rural sector. Integration sought to extend the health component of the social insurance regimen. All CSS benefits are financed through an obligatory payroll tax on formal sector wages, shared by employee and employer. All residents of integrated areas are entitled to the same health benefits, regardless of their financial contribution to the CSS. General tax revenues in theory pay for the groups unaffiliated with CSS.

The reform embodied three principal objectives: extend coverage to underserved or unserved population groups, particularly in rural areas; improve equity of access to health services through the elimination of stratified access to state-supported health services; and increase inefficiency of service delivery, especially through elimination of service duplication. In effect, Integration sought to combine the strong points of both the MS and CSS health service systems, strengthen community-based primary health care services of the MS, and at the same time fortify hospital and specialty services in the CSS tradition.

The outcomes of Integration were mixed and depend on the particular time period in question. This case study seeks to explain the factors affecting Integration's performance during two distinct phases: the expansion (or implementation) phase of the 1970s and the contraction phase of the 1980s. The outcomes of each phase suggest lessons for policymakers as they relate to the implementation and continuity of major institutional reforms involving health coverage extension through social insurance.

During the implementation phase, Integration was relatively successful in extending coverage, reducing stratified access, and fostering more rationalized service provision. Performance was related to strong political support and the CSS's sizeable resource contribution to underwrite recurrent and capital costs. In the 1980s, however, the process made fewer gains and began to lose ground in Panama's quest to achieve "equal health for all." For example, it fell short of achieving some equity goals; full national extension was abandoned; and inefficiencies threatened the reform's continuity. During this period, as political support waned and the CSS reduced funding for the integrated regions, the reform's structural and managerial flaws-originating from the implementation phase-became apparent.

Integration's shortcomings center on the reform's inability to resolve three key questions: who pays, who manages, and how to control costs. Specifically, Integration failed to: (1) develop a financing formula (together with appropriate payment mechanisms) acceptable to both the CSS and MS that paid for the costs of health care provided to insured and uninsured patients, respectively, (2) create the institutional and legal mechanisms that defined decision-making responsibilities among CSS, MS, and regional authorities, and (3) address a severe moral hazard problem and highly inefficient service delivery system.

3.1.1. Institutional Description

Integration was implemented piecemeal in seven provinces between 1973 and 1977: Colon, Veraguas, and Bocas del Toro in 1973; Herrera and Los Santos (together known as Azuero) in 1975; Chiriquí, the eastern and western parts of Panama Province, in 1976; and Coclé and Darién in 1977. Panama City and its satellite city, Chorrera, remain unintegrated.

Panama's Integration model can best be described as an unified services approach. The model is illustrated in Exhibit 3-1. Integration unified the CSS and MS provider networks through the creation of regional administrative structures. Significantly, financing remains separate. This model was a political compromise that ensured the central-level institutional integrity of both CSS and MS. This was demanded by the respective bureaucracies. In effect, Integration occurred only below the central level, unifying service provision and some administrative functions. The model centralized all decision making at the regional level, eliminating pre-Integration MS and CSS regional and sub-regional administrative structures.

Integrated regions cover a wide range of primary, secondary, and tertiary services. Service provision is limited only by the supply of services in any given region. If a service is not offered in one region, a patient can seek care in another integrated region. Uninsured patients are not permitted access to CSS tertiary services offered in unintegrated Panama City or to subsidized services provided in private hospitals under contract with the CSS.

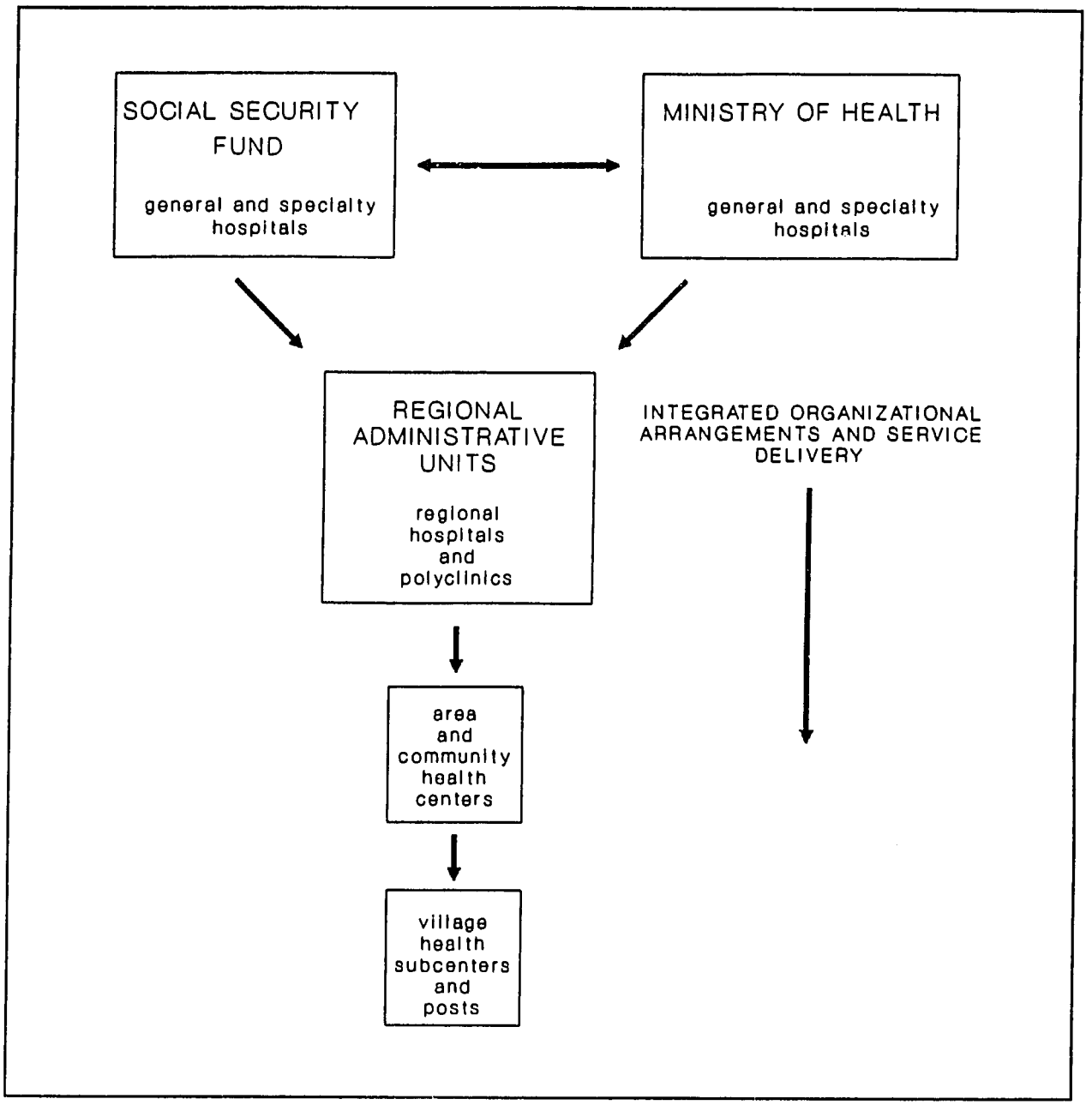
Under Integration, each institution retains proprietorship of its respective facility network, but service duplication is eliminated. In provinces in which both the CSS and MS had a large general hospital, such as in Chiriquí, the services were partitioned: the MS hospital specialized in obstetric, gynecology, and pediatrics; the CSS hospital combined all other specialties. Regarding ambulatory services, CSS polyclinics and in some cases CSS hospitals became centers for specialty outpatient services. General medicine and periodic pediatric and obstetric care were provided at MS urban and rural health centers. CSS and MS professional personnel were assigned to facilities according to need, rather than institutional employer. Within a year after Integration, it was not uncommon to find CSS physicians and nurses staffing MS facilities and vice versa.

Because of the deteriorated condition of MS facilities at the time, the CSS centered its capital expenditures on upgrading MS hospitals as well as on expanding its own medical service infrastructure. CSS also equipped several MS hospitals, invested in the construction of a limited number of rural health centers, and established and supplied pharmacies in all MS ambulatory facilities.

Integration fostered a rapid influx of professional and technical personnel to the interior provinces. The CSS contracted the major part of the new personnel. Between the first year of Integration and 1982, the number of doctors, nurses, and diagnostic technicians doubled. General practitioners who provided care in MS hospital wards were eventually replaced by specialists. MS health centers, which in the past provided medical services on a part-time basis, were assigned at least one permanent general practitioner.

EXHIBIT 3-1

PANAMA MODEL OF SOCIAL SECURITY - HEALTH MINISTRY INTEGRATION



While CSS focused on increasing physical and human resources dedicated to medical services especially in hospital and polyclinics, the MS directed its attention to extending its network of rural and peri-urban ambulatory facilities. Through external and government financing, MS created a new level within the pyramidal structure of the integrated regions consisting of village-based health posts staffed by a community health assistant (CHA). Between 1974 and 1982, 300 health posts (serving over 160,000 people) had been established and staffed by

CHAs. During that same period, 25 health centers and 30 subcenters were constructed or remodeled (with additions) in the integrated regions. The former facility is staffed by a physician whereas a nurse auxiliary is stationed in the latter. Again, with the exception of the CHAs, the CSS bore most of the staffing cost of these facilities.

3.1.1.1. Legal Framework

Integration was mandated in the military-inspired 1972 Constitution. The constitutional article (No. 107) stipulates: "Government health agencies, including autonomous and semi-autonomous institutions, shall be integrated organically and functionally. This shall be regulated by the law." Despite the constitutional mandate, an Integration law was never enacted nor a coherent policy formulated. This was a major failure of Integration's implementation phase. It stems from the lack of even minimal consensus between the CSS and MS concerning the issues of institutional authority and financial participation. From the beginning, many CSS bureaucrats rejected the concept of Integration and considered institutional integrity a major point in question. Even after implementation in the interior provinces was complete (in 1977), the MS and CSS could not agree on a legal mandate. For example, between 1979 and 1986, four different bills were elaborated, one by the CSS and three by MS. However, each met a swift end, in part because inter-institutional disputes over the question of who pays and who controls.

3.1.1.2. Institutional Relations

The implementation process occurred literally overnight. It commenced without a law, specific policy, or even a clear definition of the institutional responsibilities. Integration policy was made by the health officials and groups inside and outside of government who influenced the implementation process. Before proceeding with an analysis of coverage, managerial, and financial aspects of reform, it is important to understand how Integration overcame, initially at least, a paradoxical yet inherent defect: the CSS and MS, by definition the principal actors and subjects of Integration, were generally unable to share control or even coordinate decision making in the integrated regions. This was evident from the outset. How then, against seemingly impossible odds, was Integration successfully implemented and, initially at least, able to achieve many of its goals?

General Omar Torrijos, the country's popular military dictator at the time, represented the key source of political support for Integration at a time when he enjoyed unmitigated political power. In 1973, he ordered Integration to be implemented and appointed or approved the key personnel, including regional directors, known as "integrators." It was Torrijos who obligated the CSS to attend to the resource demands of the regional directors in the integrated regions.

The arrangements depended on two factors: a stable political climate which contributed to strong central support for Integration; and a growing economy which enabled CSS to direct additional resources to Integration. Under these conditions, Integration prospered during the 1970s. However, in the 1980s, political mobilization and polarization after Torrijos' death, combined with

severe economic crisis, sapped the foundations on which Integration was built. Powerful physician organizations, who became major players in the anti-military opposition, waged a highly publicized campaign to dismantle the reform. CSS and MS conflict intensified as competing political parties gained control of these institutions. The CSS (together with the organized physicians) pointed to Integration as the main cause of the institution's grave liquidity crisis.[27]

The political chaos and economic downturn of the 1980s made Integration's policy, organizational, and administrative shortcomings more evident. These deficiencies are discussed in the subsequent sections. The point being set forth here is that temporary political alliances, personal bonds among confidence appointees, and tentative bureaucratic arrangements may have been key to launching Integration, particularly in the face of institutional opposition. Nevertheless, under a different set political and economic conditions, these same arrangements contributed to the reform's decline in the 1980s, and perhaps to its undoing in the 1990s.

3.1.2. Population Coverage

Integration represented the granting of protection for a single risk, health care, to groups unaffiliated with CSS. It did not involve extension of social security benefits related to other CSS-covered risks such as work accidents, old age, invalidity, etc. The reform provided the mechanism whereby health coverage was expanded to a relatively large segment of Panama's low-income population without universalization of CSS affiliation. In 1986, 1.2 million Panamanians, representing 55 percent of the total population, were covered through the integrated service systems. Less than one-half (571,000 people) were affiliated with CSS. Approximately 42 percent of all CSS-insured resided in regions with integrated service delivery. The remainder lived in unintegrated areas of Panama Province.

Integration sought to extend health coverage to the unserved population and at the same time grant them access to services to which they were previously excluded. This section focuses on the issues of access extension and equity.

3.1.2.1. Coverage Extension

At the time of implementation, rural Panamanians represented approximately 40 percent of the nation's population. Nearly two-thirds of this group had little or no access to health services of any kind. Residents of urban areas were three times more likely to have access to potable water, sanitary or sewage services, and professional attention at birth than their rural counterparts.

Exhibit 3-2 shows that the integrated systems have made great strides in extending coverage to rural populations. This is particularly evident in terms of the doubling of access to medical attention, water supply, and sanitation services. Infant mortality was halved, due to several factors: improvements in

[27]The CSS began to withdraw financial support for the integrated regions: redirecting resources to unintegrated Panama City; financing services provided in private facilities to the insured population in integrated regions, and favoring its own properties with special subsidies while letting MS facilities and primary health programs fend for themselves.

water quality and sanitation in urban areas as well as greater coverage in rural areas; greater access to and utilization of health centers; and extension of immunization, prenatal, and well-baby coverage. Between Integration (1973-1976) and 1986, growth in outpatient utilization in rural facilities outpaced increases in utilization in urban facilities. This has occurred despite greater population growth in urban areas. A 1986 survey found that nearly 85 percent of women 15 to 44 years of age who had given birth during the previous five years had received at least one pre-natal consultation during their most recent pregnancy. Over 80 percent of rural mothers claimed to have brought their infants to a health facility for a well-baby check within a month after birth.

EXHIBIT 3-2
A COMPARISON OF COVERAGE AND HEALTH INDICATORS IN PARTLY URBANIZED AND RURAL DISTRICTS: 1970 AND 1980/86

INDICATOR	PARTLY URBANIZED[1] DISTRICTS		RURAL DISTRICTS	
	1970	1980/86	1970	1980/86
NO. OF DISTRICTS	11	11	27	27
POPULATION (000)	287.8	347.0	245.2	365.8
% URBAN	39%	44%	0%	3%[2]
% HH W/ACCESS TO POTABLE WATER[3]	64%	70%	26%	43%
% HH W/ACCESS TO SANITATION SERV.[3]	76%	88%	34%	64%
% BIRTHS W/ PROF. ATTENTION[4]	63%	92%	28%	57%
% DEATHS W/ MEDICAL CERT.[4]	51%	81%	22%	52%
INFANT MORTALITY[3,4]	44.5	22.4	71.6	40.6

[1]Between 1970 and 1980 four districts became partly urbanized.
[2]Data refer to 1970 and 1980.
[3]Data refer to two three-year periods: 1969-71 and 1984-86.
[4]Adjusted figures by the Planning Ministry to account for omissions.

Sources: Contraloria General de la Republica. Censos Nacionales, 1970, 1980.
_____ Situacion Demografica, Estadisticas Vitales, various years.
Ministerio de Planificacion y Politica Economic, "Estimacion de tasa de mortalidad infantil por distrito, 1970 y 1980." 1987.

Also, because of expansion of rural infrastructure and introduction of preventive programs under Integration, most rural residents have geographical access to nurses, nurse auxiliaries, and community health assistants. In 1986, the ratio of nurses and community health workers to physicians in rural facilities was 4:1. For example, over 80 percent of nurse consultations in Chiriquí and 50 percent in Azuero were provided in rural facilities.
This progress is not solely attributable to Integration. Nevertheless, through CSS financing of hospital infrastructure improvements together with underwriting the recurrent costs of medical service provision in MS facilities, the MS, with the aid of international financing, was able to focus its scarce resources on extending coverage to rural areas. This was achieved through facility construction and special preventive and primary health care programs.

3.1.2.2. Equity of Access

Integration was partially successful in improving equity of access of uninsured vis-a-vis insured populations. Social security coverage (and, hence, access to CSS services) is highly correlated with place of residence, income, and type of economic activity. In the 1970s, whereas over one-third of residents of highly-urbanized Panama Province were CSS-insured, only eight percent of interior residents were affiliated. Most of these resided in secondary cities. At that time, the interior provinces contained over 50 percent of the population. Workers participating in the commercial, industrial, service, and construction sectors constituted 88 percent of CSS insured, but composed 51 percent of the economically active population (EAP). In 1970, while the average CSS-insured worker earned $1,908 annually, uninsured agricultural laborers earned $730. Approximately 50 percent of farm families in several interior provinces earned less than $500.[28]

Upon Integration, the uninsured population was granted access to an array of services that at the time were unavailable in MS facilities. These include specialty medical, diagnostic, and technical services (e.g., psychology, physical therapy, speech therapy, etc.) and tertiary care in CSS regional hospitals. Exhibit 3-3 compares the percent of total outpatient medical consultations and hospital discharges provided to uninsured in CSS facilities during the immediate pre- and post-Integration periods. The data demonstrate that in a relatively short period the closed CSS health system that catered almost exclusively to insured patients opened it doors to the uninsured. In effect, the CSS provider network is no longer a closed system (*see Section 3.1.5.*).

EXHIBIT 3-3
PERCENT DISTRIBUTION OF UTILIZATION OF CSS FACILITIES BY UNINSURED PATIENTS: PRE- AND POST-INTEGRATION

CSS FACILITY	YEAR INTEGRATION	PRE-INTEGRATION (uninsured as % of total)	POST-INTEGRATION (uninsured as % of total)
POLYCLINICS (ambulatory visits)[1]			
COLON CITY	1973	0.8% (1972)	11% (1974)
SANTIAGO	1973	0.0% (1972)	35% (1974)
LAS TABLAS	1975	0.0% (1974)	25% (1976)
CHITRE	1975	0.0% (1974)	18% (1976)
BUGABA	1976	0.3% (1974)	29% (1977)
HOSPITAL (discharges)			
R. HERNANDEZ	1976	5.0% (1975)	42% (1977)

[1]Refer mainly to physician consultations but include consultations with speech therapists, psychologists, physical therapists, social workers, and other professionals.

Source: CSS. Estadistica de Salud, 1972, 1973, 1974.

[28]The relative differences between the insured and uninsured populations hold for the 1970s, 1980s, and probably for the 1990s. Based on data from the 1980 census and household surveys conducted between 1980 and 1984, CSS coverage was found to be highly correlated with income, education, urban residence, access to health care, and utilization ($p < .001$) (Herrera, 1985; La Forgia 1990).

Inequities persist, however. Stratified access was not eliminated in some integrated regions. CSS-financed "subsidized" beds in private facilities for the insured population constitute the principal elements of stratification. Since the 1960s, the CSS has contracted inpatient services with private hospitals located in the major cities of the interior provinces. CSS reimburses the facilities a fixed amount per patient day, and patients have access to drugs, supplies, and diagnostic exams provided by the nearby CSS polyclinic. In return, the private facility provides hotel services at no charge to the patient. However, patients pay physician honoraria. The private hospitals are lucrative businesses for the facility owners and associated physicians, albeit wholly dependent on CSS subsidies. The reimbursement mechanism provides an incentive to the facility to keep the beds full. It is common practice to extend patient days beyond what is medically required.

Exhibit 3-4 demonstrates the contrasting indices of inpatient stratification in Chiriquí and the central provinces (Veraguas, Azuero, Coclé). Measured as the number of hospital discharges of insured inpatients in special "private" wards (in MS hospitals) and in "subsidized" beds as a percent of total discharges, inpatient stratification was eliminated in Chiriquí but increased in the central provinces. During the implementation phase, CSS special wards and subsidized beds expanded to placate physician fears of perceived reduction in income from private practice. Through this measure, the government sought to check any possibility of organized opposition to Integration from the physicians.

EXHIBIT 3-4
INDEX OF STRATIFIED USE OF CSS INPATIENT SERVICES DURING THREE TIME PERIODS: CHIRIQUI AND CENTRAL PROVINCES

TIME PERIOD	CHIRIQUI		CENTRAL REGION[2]	
	INDEX[1]	% INSURED	INDEX[1]	% INSURED
PRE-INTEGRATION	.24	33%	.18	16%
1979	.05	45%	.19	26%
1985/86	0	60%	.21	35%

[1]Ratio of no. of hospital discharges of insured patients in CSS special wards (in MS hospitals) and in "subsidized beds" (in private hospitals) to total regional discharges of insured and uninsured patients.
[2]Herrera, Los Santos, Veraguas, and Cocle.

Source: La Forgia, 1990

During the 1980s, however, contracts with private facilities were expanded in the Central region for two reasons: physicians were organized in large group practices in which their leaders were closely tied to the government; and, as part of a disengagement policy, CSS began to redirect funds away from MS facilities to services to which only the insured had access (e.g, the subsidized beds). In 1986, half of all hospital discharges of insured users were registered in subsidized beds in the central provinces. In contrast, large group practices are absent in Chiriquí where private practice is of an ambulatory, storefront variety. But, more importantly, physician owners of private hospitals were allied with anti-government groups. Subsidized beds were suspended in 1983, a year of intense physician opposition to the government.

3.1.3. Managerial Characteristics

The decentralization of allocation decision making to the regional directors was key to implementation performance. In operational terms, this meant that the directors oversaw the hiring of professional and non-professional personnel and managed regional purchases of materials and supplies. Regional control of resource allocation was a major departure from the highly centralized CSS administrative structure, which in the past exerted tight control over most expenditures. Nevertheless, CSS retained central control of drug and medical supply procurement and distribution. The regional directors pooled any CSS and MS discretionary funds with earnings from user fees into a single, regionally-managed fund. It took the MS and CSS several years to agree to standardize some administrative operations such as accounting and information systems. MS and CSS budgets and payrolls remained separate.

Despite the horizontal unification of service delivery and some administrative functions, the integrated regions were born with an inherent vertical duality that contributed to deficient medical care organization, chaotic resource allocation, and inadequate cost control. These deficiencies are the subjects of this section. The reader should keep in mind that these managerial shortcomings resulted from the lack of inter-institutional coordination and absence of specific policy guidelines described earlier.

3.1.3.1. Organization of Regional Service Delivery

Perhaps the greatest deficiency of the integrated systems was the failure of central and regional authorities to contemplate how the increased flow of resources would be effectively incorporated into a regionalized health service system. Decision makers did not delineate the proper mix of (and interaction among) primary, secondary, and national-level tertiary services. Services were extended in a fragmented manner. The CSS and MS supported separate and uncoordinated infrastructure and service extension efforts based on their contrasting institutional health care models. CSS focused on medical services in urban hospitals and polyclinics while the MS emphasized preventive and primary health care in peri-urban and rural areas. Each service type became vertically attached to its institutional sponsor.

The CSS traditional curative model became the de facto health delivery mode in part because of Integration's dependence on CSS financing. Despite the launching of a primary health care program based on community health assistants and preventive services, by the 1980s these activities increasingly appeared alien to the normal medically-oriented operations within the integrated regions. This became even more evident when the CSS began to curtail funding for services and programs in rural areas.

Directing resources to hospitals and specialty clinics–to the detriment of peripheral health centers–receives the highest priority in the integrated regions. For example, in 1986, regional depositories of drugs and supplies for MS health centers in Veraguas and Azuero transferred 30 and 10 percent of the respective value of total health center shipments to hospitals and specialty polyclinics. The value of the transferred items corresponded to one-half the value of total deliveries to rural facilities in Veraguas. In Azuero, transfers represented 20 percent of rural distributions. In that same year, the regional

authorities in Veraguas and Chiriquí awarded half the user fee earnings collected from rural facilities to regional hospitals. Because of the perverse price signaling and the absence of drugs and supplies, former users of rural and peripheral health centers began to crowd already overutilized hospital emergency services.

When the CSS began to withdraw financial support for Integration in the 1980s, funding for MS facilities and preventive programs (e.g., mother-child, family planning, community health assistants) suffered disproportionately. Supplies for these services and programs were restricted. Yet subsidies for services in CSS hospitals, private facilities providing services to insured groups, and unintegrated Panama City grew in real terms.

3.1.3.2. Resource Allocation

Since guidelines indicating CSS and MS financial responsibility were absent, regional directors managed the flow of resources between the center and the periphery. As noted earlier, the acquisition of resources was dependent on their ties to the Health Minister, CSS Director, or Torrijos himself. Through their control of resources, patronage, and favors, integrators established downward vertical attachments to local stakeholders. Lacking clear budgetary guidelines, regional directors tended to seek all possible resources to accommodate regional demand makers, especially specialists who staffed the hospitals. Inefficiencies resulting from this arrangement were evident: the establishment of a neurosurgery unit in a 80-bed regional hospital, a three-hour drive on a paved road to a similar unit in Panama City. The purchase of unnecessary and underutilized medical equipment and the oversupply of specialists were other consequences. Thirty different specialties were offered in Chiriquí, serving a population of 350,000 in 1986. In an extreme case, 23 specialists representing 10 different specialties shared the aforementioned 80-bed hospital. In sum, the separation of the budgeting (and financing) process coupled with an unregulated resource allocation process resulted in a generally anarchic distribution of human, equipment, and infrastructure resources within the integrated regions.

3.1.3.3. Cost Control

Few cost-control measures have been enacted by the integrated regions. The insured population in both integrated and unintegrated regions are provided all services free of charge, though the uninsured population are required to pay user fees. Through a means test, the poor are exonerated from payment or contribute a discounted fee. Income from user fees represents less than five percent of revenues in the integrated regions. Nevertheless, as explained in Section 3.1.6, it is the insured population that consumes a large portion of resources, especially in terms of drugs, diagnostic services, and outpatient visits.

Similar to CSS and MS services in unintegrated Panama City, the provision of medical care is poorly organized: users have direct access to expensive specialty services, referral systems are dysfunctional, and physician productivity is low.

Evidence of unnecessary and costly service provision abounds. For example, physicians write an average of 20 to 30 complacent prescriptions per week. That is, they prescribe drugs solicited by people without providing a medical consultation. Moreover, since diagnoses are hurried and often superficial, physicians tend to order a battery of diagnostic tests. A high number of tests are never claimed by patients. For example, in a large polyclinic-based laboratory in Chiriquí, the average order calls for five tests per patient in 1986. But approximately 600 patients per month, representing 15 percent of monthly laboratory patients, never picked up their test results. The unused tests represented a loss of nearly $38,000 in 1986. In that same year, the polyclinic spent approximately $25,000 in medical supplies. It is important to note that these medical practices are symptomatic of CSS medical care in the integrated and unintegrated areas.

3.1.4. Relations With Providers

Integration achieved greater rationalization through eliminating service duplication, terminating CSS and MS competition for professional personal, and consolidating supply systems and some administrative functions. However, greater rationalization did not result in greater efficiency. As infrastructure expanded and supply of personnel rose, the integrated systems exhibited increasingly inefficient service provision. In large measure, inefficiencies are related to the direct service modality of the integrated systems.

With few modifications, the integrated regions replicated most of the costly deficiencies that plagued the CSS and MS provider networks before Integration (and currently in the unintegrated areas). These include: absenteeism and work evasion, low productivity, non-functional referral systems, queues, and perceived low quality. These follow from hiring practices based on political and confidence criteria, the perverse incentives of the compensation system, anarchic medical care organization, and lack of quality control.

This section focuses on perhaps the most costly and contradictory inefficiency afflicting the integrated regions: oversupply of physicians coupled with undersupply of physician services. Between the early years of Integration and 1986, while the number of physicians more than doubled, the per-physician production of outpatient consultations halved. In other words, production was increased simply by augmenting the number of producers. By 1986, physician salaries comprised 40 percent of the $35 million in salary expenditures (71 percent of total recurrent expenditures) in three integrated regions.

All physicians receive 40-hour contracts and are expected to be on the job eight hours per day. The Integrated systems adopted the CSS piecework norms for outpatient services. Each physician according to his specialty is assigned a quota of patients per hour (five for general practitioners, three or four for specialists). Most physicians do not meet these standards and set their own patient quotas and work schedules with little or no supervision by health authorities. It is common practice for physicians to halve their work hours and production norms. For example, in a large CSS general medicine polyclinic in Veraguas, 14 general practitioners are assigned no more than 25 patients per eight-hour day. The norm called for 40 patients. The quota was lowered arbitrarily by the physicians. The 14 physicians average 21 consultations per

eight-hour workday and on the average are absent (with pay) 2.5 days per month. About 75 patients are turned away each week at the polyclinic due to lack of "cupos" or appointment slots.

Similar to the general practice clinics, many specialty clinics are characterized by the apparently paradoxical condition of waiting lists and unfilled "cupos." For example, in 1986, nearly 30 percent of the available appointment slots in a large specialty polyclinic in Chiriquí were never utilized. For many specialties this situation resulted from physician reduction of appointments and their erratic comings and goings, which in turn resulted in waiting time of one to three months. For other specialties, however, appointments were never demanded. This was related to physician oversupply as well as patient knowledge of physician behaviors.

Inpatient services suffer a similar plight. Hospital work schedules dictate that specialists spend five hours per day performing an assortment of duties. Most spend less than one hour per day in the facility. Surgical specialists operate one morning a week performing one major and two minor interventions. Operating rooms are usually vacated before noon except for emergencies, leaving costly support staff idle for the remainder of the workday. Operating room logs confirm the low output. Most surgical specialists perform between 10 and 15 interventions per month. Most of these are minor (e.g., hernias, polypectomies, sterilizations). Yet waiting lists for surgeries in all hospitals are extensive. For example, in Azuero in 1987, one had to wait an average of four months for general surgery, two months for orthopedic surgery, and eight months for ophthalmological surgery.

Taken together, the trimming of production norms, reduction of work schedules, and underutilization of appointment slots and operating theaters result in highly inefficient service operations. In the foregoing case of specialty polyclinic, the underutilized cupos cost the integrated system $175,000 in physician salaries alone in 1986. This amount represents nearly 50 percent of provincial expenditures in drugs and medical supplies in rural areas. Twenty-five percent of specialist staff time is unnecessary. Likewise, if general practitioners were kept to their production norms, their ranks could be reduced by approximately one-third with little effect on service supply.

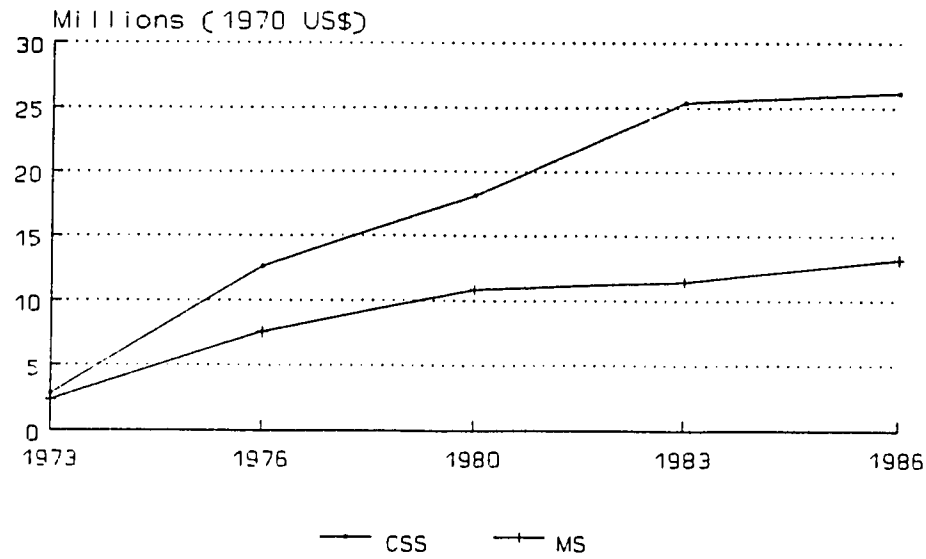
3.1.5. Financing and Expenditures

Integration became a social security-financed social welfare program in the form of noncontributory health care for low-income groups. At the onset of Integration, CSS officials thought CSS and MS financial obligations would be shared equally through some coverage, utilization, or cost-based formula. But guidelines regarding financial responsibility were never introduced. In large measure, employee and employer payroll taxes finance Integration and ultimately the health coverage extension to uninsured groups.

During the early years of implementation, Torrijos obligated CSS to use its resources to strengthen health services in the interior provinces. Decisions were made at high government levels that imposed increasing financial responsibility on CSS. This was due in part to governmental financial constraints. The government was unable to increase the MS budget to meet personnel and other

operational costs of the rapidly expanding health infrastructure. For example, CSS took charge of all procurement and supply of drugs and medical supplies for all integrated systems and contracted the major part of the new personnel. Exhibit 3-5 shows the widening gap between CSS and MS financing of recurrent costs of the integrated systems.

EXHIBIT 3-5
CSS AND MS RECURRENT EXPENSES ON HEALTH SERVICES IN INTEGRATED REGIONS 1973-86



1973 Bocas del Toro, Colon, Veraguas
1976 All Provinces less Cocle, Darien
1980-86 All Integrated Provinces

By 1986, CSS was paying the bill for all drugs and medical supplies, half of non-medical supplies and contracted services, and two-thirds of salaries.[29]

At this point, one can ask whether the increase in resources directed at the interior provinces would have happened otherwise, that is, without Integration. Expansion of rural infrastructure, e.g., health centers, piped water systems, and

[29]It is difficult to compare CSS and MS capital investments in the integrated regions. During the 1973-83 period, the CSS reported spending nearly $23 million on capital investments in the integrated regions. Over the same period, data from the Comptroller General's Auditing Department demonstrate that the MS spent $29 million on capital investments. However, the MS definition of capital investments is qualitatively different from that of the CSS. The MS includes all expenditures incurred in the implementation and operation of vertical and special preventive programs. Whereas the CSS figures refer mainly to facility construction and equipment expenses. Moreover, at least half of MS capital outlays were externally financed, mostly through loans.

sanitary services, probably would have continued unaffected in a dual system. Expansion was financed externally. Nevertheless, given the government's budget constraints, it would have been difficult for the MS to underwrite the recurrent costs of the expanding health infrastructure while maintaining hospital services. In real terms, recurrent expenditures in the integrated regions grew by an average of 9.8 percent between 1976 and 1983. CSS contributed 84 percent of this increase. In comparison, over this same period, real GDP increased by an average of six percent and MS expenditures in the integrated areas by 3.8 percent. Real growth in the government budget for all ministries was 6.4 percent. In 1983, MS and CSS were spending $74 per capita on integrated service provision, one of the highest per capita outlays for health services in Latin America. In sum, without the financial contribution of the CSS (or the implementation of a more efficient financing and service delivery model), it is hard to imagine how the government could have afforded the operational costs of expansion.

By the mid-1980s, the CSS was no longer willing to finance the major part of integrated service provision. The institution's motivation was as much political as economic. The 1980s ushered in a period of unprecedented political turmoil and economic instability. Physician associations became well-organized, high-profile participants in the political opposition. The physicians, together with allies within the CSS who had always opposed the reform, singled out Integration as an example of flawed government policy and denounced the reform as a major drain on CSS finances. The CSS unilaterally reduced funding for the integrated systems while increasing outlays to non-integrated areas and to services to which only the insured had access. Political infighting among pro-government groups combined with an increasingly powerful opposition hampered the government's ability to conduct public policy or provide continuity to previous initiatives.

At the center of the debate was the CSS liquidity crisis. Exhibit 3-6 shows that between 1980 and 1986, the Sickness and Maternity Program, a fund that finances all CSS medical care, had an accumulated deficit of $196 million. This deficit was covered in part through transfers from CSS pension funds. CSS bureaucrats and physician critics claimed that Integration was the principal cause of the deficit. This was more political jockeying than reality. Structural conditions such as increasing dependency ratios, economic crisis, employer non-payment of payroll tax, decreasing real salaries, and failure of the government to pay employer contributions are the main culprits. Taking into account CSS expenditures in integrated and unintegrated areas as well as insured and uninsured utilization rates, only $8 million (five percent) of the $196 EMP deficit over the 1980-86 period can be attributed to Integration. As suggested earlier in this study, the issues of medical care organization and efficiency were conspicuously absent from the debate on the CSS financial crisis.

EXHIBIT 3-6
REVENUES AND EXPENDITURES OF CSS "SICKNESS AND MATERNITY" PROGRAM, 1980-86
(in millions of current US dollars)

YEAR	REVENUES "COLLECTED"	EXPENDITURES MEDICAL SERVICES[1]	CASH BENEFITS[2]	TOTAL	DEFICIT
1980	$91	$95	$7	$103	($12)
1981	108	112	9	121	(14)
1982	116	122	10	132	(16)
1983[3]	123	140	11	151	(28)
1984[3]	126	163	11	174	(48)
1985	138	165	13	178	(40)
1986	140	166	13	178	(38)
TOTAL	841	963	75	1,037	(196)

[1]Exclude expenditures for medical care for Professional Risks which is covered by a separate fund.
[2]Maternity and sickness subsidies.
[3]Collected revenues estimated based on average of 1980-82 and 85-86 (81.1%)

Source: CSS. Dept. de Presupuesto, "Informe de la ejecucion presupuesto." various years.
CSS. Direccion de Contabilidad, "Estado de ingresos devengados y gastos por programa." various years.

3.1.6. Utilization

Implicit in government pronouncements on Integration are the goals of equal utilization among population groups. Exhibit 3-7 presents per capita ambulatory consultations by insurance status during three time periods: pre-Integration, immediate post-Integration, and 1986. Utilization rates for medical visits by the insured have significantly exceeded the uninsured during the three periods. But the gap has narrowed. Before Integration, per capita outpatient utilization by the insured surpassed the uninsured by an average of five to one. By 1986, this gap was reduced to about half these levels. Between Integration and 1986, the uninsured population decreased by 10 percent while consultations consumed by this group increased by nearly half. On the other hand, the growth in the insured population outpaced growth in outpatient utilization. The narrowed disparity responds to lowered utilization by the insured in CSS/MS facilities and increased utilization by the uninsured. The decrease in per capita utilization by the insured probably does not reflect an absolute decrease in utilization by this group. Rather, it relates to a reduction in the use of state medical services and flight to the private sector.

EXHIBIT 3-7
AZUERO, CHIRIQUI, VERAGUAS: PER-CAPITA PHYSICIAN CONSULTATIONS ACCORDING TO INSURANCE STATUS DURING THREE TIME PERIODS[1]

PERIOD	AZUERO[1]		CHIRIQUI		VERAGUAS		REGIONAL AVERAGE	
	INS	UNINS	INS	UNINS	INS	UNINS	INS	UNINS
PRE-INTEGRATION[2]	5.3	1.0	3.7	0.7	4.2	0.6	4.1	0.8
FIRST YEAR POST-INTEGRATION[3]	5.2	1.2	3.7	0.7	4.9	0.6	4.1	0.8
1986	3.8	1.9	2.7	1.4	3.3	0.8	3.0	1.3

[1]Includes consultations provided by psychologists, speech therapists, physical therapists, and others, representing approximately 5 percent of outpatient visits.
[2]Herrera and Los Santos.
[3]Azuero (1974), Chiriqui (1975), Veraguas (1972).
[4]Azuero (1976), Chiriqui (1977), Veraguas (1974).

Source: La Forgia (1990).

Although not illustrated in Exhibit 3-7, a similar pattern appears for inpatient utilization. Insured patients increasingly are abandoning the integrated system and seeking non-emergency inpatient services in subsidized beds. In the Central region, between Integration (1975) and 1986, hospital discharges per 1,000 insured in CSS/MS facilities have decreased by half while utilization per 1,000 uninsured have increased by one-third. By 1986, half of all hospital discharges by insured persons were registered in subsidized beds. Thus, if we account for hospital discharges in subsidized beds, the insured have slightly increased their use of inpatient services (from 101 to 109 discharges per 1,000 insured).

Certain pre-Integration utilization patterns remain intact. Differences persist in terms of the types of services utilized by the two groups. For example, the urban-based polyclinics that offer mainly specialty services remain the bastions of the insured patients. By the mid-1980s, Integration appeared to have been more successful at extending specialty services to the urban-based, insured population residing in secondary cities than in providing preventive and primary health care to rural residents. This results from budget reductions by the CSS which disproportionately affect MS facilities and programs aimed at serving rural areas.

Finally, the insured are high consumers of drugs when compared to their uninsured counterparts. In 1986, the integrated regions dispensed an average of 11 prescription drugs per capita insured compared to two drugs per capita uninsured. The insured received an average of four drugs per outpatient visit compared to 1.6 for the uninsured. Similar differences exist for outpatient diagnostic exams. The uninsured pay user fees for these services while the insured receive them free of charge.

3.1.7. Synthesis and Topics for Future Research

MS and CSS Integration in Panama was a convergence of often diverse values, interests, and goals held together through a series of political and administrative comprises which emerged during the implementation process. Consonant with General Torrijos' emphasis on economic policies with the potential to foster rapid growth, he focused on social policies with the potential to foster rapid change. Integration offered the possibility of doubling the health resources available to underserved groups almost overnight. It was his pragmatism and astute political maneuvering that set the conditions for successful implementation. This was especially the case related to obliging the CSS to pay for an increasingly larger share of the financial burden.

By the late 1970s, coverage was extended at a rapid pace and national extension seemed likely to become a reality. The uninsured were granted unrestricted access to CSS facilities. Service duplication was eliminated and some administrative systems were unified. These were no minor achievements.

Nevertheless, under the unfavorable political and economic conditions of the 1980s, Integration became an easy target for the political opposition and the CSS. These groups identified the reform as the major cause of CSS insolvency, and, ultimately, the deterioration of CSS services. Physician associations campaigned for the dismantling of the integrated regions. The CSS redirected resources away MS facilities and preventive programs serving mainly the uninsured population while favoring services catering to the insured (e.g., subsidized beds).

What are the lessons learned from Panama's unified service approach? Integration remained an inchoate policy in part because the difficult questions of who controls and who pays were never addressed. The divergent institutional mindset remained untouched during the implementation process. The highly antagonistic, bifurcated institutional setting inhibited the formulation of an Integration policy with the appropriate legislative underpinnings. It is clear that the short-lived alliance between MS and CSS during the early 1970s was highly dependent on strong central political support and CSS's favorable economic position. Based on 15 years of Integration experience, it is unlikely that central-level CSS and MS officials can work together in a coordinated and harmonious fashion. To be sure, any solution will need to redefine the roles of CSS and MS. Moreover, it should address the inefficiencies inherent in the direct service delivery system and financing mechanism, and provide compensation arrangements.

The Panamanians face a number of questions that suggest major topics for research. Can a financial and administrative arrangement be created that would take advantage of MS and CSS funds, provider networks, administrative expertise, and 15 years of integrated experience to provide services in the integrated regions? How can such an arrangement stimulate more efficient service delivery? Should services continue to be provided directly, or should the CSS and MS simply act as a financier and regulator of service provision? How does the financing system affect provider incentives? Can incentive arrangements be altered to stimulate greater efficiency in the provision and utilization of services? What can be the role of the private sector in achieving efficiency goals?

One solution currently under consideration in Panama is to remove the integrated regions from direct administrative and financial control by converting them into an health region controlled by an independent board of directors.[30] In effect, each region will become the administrative agent of a regional health insurance fund financed by the CSS, MS, and system clients. The first step in such a design is to specify the CSS and MS financing formula for the insured and uninsured populations, respectively. Determining the appropriate formula will require careful analysis of utilization and costs by insured status. Research also can test how the financing methods can provide incentives to regional authorities to explore alternative provider payments systems (capitation, fee-for-service, prospective budgeting, etc.), utilization control mechanisms (prior authorization, screening, second opinion surgery), cost-sharing mechanisms (e.g., copayments), and more appropriate medical care organization (e.g., functional referral systems, gatekeepers, use of paraprofessionals).

3.2 CASE STUDY #5: HEALTH MINISTRY-SOCIAL SECURITY INTEGRATION: EXTENDING BENEFITS AND COVERAGE: THE CASE OF COSTA RICA

3.2.1. Institutional Description

Costa Rica has a semiconsolidated system for delivering health care. (See Exhibit 3-8 for a complete list of the organizations concerned with the health sector.) Curative care for insured, indigents, and low-income groups is provided mainly by the Social Security Bureau (CCSS). The Ministry of Health (MS) is responsible for preventive services and rural and indigent primary health care. MS is the main health institution and the Minister of Health is the highest health authority in the nation; CCSS is an autonomous public agency, the largest of the health institutions and the best funded. The other agency responsible for health care delivery is the National Institute of Insurance (INS). INS is responsible for the prevention of occupational hazards and providing medical care to workers injured at work. INS services are offered in INS outpatient clinics, and within the main hospitals of the Social Security network by physicians and other staff paid directly by INS.

[30]Currently, groups within the CSS and the medical corps seek the dismantling of the integrated regions and a return to the *status quo ante*. This will be a formidable task given the economic turmoil cause by the invasion combined with several years of economic blockade and nearly a decade of stagnant or declining economic growth. The CSS cannot afford the capital costs nor can the MS bear the recurrent costs of re-establishing the dual health service model in the interior provinces.

EXHIBIT 3-8
GOVERNMENT INSTITUTIONS AND ORGANIZATIONS CONCERNED WITH THE HEALTH SECTOR, COSTA RICA, 1984

Name	Year founded	Activities
Ministry of Health	1984	National Health Policy Health Services Primary Health Care Rural Medical Services
Social Security Bureau (CCSS)	1943	Medical Care Hospitalization, Maternity, Rehabilitation, Care of the handicapped and the aged, Pension and death insurance
National Institute of Insurance (INS)	1948	Care of workers injured in accidents at work
General Directorate of Social Development and Family Allowances (DESAF)	1974	Funding for health activities of MS, IMS, CCSS, etc.

Until the creation of the CCSS, health care was delivered through hospitals operated by the state, private charity, and the banana companies. The law creating the Costa Rican Social Security Bureau (CCSS) was put in place in 1941 but it was not until 1943 that the CCSS started its operations. For the first two decades, however, the social security system was practically stagnant, protecting a very small proportion of the labor force in urban areas, mainly in the capital city, and mostly civil servants and some white-collar employees in public and private enterprises. Only salaried workers earning a maximum of 300 colones a month were eligible. In 1955, limited health coverage was expanded to workers' dependents. But in the early 1960s, under the influence of the Alliance for Progress and pushed by a propitious domestic climate of party competition, a program of socioeconomic reform changed the situation. A constitutional amendment in 1961 ordered the universalization of social security coverage in a decade. The social security bureaucracy, empowered by this mandate, incorporated most industrial, commercial, and construction workers and dependents of the insured, and also raised salary ceilings which prevented the middle and high-income salaried employees from inclusion. The goal of universal coverage was not reached on the scheduled date, but in the 1970s another push was given to coverage expansion, to include urban blue-collar and agricultural workers, the self-employed, domestic servants, and pensioners (in health), as well as their dependents. In addition, the salary ceiling for inclusion was removed, and although a ceiling for contributions was introduced, it was gradually increased and eventually eliminated. In addition, a welfare program (family allowances administered by the Ministry of Labor and Social Security) provided minimum pensions and health care to the dispossessed who did not qualify for social insurance. At this point the CCSS became the largest provider of curative services and all hospitals were gradually transferred to CCSS, including those

administered by banana companies. MS remained responsible for preventive services and the provision of primary health care to the rural and urban indigent population. By 1978, all public hospitals belonged to CCSS except San Ramon, which was not transferred until 1985. By 1980, almost the whole population was covered, about three-fourths by social insurance and the remaining one-fourth through social welfare and public health programs. Left out of the system were the higher income strata, as well as unpaid family workers, some of the unemployed, and the self-employed, particularly in agriculture.

In 1984, in an effort to create a unified National Health System, the government designed a mechanism to insure the indigent population. In addition, in 1985, due to the economic crisis, the existing duplication of services between CCSS and MS, and the inconveniences created to insured patients who had to go to different buildings to receive health services (curative at CCSS and preventive at MS), a decision was made to consolidate CCSS and MS services in the same building. It was determined that MS would limit its activities to preventive services and some community health activities in urban and rural areas, while CCSS would be responsible for curative services for the entire population. MS would reimburse CCSS for the expenses incurred by the indigent through the state insurance program. In other words, the Integration of the Social Security Services and the Ministry of Health services meant that both institutions would use the same physical infrastructure, CCSS would expand curative services to those covered under state insurance, and MS would be responsible for preventive services for the entire population and reimburse CCSS for the cost of health services provided to the indigent population under the state insurance plan.

In practice, the Integration of CCSS and MS services was not as efficient as hoped. All patients could get free emergency care, but in all other cases patients had to show proof of insurance. The process to get state insurance was slow and cumbersome. People had to fill out forms and sometimes wait several weeks until social workers reviewed their cases and the MS granted insurance. Moreover, state insurance was granted for a limited period of time (maximum of one year) and had to be reevaluated periodically. In addition, personnel from MS and CCSS were working in the same building but had different work schedules, salary scales, and approaches to health care. These differences had an impact on how services were delivered and on the provision of preventive services. For example, in some clinics, the uninsured could not even get MS services because the medical records area was under the control of CCSS personnel, and they required proof of insurance before making appointments. Personnel from MS were occasionally pulled out of their jobs to substitute for CCSS workers, whereas the opposite never occurred. To make things worse, most MS outreach activities had to be kept to a minimum due to the economic crisis affecting the finances and resources of the MS. It is also worth mentioning that, with the Integration of services, MS personnel could no longer prescribe drugs that were formerly provided free through MS or CCSS; uninsured patients who previously could receive treatment through MS personnel now had to go through the process of getting state insurance.

In summary, the economic crisis coupled with the Integration of CCSS and MS shifted the orientation of the health delivery system toward curative medicine. In terms of access to services, the uninsured who managed to get state insurance enjoyed complete coverage for all health services, but those who did

not manage to get health insurance did not have access to even the limited services that were previously offered by MS personnel. There has been no evaluation of the cost of the bureaucracy involved in providing state insurance to the indigent; however, there is a need to ensure that employers do not evade their CCSS responsibilities.

Although more than 80 percent of physicians, microbiologists, and nurses work for the government (primarily in Social Security) and there is almost universal health care coverage, the private medical sector is strong. Private medicine is practiced by almost all medical doctors after 3:00 p.m., but physicians in hospitals can use their State-paid time to see private patients and use the pension system to hospitalize and treat their own patients. Patients who use the pension system have to pay a fee to the physician and a fee to the hospital in exchange for better rooms and more personalized service.

3.2.2. Enrollees and Employers

Financing the CCSS follows the tripartite participation system, the three sectors being the state, employer, and employee. But since the mid-1970s, due to economic problems, the state has increasingly evaded its responsibility, shifting the burden to employers (this will be explained in Section 3.2.5). All employers must contribute a percent of their workers' salary to the CCSS by law. CCSS insurance covers the employee and his/her family. In 1990, 83.7 percent of the population was covered by CCSS (*See Exhibit 3-9*). Those that remained uncovered were mainly self-employed, rural workers, professionals and business people, workers whose employers did not comply with the law, and an unknown number of indigent people who had not been covered through state insurance.

All persons covered, including those insured through the state, are entitled to receive all services free of charge, including pharmaceuticals. In other words, theoretically there is no stratification on access to health services. The bureaucracy and time involved in getting state health insurance, however, are deterrents to the use of services by the indigent population.

EXHIBIT 3-9
INDICATORS OF THE COVERAGE OF THE COSTA RICAN SOCIAL SECURITY FUND AND COST PER PERSON COVERED, COSTA RICA, 1970-1990

Year	Active, direct beneficiaries	Population Coverage (percent)	Coverage of economically active (percent)	Cost per person in 1978 colones
1970	202,291	47.2	38.3	570.8
1975	320,432	59.6	50.1	514.9
1980	528,033	75.7	67.8	866.9
1985	605,743	81.4	65.3	587.0
1990	725,758	83.7	67.6	n.a.

Source: Duran, Fabio, CCSS: Evolución financiera del seguro de enfermedad y maternidad en la decada de los ochenta, August 1991

In 1973, it was estimated that, due to CCSS insurance, a small percentage of income was transferred from the highest to the middle and, to a lesser extent, the lowest-income groups. The subsequent elimination of salary ceilings on contributions, achievement of universal coverage (including low-income groups such as agricultural workers, domestic servants, and the self-employed), and introduction of welfare programs for the needy must have increased the overall progressive impact of social security on distribution. A study showed that, in 1978, the health programs transferred 2.3 percent from the richest 30 percent to the poorest 60 percent, with half of it going to the poorest 20 percent (Sanguinetty, Salud y Seguro Social en Costa Rica, 1988).

3.2.3. Managerial Characteristics

Within the integrated CCSS-MS system, there is no adverse selection and no controls for moral hazard. The only cost-containment measure is in the use of pharmaceuticals. There is a ceiling of three prescriptions per visit, and only medicines included in the CCSS directory and provided through CCSS pharmacies are free of charge. Everybody that enters the system has access to the same quality and quantity of services (outpatient as well as inpatient services). All services are provided free of charge to the patient.

Patients are seen by appointment and each doctor has to see five patients per hour of work if he/she is a generalist, or four per hour if he/she is a specialist. Specialists tend to be concentrated in metropolitan areas, and often patients have to wait several months before they can make an appointment (*See Exhibit 3-10*). From this perspective, people residing outside the metropolitan area have less access to specialized health care than those residing within the metropolitan area, although all of them pay the same premium.

EXHIBIT 3-10
DISTRIBUTION OF CCSS HEALTH PERSONNEL BY REGION
NUMBER OF PEOPLE PER PROFESSION
COSTA RICA, 1985

Personnel	Total	Central[1]	Norte	Chorot.	Atlan.	Brunca
Microbiol.	9,042	8,169	28,342	10,438	11,848	9,978
Pharmacist	18,601	16,649	37,789	14,708	37,914	45,899
Aux. nurse	830	763	1,012	999	987	1,053
Dentist	16,175	16,338	22,673	11,984	15,797	22,950
Nurse	2,179	1,813	4,929	3,370	3,646	3,825
Physician	1,262	1,105	2,099	1,694	1,708	1,836
Specialist	6,430	6,134	10,306	5,883	7,021	8,500

[1] The Central region includes the state capital and its metropolitan area.
Source: CCSS, Anuario Estadístico, 1985

The majority of services provided within the integrated CCSS-MS delivery system are curative or geared toward the early detection of health problems. Health promotion programs focusing on the community or the environment suffered substantial cuts due to the economic crisis affecting the MS.

Several studies conducted by Diaz Benavides (1981, 1982, 1983a, 1983b, 1986) and field work conducted during 1987 and 1988 proved that patients were dissatisfied with the way that outpatient services were being delivered. Long waiting time, depersonalized attention, slowness of the system, inefficient patient flow, and congestion of services were the main complaints. Access to inpatient services was limited by the availability of beds or doctors to perform the clinical procedures. Most of these problems were caused by health care providers. Physicians' dissatisfaction with their working conditions lead them to establish the "carrusel" and the "biombo." These two strategies will be described in Section 3.2.4, but are aimed at limiting the access of certain sectors of the population to services, and entail the unnecessary use of services by a limited number of patients (moral hazard).

In an attempt to improve the access and quality of services provided, especially outpatient services, Costa Rica designed and pilot-tested different health care delivery systems. These programs were different methods of providing outpatient services to the insured population, expected to result in better efficiency and increased satisfaction of the patients as well as the providers.

3.2.3.1. The Company Medicine Program (Medicina de Empresa)

Medicina de empresa was the first innovation in the area of ambulatory care. Initiated in the early 1970s, the program was based on agreements between the CCSS and private companies that were authorized to provide ambulatory care to their workers in the workplace. Under this arrangement, the company pays the salary of the physician, while CCSS provides all necessary diagnostic and therapeutic resources. Currently, over 600 companies participate in the program and it provides about seven percent of all medical visits. This program has been overwhelmingly geared toward curative care, and includes no coordination with INS (which is responsible for health promotion programs in the workplace). It is important to note that employers who subscribe to this system in addition to paying their physicians have to pay the same contribution to CCSS that other employers pay. No study has been done on the cost of the program.

3.2.3.2. The Mixed Medicine Program

Under this program, which started in 1981, CCSS beneficiaries who visit a private physician on a private fee-for-service basis may have prescriptions filled for any diagnostic or therapeutic goods at any CCSS facility. Both physicians and patients who want to participate in the program have to be accredited by CCSS. The bureaucracy involved in the accreditation and verification process limits the growth of the program.

3.2.3.3. The Capitation Program

This program began in January 1987 in Barva, and was supposed to assign full and continuous responsibility to a multidisciplinary team for the medical care of the population in the area. The original plan was that the population would be able to choose the doctors they wanted and the physicians would be paid based on their number of clients. Having one physician as a regular source of care was foreseen to decrease the use of medication, need for clinical tests, and need for referrals. In addition, better doctors would have more clients, which would be an incentive to improve the quality of services provided. However, the program was implemented too fast, and turned out to be very different from any European capitation model. A crucial factor was that only physicians participated in the capitation program. Thus, while physicians were being paid based on the number of clients, the rest of the staff received their standard CCSS or MS salary and did not have any incentive to improve while working under the capitation system. The fact that only the physician operated under the capitation system limited his/her possibilities of reorganizing the clinic schedule, patient flow, or other aspects of the service delivery to better respond to people's needs. The organization of services had to follow the rules that the personnel that were being paid either by MS or CCSS had to obey. The building, equipment, and all supplies were provided and maintained by CCSS or MS, and physicians never had the freedom to organize the services the way they thought would be best for the community, and the bureaucracy of MS and CCSS was reproduced in Barva. In addition, most physicians working in the program took these jobs due to the absence of better offers, or while they were waiting to be admitted to a residency program-they were not committed to primary health care. Another managerial irregularity was that working within the capitation system did not preclude the possibility of having a private practice and, although physicians' salaries were much higher than the regular CCSS pay, they opened private offices. In effect, the program never accomplished its goals; the costs of running the clinic were much higher than in any other CCSS clinic, mainly due to physicians' salaries; and the results in terms of patient flow, patient satisfaction, patient referrals and use of medication were very similar. However, since there were so many irregularities in the way the program was implemented, the capitation system in Costa Rica cannot be called a failure. In fact, the system was never implemented.

3.2.3.4. Family and Community Medicine Program

This program is the most recent one, and different from a regular program only in that it places more emphasis on community and family health. There are no differences in the way that personnel are remunerated. This program has not been evaluated yet.

3.2.3.5. The Cooperative Clinics[31]

Currently there are two cooperatives (in Pavas and Tibas) to which CCSS, acting as a third-party payer, has rented equipped facilities (the rent is minimal–2,000 colones a month) and paid an annual stipend (2,760 colones per insured person living in the area) with which to implement another alternative model of care. In addition, MS agreed to pay a monthly sum of 1,375,000 colones. The members of the cooperative have not had to invest any of their own money. The clinic in Tibas started its operations very recently and its services have not been evaluated. The Pavas clinic does not have any user fees, even for uninsured persons not covered by state insurance. Out of 173 workers, 156 are members of the cooperative and the majority are either former or current employees of MS or CCSS. A few people work part-time at Pavas and at CCSS, and others work full-time at Pavas, although legally they are employees of CCSS on leave of absence. Salaries of the cooperative workers tend to be higher than those of the CCSS workers, especially for physicians, and the number and type of workers are closer to the needs of the population than in the regular staffing of a CCSS clinic. For example, the number of administrators has been substantially reduced by about 40 percent. Services are oriented much more toward preventive and health promotion activities than in the regular CCSS clinics. Patients do not choose the doctor; instead, physicians are assigned different geographic areas. In addition to the main clinic, there are six health posts, each staffed by a physician, auxiliary nurse, community health technician, and receptionist. These health posts (EBAIs) provide between 35 and 40 percent of the consultations given by the cooperative. EBAI staff do home visits and are responsible for outreach health promotion activities within their area of influence.

All the cooperative supplies are bought from CCSS and MS at cost plus 15 percent to cover administrative expenses. Although most administrative procedures follow the CCSS model, the cooperative's General Assembly has the freedom to operate the services the way they choose.

In terms of productivity, the Pavas clinic has more physician visits than any other CCSS clinic of similar size, but the number of consultations per physician is lower. In terms of concentration, while a regular CCSS clinic has an average of 3.34 visits per person per year, the Pavas clinic provides an average of 8.25 visits per person. In addition, the Pavas clinic has been offering a higher proportion of emergency consultations than other clinics, and about 70 percent cannot be called real emergencies. They respond to the population's need to have access to services during non-traditional hours.

Comparing the cost per consultation in Pavas to other CCSS clinics is difficult. A study conducted by Fiedler (1991), however, concluded that consultations at Pavas were cheaper than other CCSS clinics and clients were more satisfied. But if one takes into account the number of consultations per person (8.25 per year instead of 3.34), the cost of health care per person is higher in the cooperative model. In addition, there is no information available on the cost of referrals outside the clinic, either for hospitalization, consultation with

[31]Based on Fiedler and Rigole, "The Costa Rican Social Security Fund's Alternative Models: A case study of the cooperative based, coopesalud Pavas clinic." September 1991. AID Internal report.

other specialists, or performance of special diagnostic and therapeutic procedures. Information on the quality of services provided; the relationship between the number of contracted hours vs. the actual number of hours worked; whether physicians work exclusively for the clinic or have their own private practices; the real need for 8.25 encounters per person; the use of referral centers and hospitals; and health care providers' satisfaction is lacking. Another problem with the cooperative approach is the unions. As it is now, the cooperative has a General Assembly that meets once a year and an Administration Council. It is the perception of the workers that the Administration Council has more decision power than the rest, and they are beginning organize as a union. This is a worrisome indication that the cooperative is not working as such and that the bureaucracy and hierarchy of the CCSS are being reproduced.

In summary, the cooperative model seems to improve patients' satisfaction and is more health promotion-oriented than the services provided in an integrated CCSS-MS clinic. However, there is no reliable information on the cost or quality of services provided. In addition, health care providers' satisfaction with the organization of services is starting to decrease. The high number of emergencies highlights the need for the clinic to be open later hours during the week if the clinic wants to improve the continuity of care. Whether the model can work in other settings remains to be seen. The clinic in Pavas had the advantage of being situated in urban San Jose, and since it was the first one to open, there was a large pool of potential personnel from which to choose. In addition, the clinic director had expansive knowledge of health management and administration.

3.2.4. Relations With Providers

As mentioned in the first section, CCSS and MS workers share the same buildings but have different employers and working conditions. All health personnel are salaried workers; physicians working in the capitation system receive a basic salary and an extra amount based on the number of patients enrolled.

Physicians' dissatisfaction with the CCSS system has led to the introduction of distortions in the system that limit patients' access to services. These practices are known as "carrusel" and "biombo" and are geared toward increasing physicians' salaries. As mentioned, physicians have to see a fixed number of patients a day (four per hour if they are specialists or five per hour if they are general practitioners). Once they have seen their daily quota, physicians can practice private medicine. One way to increase the number of patients that go to the private office is to keep the pool of patients seen at CCSS constant. In other words, physicians ask the patients who are already in the CCSS system to go for follow-up visits or get their prescriptions once a month (this is known as the "carrusel"). When a new patient wants an appointment, he/she has to wait until there is an opening (for some doctors it means months) or choose to go to the private office. The "biombo" is practiced mainly by specialists working in hospitals. Physicians act as gatekeepers for hospital use—they can keep patients longer than needed and can decide who to admit. When a patient needs hospitalization, it may be difficult to get a bed, especially for elective surgery, if he/she does not go through a private physician or pay an extra fee to the CCSS doctor.

Another interesting feature in CCSS hospitals is the pension system, consisting of better equipped and cleaner rooms where medical services are paid by the patient. Some pension services may be better than those in the general hospital service, while payment is lower than the actual cost of the bed. Residents, interns, and other hospital staff provide services in this system, but generally only the physicians directly responsible for hospitalization of the patient and senior colleagues receive compensation from this private arrangement. The hospital care provided by the CCSS is still regarded as being of high quality.

3.2.5. Financing and Expenditures

The CCSS has two main programs: illness and maternity, and pension fund. In addition, there are contributions to INS and the family allowances program that are mandatory for all employers and also collected through CCSS. All these contributions place a high burden on the employer (increasing from 9.25 percent of the worker's salary in 1973 to 22.66 percent in 1983), almost three times as high as the contribution of the insured (6.5 percent in 1981 and 8 percent in 1983), while the state contribution has been declining (from 4.5 percent in 1973 to 1.5 percent in 1983) (*see Exhibit 3-11*). The state has also earmarked certain tax revenues for social security, but these generate only a small percentage of total income. The self-employed pay roughly the equivalent percentage as the sum of the contributions of the insured and the employer percentage. The high cost of social security (concentrated on the employer's side) probably plays a negative role in employment creation. Since unemployment was not a significant problem until the 1980s, there are no studies evaluating this impact.

EXHIBIT 3-11
DISTRIBUTION OF SOCIAL SECURITY CONTRIBUTIONS (SALARY PERCENTAGES) COSTA RICA 1973-1986

Year	Employee	Employer	State	Total
1973	6.50 (4.00)	9.25 (5.00)	4.50 (2.00)	20.25 (11.0)
1978	6.50 (4.00)	19.22 (6.75)	3.50 (3.25)	29.22 (14.0)
1986	8.00 (5.50)	22.66 (9.25)	1.00 (0.75)	31.66 (15.5)

Source: David Rochwerger, Costa Rica: Análisis socioeconómico del sector salud 1987. Tabla 35.
Note: Amounts between brackets represent the contribution to the health and maternity program.

During the 1980s, the illness and maternity program faced increasing deficits, partly covered with loans from the pension fund, for a total of two billion colones in 1982. In that year, the health program also owed $22 million to foreign suppliers. The major cause of the deficit was the failure of the state to fulfill its obligations with CCSS, both as an employer (only part of the payroll was paid) and as a tripartite contributor (from 1975 to 1982 the state did not pay this obligation, except for a small sum in 1981). In addition, the state did not fully reimburse CCSS for the cost of health care to indigents, and

the programs to support low-income self-employed and welfare pensioners were also in the red. The cumulative state debt to CCSS was estimated to be at least two billion colones in 1982, equal to the health program debt to the pension fund. Other causes of CCSS financial deficits were delays in payment of employers' contributions (estimated at more than 600 million colones in 1983) and significant evasion. In addition, social security expenditures as a percentage GNP doubled between 1970 and 1979.

EXHIBIT 3-12
CCSS ILLNESS AND MATERNITY PROGRAM EXPENDITURES AND ITS RELATIONSHIP TO THE GNP (IN MILLION COLONES), COSTA RICA 1970-85

Year	CCSS	GNP	CCSS
1970	125	6,525	1.92
1975	483	16,805	2.87
1980	2,202	41,406	5.32
1985	8,647	192,425	4.51

Source: Sanguinetty, Salud y Seguro Social en Costa Rica, 1988, p 46.

Expansion of coverage, inflation, and addition of welfare programs are important reasons for the increase in the cost of health services, but there are administrative reasons as well. CCSS personnel grew from 1,510 employees in 1960 to 22,093 in 1981, almost a 15-fold jump compared with a nine-fold increase in the number of insured (in 1972-81, personnel increased at more than twice the rate of the insured). Part of this increase was due to the transfer of hospitals and their personnel from MS to CCSS in 1973-78, but the 2,500 employees added in 1979-82 were not justified by proportional increases in the number of insured or indigents. Salaries had been raised at a rate greater than inflation, and CCSS personnel enjoyed generous fringe benefits (until recently they were exempted from paying their social security contribution).

In trying to cope with these problems, CCSS introduced a series of austerity measures in the 1980s: construction of new facilities and buying of new equipment was virtually stopped, payment of overtime and substitute personnel were banned, fringe benefits were reduced (now employees pay their social security contributions), supplies of medicines to the uninsured were reduced, and there was an effort to cut other expenses (food, energy) and raise the efficiency of hospital utilization. Another set of measures aimed at raising contributions of the insured (including the self-employed) included taxing pensioners, introducing a minimum contribution for those in the welfare programs, and negotiating with the state about honoring its financial obligations. In 1982, the state began to pay its current contributions as well as part of its debt to the CCSS on time. These helped the financial problem and resulted in a surplus of 1,885 million colones in 1986.

EXHIBIT 3-13
FINANCING REVENUES BY SOURCE (PERCENTAGES), COSTA RICA 1975-1986

Source	1975	1980	1985	1986
Employer	52.9	46.3	46.7	50.5
Employee	35.2	31.0	36.8	36.4
Other fees	0.0	4.0	n.a.	n.a.
Services	1.8	17.0	5.7	4.3
Other	3.8	1.6	7.8	5.3
State	6.3	0.2	3.0	3.5
Total	100	100	100	100

Source: From 1975 to 1983: CCSS. Indicadores de Seguridad Social
From 1984 to 1986: CCSS, Gerencia Financiera. Racionalización de los recursos para el logro de los objetivos. Programa de salud y bienestar social 1987.

The CCSS illness and maternity program is financed through multiple sources. The employer bears the largest share, followed by the employee. The "Other Fees" category includes contributions for those under the pension program and those insured by the state. Income from charges for medical services provided to private or INS patients are included under "Services" (*see Exhibit 3-13*).

Salaries have always accounted for slightly over 50 percent of CCSS expenditures; supplies (including medicines) are the second largest expenditure. It is worth noting the lack of investments in construction and equipment due to the CCSS austerity program (*see Exhibit 3-14*).

Salaries in the CCSS system follow the civil servant scales, with salary increases per year of service and different types of bonuses. CCSS cannot raise or lower salaries based on the quality of the performance or imbalances in the supply and demand of different types of health professionals. Physicians have been able to raise their salaries substantially through strikes and other pressure tactics.

EXHIBIT 3-14
DISTRIBUTION OF CCSS EXPENDITURES, COSTA RICA, 1981-1986
(PERCENTAGES)

Items	1981	1985	1986
Salaries	53.4	56.6	52.3
Rent and utilities	4.6	6.3	6.2
Supplies	16.4	22.3	20.8
Equipment	2.6	0.7	3.2
Financing charges	6.1	0.1	0.3
Construction & improvements	1.7	1.5	2.6
Social charges	12.8	10.1	9.6
External debt	2.4	2.4	5.0
Total	100	100	100

Source: CCSS, Gerencia Financiera. Racionalización de los servicios para el logro de los objetivos. Programa de salud bienestar social, 1987.

If CCSS expenditures are classified in categories of hospital and outpatient services (including hospital outpatient services), one can see that in 1986, 88.2 percent of expenditures were on direct medical services and the rest were on administration costs. Out of the medical services expenditures, 61 percent were used in hospital care and 39 percent in outpatient services (Sanguinetty, 1988).

Information on unit costs of outpatient services is only available for the services provided in regular clinics; no information is available for the company medicine program, mixed medicine program, family and community medicine program, or capitation system progam. Fiedler gathered some data on the Pavas clinic, but they were collected differently and therefore the results are not comparable.

EXHIBIT 3-15
COST OF OUTPATIENT SERVICES IN CCSS HOSPITALS AND CLINICS BY TYPE OF FACILITY, COSTA RICA, 1986

Facility	Encounters	Percentage	Total cost (000) colones	Percentage	Cost per encounter
HOSPITALS	2,911,276	43.73	2,225,952	60.60	765
CLINICS	3,746,063	56.27	1,473,450	40.11	393
TOTAL	6,657,339	100.00	3,673,339	100.00	552

Source: CCSS Anuario Estadístico, 1986.

It is important to note that while hospitals provide almost 44 percent of the consultations, they are responsible for over 60 percent of the expenditures (*see Exhibit 3-15*). The reason for the increased hospital cost should be examined. One possible explanation is the type of health problem. If the referral system was working appropriately, one would expect to see more complicated health problems at the hospital level, ones that would be likely to require the use of more sophisticated equipment and therapeutic procedures. However, often the referral system is not perfect and hospitals draw their clients from the population residing closer to the facility. In the latter case, the increased cost would not be justifiable–it could be due to the use of better qualified personnel or to physicians' use of unnecessary high-technology equipment.

The cost of hospitalization is approximately the same regardless of where the hospital is located. Different wards, however, have different average costs (*see Exhibit 3-16*). The most expensive are those services provided under the "pension" system, followed by the surgery ward.

EXHIBIT 3-16
HOSPITALIZATION COSTS, CCSS, COSTA RICA 1986

Ward	Total cost (1000 colones)	Cost per diagnosis	Daily cost (colones)	Percentage of total cost
Medicine	1,133,580	24,429	2,827	19.88
Surgery	2,501,868	35,550	5,616	43.88
Pediatrics	555,234	10,338	2,247	9.74
OB-GYN	742,430	6,226	2,413	13.02
Chronics	565,838	58,355	1,186	9.92
"Pensiones"	203,305	51,925	16,176	3.57
TOTAL	5,702,256	18,798	3,016	100.00

Source: Sanguinetty, Salud y Seguro Social en Costa Rica, 1988, p.59

Personnel costs are always under 50 percent, and indirect costs constitute the second largest expense. Capital costs include the depreciation of capital and equipment. Auxiliary services refer to the utilization of diagnostic and therapeutic techniques and equipment, and indirect costs are those such as administration, cleaning services, meals, etc. As mentioned earlier, the CCSS illness and maternity program was in a deficit until 1982. In 1986, there was a surplus of 1,885 million colones, or 0.8 percent of the GNP.

EXHIBIT 3-17
DISTRIBUTION OF HOSPITAL EXPENDITURES (PERCENTAGES), COSTA RICA, 1986

Ward	Salaries	Capital	Supplies & utilities	Auxiliary services	indirect costs	Total costs
Medicine	38	3	10	15	35	100
Surgery	41	3	15	6	35	100
Pediatrics	50	7	3	5	35	100
OB-GYN	36	6	8	15	35	100
Chronic	37	7	10	12	35	100
Pension	50	1	0	14	35	100
Total inpatient	41	4	11	10	35	100
Total outpatient	32	4	15	26	23	100
TOTAL	37	4	12	16	30	100

Source: Sanguinetty, Salud y Seguro Social en Costa Rica, 1988, p.65.

3.2.6. Utilization

Except for the Pavas cooperative, the number of clinic visits follows the administrative regulation of four consultations per hour for specialists and five patients per hour for general practitioners. Any differences in the amount of services provided by clinics are mainly due to differences in staffing patterns and physicians' absenteeism. The number of uninsured is negligible, and there are no data on where they go for services.

The Pavas clinic has a much higher number of consultations per person per year. No evaluation has been done, however, on the impact on the health of the population. The average number of visits for the population covered by the Pavas clinic is well above international standards. Since the Pavas clinic provides outreach services, it would be interesting to see whether the entire population in the area use the services provided by the clinic, and if not, to study why they do not and where they go for services instead. In addition, it would be interesting to document use of private providers.

The average number of physician encounters per person per year is 3.34. The population using the company doctor system had an average of 4.5 encounters in 1986, higher than documented for a normal CCSS clinic. This could be an indication that there is unsatisfied demand for services, and when the bureaucracy and waiting time necessary to see a physician in a CCSS clinic are

removed, people use the services more often. It could also mean that employees use the clinic to take a break from their jobs. However, the fact that employers are willing to pay extra to avoid the delays of getting services in the CCSS clinic is a good indication of how inefficient the CCSS outpatient services have become.

The number of patients to be seen per hour is in theory the only factor that limits patient access to services of a general practitioner. Access to specialists is only by referral, and the "carrusel" and "biombo" practices limit patients' access to both outpatient and hospital services.

3.2.7. Synthesis: Further Research

Costa Rica has almost universal social security coverage, but private practice is widely used. In fact, those who can afford it use private providers instead of public services. While CCSS inpatient services are good, the bureaucracy and depersonalization of the CCSS outpatient services result in patients and physicians being very dissatisfied with the system. The CCSS has been aware of its deterioration and has started to pilot-test alternative models of outpatient delivery services. However, all alternative programs (we do not have information about the Pavas cooperative) allow physicians to work simultaneously in the private and public sectors, and in the absence of administrative and quality controls, physicians tend to drain resources from the public sector into their private practices. Moreover, all health delivery alternatives have been designed based on negotiations with physicians rather than on existing technical guidelines (e.g., the capitation system has little ressemblance with European capitation systems, and the members of the Pavas cooperative do not share any risks in the operation of the clinic, which in turn decreases their long-term interest in maintaining the quality of the services provided). Preliminary data from the Pavas cooperative show that the population is more satisfied, services are more prevention-oriented, and people use the services more often than in a regular CCSS clinic. However, the fact that workers are starting to unionize threatens their performance and the clinic's long-term success. In addition, before it is expanded to other areas of the country, more information is needed on the costs of the services, their appropriateness, the level of unnecessary use of services and technology, and the replicability of the program.

CCSS delivery programs can likely only be successful if: 1) physicians working for the public sector are not allowed to have private practices or if services are completely privatized (i.e., provided by the private sector but financed by social security or state insurance programs); 2) administrative and quality control mechanisms are introduced in the public health delivery system; and 3) the power of physicians is limited. The apparent success of the company doctor can be explained by physicians' competition to get this position, the employers' capacity to fire the contracted physician, the decreased bureaucratization of the system, and the personal relationship between physician and employee. In addition, the physician's conflict of interest is reduced because the likelihood that an employee would use that particular physician's private practice is slim, particularly because most companies are located in urban areas where several physicians have private practices. Moreover, company

doctors make their arrangements with each particular company and do not constitute a pressure group. It is worth mentioning that the efficiency of the company doctor program could be easily enhanced if there was some coordination with INS.

The Pavas experiment is an attempt to privatize the delivery of services and apparently has resulted in higher patient satisfaction and more emphasis on health promotion. Although the model has some problems, like increasing workers' dissatisfaction and a very high number of patient encounters, it would be interesting to study further how the cooperative is working; how much services cost; the need for over eight patient-visits per year; the referral system to hospital care and to diagnostic and treatment procedures not available in the clinic; the appropriateness of CCSS and MS contributions; physicians' behavior within the system in terms of increasing demand or directing patients to private practice; how some of the identified problems could be solved; and whether the model could be replicated in other settings. In addition, it would be worth looking at how much is spent on service provision to uninsured patients and whether different mechanisms should be used to avoid the overuse of services or an increase in the number of employers not contributing to the CCSS system.

Another priority is to study how public services can be privatized or how the practice of medicine in a public setting can be made incompatible with physicians working privately. Within the latter option, it is worth exploring the main sources of physicians' satisfaction, how these elements can be introduced into the health delivery system, how phsycians can be administratively and technically supervised, how quality of care measurements can be introduced into the system, how the public subsidy of private medicine can be discontinued, and how physicians'induced demand can be reduced to a minimum.

The company doctor has also proved to be a useful way of providing health care services, but the impact could be improved if preventive services were also covered. It would be worth studying the cost of the program and the additional cost of including preventive services. In addition, there should be an assessment of who should bear the costs of the preventive program, and different strategies to include INS and CCSS contributions should be devised. Subsidized expansion of the program to smaller companies could be another subject of study.

No study has been done on the use of private services and its cost. Having this information would allow for the design of alternative health care prepayment programs. Until now, all health care delivery alternatives have been overprotected by CCSS authorities; health care providers have never shared any risks. It would be interesting to see how much people are paying for private services in addition to their contributions to CCSS, and assess whether a private group of health care providers could offer better services for the same cost.

3.3 CASE STUDY #6: COVERAGE EXTENSION IN RURAL AREAS THROUGH PEASANT SOCIAL SECURITY IN ECUADOR

With a GNP per capita of US $953, Ecuador is considered a low middle-income developing country. Nearly two-thirds the rural population live in conditions of absolute poverty (World Bank, 1990). Compared to other Latin American countries, life expectancy is low (66 years) while infant mortality is relatively high (73 deaths per 1,000 births) (Fiedler, 1991; World Bank, 1990).

In 1989, approximately 45 percent of Ecuador's 10.5 million inhabitants resided in rural areas, decreasing from 65 percent 20 years earlier. Ecuador contains three distinct regions, coastal, Andean, and Amazonian, in which 52, 40, and 76 percent of the respective regional populations are rural. The urban informal and rural traditional sectors make up approximately 60 percent of the economically active population (Blumberg, 1990). In 1987, agriculture represented over one-third of the work force, consisting mostly of traditional farmers.

Three major institutional actors provide health care in Ecuador: the Public Health Ministry (MSP), Ecuadorian Institute of Social Security (IESS), and Military and Police Social Security. Most institutional resources are centered in urban areas. The MOH allocates approximately 80 percent of resources to urban areas and over 50 percent to three provinces containing large metropolitan areas (Fiedler, 1991). Mesa-Lago (1989) reports that 98 percent of IESS expenditures in 1981 were directed to the urban sector. Most IESS polyclinics and hospitals are located in relatively large urban centers.

Depending on the region, between 20 and 50 percent of the rural population has no access to organized health services. Compared to urban areas, rural residents have relatively little access to social services. In 1982, while over 80 percent of urban residents had access to water, sewage (including latrines), and electrical services, only 30 percent of their rural counterparts had similar access (World Bank, 1990).

This case study describes an innovative but relatively unknown social insurance scheme, Seguro Social Campesino (SSC). Although a dependency of the IESS (but administered separately), SSC breaks with the pattern of costly hospital and specialist-oriented medical care provided to mostly urban workers–characteristic of the IESS and social security institutes elsewhere in Latin America. What is atypical about SSC is its emphasis on providing primary health care to rural families through greater use of auxiliary workers and inexpensive infrastructure and equipment. To be sure, few countries have experimented with alternative mechanisms to foster rural coverage extension. Another interesting aspect of SSC is its ability to capture small, more traditional farm producers (through community organizations) as well as salaried farm workers employed by larger agricultural enterprises. On a more negative note, it has had less success in reaching more dispersed communities. Moreover, efficiency and utilization appear low, and impact on health status of the rural communities served by the program appears minimal.

3.3.1. Institutional Characteristics

Founded in 1968, SSC is a social security regimen providing basic protection to the rural population against the risks of sickness, maternity, old age, and invalidity. Financed mainly through a payroll tax on IESS affiliates and their employers, SSC provides a basic package of benefits to its affiliates who are enrolled through a variety of local organizations including cooperatives, agricultural firms, producer associations, traditional community groups, and increasingly, organizations set up to group community residents for the specific purpose of SSC affiliation. Health services are provided by physicians (general practitioners) and nurse auxiliaries who staff seven-room dispensaries. For the most part, the SSC (with some community collaboration) underwrites the cost of dispensary construction and equipment.

As is the case in most of Latin America, social security legislation in Ecuador calls for the universalization of coverage. However, few countries have approached this goal. As mentioned above, the IESS covers less than 15 percent of Ecuador's population. Throughout Latin America, there is minimal social security coverage of the rural population despite much higher levels of affiliation in urban areas. In 1986, the IESS covered nearly 20 percent of the population in the province containing Quito, the capital city, while the coverage (excluding SSC affiliates) in most provinces ranged from four to seven percent (Mesa-Lago, 1989). At current rates of service extension, Mesa-Lago estimates that it would take the IESS well over a century to reach universal coverage.

3.3.1.1. Legal Framework

In Ecuador, social security legislation dating to the 1930s stipulates the extension of coverage to rural areas. During the late 1940s, the IESS created a special fund to extend coverage to rural agricultural workers. However, this effort was limited to establishing four health centers in rural areas proximate to Quito. In 1966, the then-military government sought to extend social services to the impoverished rural populations and ordered the IESS to provide social security coverage to rural areas. At that time, the military was particularly interested in providing benefits to communities that had formed agricultural collectives, known as *comunas*. The *comunas* were the beneficiaries of military-inspired agrarian reform and rural development efforts. With the assistance from the Iberoamerican Social Security Organization, the IESS established pilot projects in four *comunas* between 1968 and 1973, covering over 2,500 persons. In 1973, the military decreed (no. 307) the creation of the SSC and ordered the extension of the coverage to nearly 100 additional *comunas* by 1977.

The military decree, with subsequent IESS regulations, set out the benefits package (with qualifying criteria), target beneficiaries, and administrative structure for the extension of the pilot plan. During this initial expansion phase of the 1970s, the SSC was highly centralized and managed through a division under the IESS Medical Department. It was financed by the IESS and central government through a special rotating fund also administered by the Medical Department.

In 1981, a democratic government legislated the extension of SSC coverage (Law No. 81). This law mandated several important changes for SSC beneficiaries and staff. First, it created within the IESS a separate, autonomous division with corresponding administrative structure overseen by a commission consisting of the IESS director, the SSC director, and a representative from the IESS board of directors. Second, the law directed the SSC to extend affiliation through a variety of popular and community organizations in rural areas including cooperatives, *comunas*, associations, committees, etc., and to incorporate families who do not belong to any organization. Third, the law mandated an additional benefit, old age pension, and directed the IESS to create a special reserve fund for this purpose. The law also set out the IESS-government arrangement for financing SSC operations and benefits. This is discussed in Section 3.3.4.

Finally, a 1981 IESS resolution also decentralized some operations through the creation of administrative units in four regions (expanded to eight in the mid-1980s). In accordance with Law 81, the regulation also instituted the organizational structure of the SSC, establishing three departments: planning, services, and finance and supplies. The resolution set a five-year target of one million affiliates. At that time, the SSC had approximately 100,000 enrollees.

3.3.1.2. Institutional Linkages

Although SSC is organizationally a dependency of the Ecuadorian Social Security Institute (IESS), as suggested, it retains considerable decision making autonomy in terms of planning, investment, and operations. Essentially, SSC represents a separate and streamlined social security scheme within a larger and more generous (IESS) social security system. The former enrolls workers and families whose major source of income is derived from agricultural activities while the latter caters to formal sector workers (not their families) employed in private industrial and commercial firms. The SSC provides a limited package of primary medical care while the IESS grants comprehensive coverage.

Despite deriving a significant proportion of its financing from the IESS, the SSC has a separate budget, administrative apparatus, facility network, and personnel structure. Nevertheless, as described in Section 3.3.3, SSC is linked to the IESS in other ways. For example, through a referral system requiring special authorization, SSC refers its affiliates to IESS facilities for specialty and hospital care.

Finally, contrary to SSC legislation calling for coordination with the Ministry of Health, there is little evidence of linkage. The SSC and MS have shared the costs of building some dispensaries, but it appears that both entities maintain parallel health delivery systems in most rural areas. The SSC has some ties to non-government organizations and international donor agencies (including USAID/Quito) for specific activities and programs (e.g., dispensary construction, family planning programs, etc.).

3.3.2. Enrollees

Available data on institutional coverage population permits only rough estimates of real population coverage. As measured by affiliation, the IESS

(including SSC) covered about 15 percent in 1987, and another two percent were enrolled in the military and police system. Real coverage is probably less. An undetermined number of IESS affiliates are also enrolled in private insurance plans while others prefer to use other than IESS providers.[32] The MSP officially claims responsibility for covering 80 percent of the population. However, recent household demand studies demonstrate that the MSP covers about one-third of the population in both urban and rural areas (Fundacion Eugenio Espejo, 1986, Vanormelingen, 1991). These same studies reported that the private sector captures 44 and 33 percent of the urban and rural populations, respectively.

Exhibit 3-18 shows that SSC coverage has increased steadily since its founding. For example, while the rural population decreased by nearly 10 percent during the 1980s, SSC coverage increased five-fold over this period. However, coverage extension has fallen short of the goal of one million affiliates by 1986 (Resolution No. 413, 1981). In 1992, SSC officials estimate an enrollment of nearly 700,000, representing approximately 14 percent of the rural population, or six percent of the total population. However, the registers may overestimate affiliation since the SSC does not record enrollee attrition due to non-payment of prima, migration, death, etc. (*see Section 3.3.5*).

EXHIBIT 3-18
SSC COVERAGE: SELECTED YEARS

YEAR	NO. AFFILIATES	NO. FAMILIES	NO. COMM. ORGANIZATIONS	FAMILIES/ COMM. ORG.
1970	2,700	514	4	129
1980	107,900	20,870	263	79
1989	548,900	99,000	1,638	60

Source: SSC. Boletin Estadistico, 1989.

Unlike the IESS, SSC provides health coverage to the entire family. The family represents the principal enrollment unit and the head of the household is responsible for paying the single, per family, monthly premium. Generally, a family only can obtain coverage through membership in an established local organization. These can take on a variety of forms: cooperatives, production associations, and traditional community groups. An undetermined number are in effect agricultural firms and hacienda-based employers who enroll their farm workers in the SSC. Moreover, an increasing number of these groups are organized by the SSC for the express purpose of affiliation. SSC-initiated organizations provide the mechanism whereby families who are not members of any established local organization can secure SSC affiliation. SSC records do not distinguish among the different forms of organizations linking families to the SSC.

Exhibit 3-18 demonstrates that the number of families per local organization has halved since the onset of SSC. Currently, each local organization contains an average of 60 families. It is the responsibility of the organization to collect the nominal premium from members and pay SSC, arrange for ID cards, maintain up-to-date registers of premium payments, number of enrollees per family, and household characteristics (e.g., age and sex of all family

[32] Approximately 70 percent of IESS affiliates reside in the two highly urbanized provinces of Pinchacha and Guayas.

members, access to water and sanitation services, land ownership, occupation, etc.).

EXHIBIT 3-19
NO. OF SSC DISPENSARIES AND RATIO TO COMMUNITY ORGANIZATIONS AND AFFILIATES BY REGION, 1989

REGION	NO. DISPENSARIES	NO. COMM. ORG./ DISPENSARY	NO. AFFILIATES/ DISPENSARY
QUITO	109	3.2	1,044
GUAYAQUIL	58	2.6	1,307
CUENCA	69	5.3	1,216
AMBATO	17	2.5	868
RIOBAMBA	53	3.9	1,086
PORTOBIEJO	79	2.8	1,485
LOJA	43	4.0	1,093
IBARRA	36	3.8	1,051
TOTAL	464	3.5	1,182

Source: SSC, Boletin Estadistico, 1989.

According to SSC policies, the location (and consequent construction) of a dispensary is contingent upon a number of factors that are assessed through a feasibility study: 1) desire for affiliation of at least 1,200 people who at the same time have relatively facile access to the proposed site; 2) no other health facility (public or private) is located within eight km. of the proposed site; 3) the existence of established community organizations willing to take on the various responsibilities described above; and 4) the existence of a permanent access route (road, path, or waterway to transport supplies and personnel).

Exhibit 3-19 shows that although an average of 1,800 persons are affiliated with a dispensary, considerable variation exists among the eight administrative regions. For example, the Ambato area located in Andean region average 800 families per dispensary while the coastal Portoviejo region averages nearly 1,500 affiliates per dispensary. Differences may relate to geographical dispersion and access. Also noted in the Exhibit, each dispensary is associated with two to five community organizations. As noted, an under-determined number of these organizations represent agricultural firms or hacienda-based employers.

SSC affiliation is higher in those regions where there is a greater percentage of rural inhabitants. As seen in Exhibit 3-20, affiliation as a percent of total population is proportionately higher in the mostly rural Amazonian region while lower in more urban coastal region. This pattern holds for most provinces (not shown in the Exhibit). Those provinces with highest percentage of rural residents (greater than 70 percent) also register the highest proportion of affiliation (10-16 percent). But within each region, affiliation varies considerably, ranging from 2 to 16 percent of provincial populations, suggesting inequalities in coverage.

Data on socio-demographic and economic characteristics of the affiliated population vis-a-vis the unaffiliated population are not available. SSC officials maintain that, in general, the SSC dispensaries are located near two or more rural hamlets or nucleated population centers. However, internal documents

highlight that an undetermined number of the dispensaries are located near towns with MSP and private facilities. The unaffiliated population consists of inhabitants of more dispersed areas. Moreover, affiliates tend to be members of an organized group, many of which are related to production activities (cooperative, hacienda, etc.). In sum, SSC enrollees may represent a relatively better-off strata of Ecuadorian rural society.

EXHIBIT 3-20
SSC COVERAGE OF RURAL POPULATION BY REGION
DESCRIPTIVE STATISTICS, 1986

REGIONAL/ STATISTIC	PERCENT RURAL	PERCENT SSC AFFILIATION
ANDEAN		
average	52	6
range	28[1] - 84	2[3] - 12
COAST		
average	40	3
range	28[2] - 49	1[4] - 8
AMAZONIAN		
average	76	12
range	64 - 80	8 - 16
COUNTRY		
average	47	5

[1]Pinchacha Province (contains Quito); Second most urban province is 58 percent rural.
[2]Guayas Province (contains Guayaquil); Second most urban province is 33 percent rural.
[3]Pinchacha Province.
[4]Guayas Province.

Source: Mesa-Lago, 1989.

3.3.3. Managerial Characteristics

SSC provides three health benefits through the direct provision of services: sickness, maternity, and dentistry. Three additional benefits involve cash transfers: death (funeral allowance), invalidity pension, and retirement pension. The latter benefits represent percentages of the government-mandated minimum salary (S/40,000 [US $36] in March, 1992): funeral allowance: 25 percent; invalidity and old age pensions: 75 percent.

SSC dispensaries provide mainly primary medical and preventive services. Medical services include physician consultations, first aid, minor surgery, and drugs. Preventive services include prenatal and well-child care, and, to a lesser extent, health education. Recently, SSC has initiated a family planning cancer detection program. Dental services consist of prophylaxis, exodoncy, and minor surgery.

Finally, SSC affiliates have access to outpatient specialty care as well and secondary and tertiary inpatient services at IESS facilities. Access is restricted, however, through a somewhat lengthy review and authorization process involving approval of SSC regional medical supervisors and administrative officials. In 1989, the SSC approved 18,950 referral requests, representing a low four percent of total morbidity-related medical consultations provided in the

dispensaries. Approximately one-third involved a hospital admission in a IESS facility. Although not specified in SSC registers, the remainder consist of referrals to specialty and diagnostic services.

Each affiliated head of household is required to pay a token monthly premium presenting one percent of the minimum wage, less than US $1 in 1992. In comparison, IESS health services financed a contribution, representing 5.4 percent of wages, paid by employers. But the resources generated by this contribution are insufficient and the IESS has tapped pension reserves to cover deficits in the health care program.

By contract with the SSC, the local organization is at risk for premium collection from all its members. Each family member is issued an identification card which he or she submits upon requesting services at SSC dispensaries. Some local organizations collect the premiums on a bi-yearly basis in correspondence with the harvest cycle. According to SSC officials, non-payment of the premium results in denial of services if payment is not received from the organization during a three-month period. However, it appears that management of the collection and payments by local organizations varies considerably and the SSC administrative capacity to keep abreast of payment schedules is deficient.

SSC incorporates some measures to reduce adverse selection and moral hazard. SSC will not accept a local organization (or community) unless at least half of all households desire affiliation. Further, only founding members are provided immediate access to IESS secondary and tertiary level services. All families that affiliate after an initial enrollment period–usually corresponding to the completion of the dispensary–must wait six months before referral to IESS services is permitted.

As suggested earlier, access to higher level IESS services is limited through a pre-authorization process than may require a waiting period. Between 1981 and 1989, referrals as a percent of total SSC consultations decreased from 10 to four percent. In 1989, SSC affiliates, who make up 33 percent of total SSC and IESS insured, represented 11 percent of hospital discharges in IESS hospitals. However, low use of inpatient services, 12 discharges per 1,000 affiliates, may relate to distance and transportation factors.

No user fees are collected for medical services and drugs are distributed free of charge. However, as described in Section 3.3.6, SSC facilities are underutilized and the number of drugs dispensed or applied per medical visit is low.

Finally, although the policy is implemented irregularly, the SSC attempts to initiate service provision (in a private home or community building) before the facility is constructed. According to SSC officials, this facilitates community acceptance of the program, which in turn encourages community donation of land, labor, and some materials to the construction effort.

3.3.4. Relations With Providers

SSC services are provided directly through a facility-based network of over 520 dispensaries (in 1992). The dispensaries are relatively large buildings consisting of seven rooms: consultation (two), waiting area, ORS, minor surgery, and maternity. Most dispensaries contain living quarters for the nurse auxiliary. Physicians and dentists are hired through four and six-hour contracts, while nurse auxiliaries have eight-hour contracts.

SSC dispensaries are distributed throughout the country. Of the 464 dispensaries operating in 1989, 51, 40, 9 percent were located in the Andean, Coastal, and Amazonian regions, respectively. In 1990, these three regions represented 53, 41, and 6 percent of the rural population.

EXHIBIT 3-21
SSC: PERSONNEL BY CATEGORY, 1989

PERSONNEL CATEGORY	NUMBER	PERCENT
PHYSICIANS	235	21
DENTISTS	13	1
AUXILIARIES	464	46
SUPERVISORY/ INVESTIGATIVE	75	8
ADMINISTRATIVE	201	20
OTHER	19	2
TOTAL	1,007	100

Source: SSC, Boletin Estadistico, 1989.

Exhibit 3-21 displays the number of SSC personnel by category in 1989. Nearly 30 percent of SSC employees are administrative, supervisory, or investigative personnel. The latter group performs feasibility studies to assess community needs and location of potential sites for SSC dispensaries. Most administrative personnel are located at the central office in Quito. In 1992, 87 dispensaries (17 percent) were without physicians, in part because they are located in remote rural area which physicians consider undesirable. These are covered by itinerant physicians rotating among two or three facilities. Only a small proportion of dispensaries provide dental services, usually on an irregular basis.

3.3.5. Financing

Based on the principle of social solidarity, SSC is financed through a tripartite mechanism typical of social security regimens in Latin America. The SSC is financed legally through a one percent payroll tax applied to wages of IESS affiliates. But the payment is divided among the insured (35 percent), their employers (35 percent) and the government (30 percent). In practice, because of government arrears in its contribution, the IESS (and therefore affiliates and employers) bear the total costs of the SSC. The SSC token premium (one percent of the minimum wage) paid by each head of household represents an insignificant contribution to SSC revenues or expenditures.

Data on real reverues and expenditures are unavailable. SSC officials are generally unaware of their expenditures in part because finances are managed by the IESS. In 1991, the SSC estimated that it spent S/11,791 million. But these are very rough approximations based on the legally-determined transfer from IESS. Nevertheless, SSC per affiliate costs for medical care are only one-fifth of IESS per affiliate outlays. In 1986, the last year in which comparative data were

available, the IESS per affiliate cost of health care was $10,573 compared to $2,112 for SSC (Mesa-Lago, 1989). However, SSC costs do not include expenditures (incurred by the IESS) of providing inpatient care to SSC affiliates. In 1989, 11 percent of total discharges from IESS hospitals were SSC affiliates (6,556 discharges representing 63,444 patient days, of a total of 59,343). Despite this omission, the per affiliate expenditure gap probably remains vast, and the difference relates to the SSC's low-cost delivery modality and lower utilization rates (*see Section 3.3.6*).

EXHIBIT 3-22
A COMPARISON OF COST, PRODUCTIVITY, AND QUALITY MEASURES, SSC AND MSP PRIMARY HEALTH SERVICES, 1985

INDICATOR	SSC		MSP	
	CURATIVE	PREVENTIVE	CURATIVE	PREVENTIVE
COST/PHYSICIAN CONTACT (US $)	$7.50	$5.53	$4.46	$3.06
PRODUCTIVITY[1]	2.5	3.2	1.9	2.1
DOWN TIME[2]	33%		52%	
TEST SCORE[3]	69		77	
% TOTAL EXPEND. ON DRUGS	14%		6%	

[1] No. of services provided per contract hour.
[2] The amount of time observed without "specific activity."
[3] Percent correct responses on knowledge test of child care principles, maternal care procedures, and communicable disease reporting.

Source: Robertson et al., 1991.

Finally, Robertson, et al. (1991) compared the cost, productivity, and quality of physician-provided primary health care services in a sample of comparable MSP health centers and SSC dispensaries. The results are displayed in Exhibit 3-22. Curative and preventive services cost respectively 70 and 80 percent more in SSC facilities. Yet productivity was higher and down time less for SSC physicians.[33] As measured by a knowledge test of maternal/child care principals, MSP personnel received superior scores. Yet quality as measured by expenditures in drugs and supplies strongly favored the SSC. The authors attributed the higher costs to higher pay scales and less volume (and range) of services, particularly for preventive care. Other measures of efficiency and quality were not performed.[34]

3.3.6. Utilization

As measured by utilization, demand for SSC services by affiliates is alarmingly low. They average approximately 1.3 contacts with dispensary personnel

[33] Ugalde (1985) reported much higher physician productivity rates during the 1970s, ranging from 4.6 to 5.0 consultations per hour in SSC dispensaries.

[34] It is important to note that during the late 1980s, the quality of MSP services deteriorated considerably in part because significant reductions in MSP budgets (Fielder, 1991). Over this same period (1985-1989), the SSC has expanded coverage: adding 91 dispensaries and nearly 186,000 affiliates (a 50 percent increase over 1985 levels).

in 1989, including physician and nurse consultations for curative and preventive care. By contrast, in 1985, IESS affiliates averaged nearly four physician consultations. Most of these visits were provided by specialists.

Only about half of the SSC patients who demanded a medical visit in 1989 returned to the dispensary for a subsequent visit during that same year. Physicians average a low 11 patient contacts per four to six-hour workday. Children less than one year of age (who demanded at least one visit) average less than two well-baby visits, while pregnant women (who demanded at least one visit) average only three prenatal consultations.

EXHIBIT 3-23
ESTIMATES OF SSC COVERAGE BY TYPE OF SERVICE, 1989

TYPE OF SERVICE (CONSULTATION)	PERCENT COVERAGE (affiliated pop.)
MORBIDITY	31.8[1]
PRE-NATAL	47.7[2]
BIRTHS	7.1[3]
WELL-CHILD	
(<1 Yr.of age)	52.2[4]
(1-4 yrs. of age	9.9[4]
FAMILY PLANNING	1.7[5]

[1]Number of first-time medical consultations/affiliated population.
[2]Number pregnant women receiving at least one prenatal consultation/estimated total number of pregnant women.
[3]Number of births in dispensaries/total number of births reported by affiliates.
[4]Number of children within each age group receiving at least one well-child consultation/total of affiliated children within each age group.
[5]Total number of women of child-bearing age receiving at least one family planning consultation/total number of female affiliates of child-bearing age.

Source: SSC, Boletin Estadistico, 1989

More disturbing are the low rates of coverage evidenced in Exhibit 3-23. The figures presented in the Exhibit are based on the registered number of persons affiliated with each dispensary. Rates for preventive services and birth have declined dramatically during the 1980s. For example, between 1981 and 1991, SSC coverage for prenatal care declined from 62 to 42 percent while coverage for births halved. Although not indicated in Exhibit 3-23, coverage for family planning doubled in 1990 because of a special USAID-funded program.

In 1989, only four percent of pregnant women that received prenatal care at SSC dispensaries also gave birth in the facility. Nearly two-thirds gave birth at home but 30 percent were attended in other public and private facilities. SSC officials offer several explanations for the low rates of coverage among the affiliated population: the long distance between household and dispensary, irregular hours by the physician, widespread use of traditional healers, client preference for private facilities in market towns, and the lack of outreach services and health promotion activities by dispensary personnel.

SSC epidemiological records suggest that the SSC has had little impact on health conditions in the communities they serve. For example, in 1989, nine of the 10 principal pathologies observed in dispensaries in all regions are

parasitic, respiratory, and diarrheic diseases. These are virtually the same pathologies–in mostly the same order–observed since founding the SSC nearly 20 years earlier.

Part of problem rests on the SSC emphasis on curative services. Despite legislation calling for a strong focus on preventive services, SSC services consist mainly of clinic-based morbidity treatment. Community outreach and public health activities are nearly non-existent. In 1989, SSC registers show 85 percent of all activities registered by nurse auxiliaries and physicians were curative in nature (injections, morbidity consultations, first aid, and minor surgery). Clinic-based preventive services such as vaccinations and pre-natal and well-baby care represented the remainder. Community outreach activities are limited to periodic home visits by the nurse auxiliary, averaging less than two home visits per week in 1989. The only promotional services provided at SSC facilities include recently-initiated cancer screening and family planning programs, funded in part through USAID/Quito. SSC officials admit that most of the communities served by the SSC are without basic potable water and sanitation facilities, and more preventive services are desperately needed.

SSC internal documents suggest several additional inefficiencies. Many physicians keep irregular hours and this may affect the low levels of utilization and coverage observed in most dispensaries (*see Section 3.3.6.*). Uncertainty concerning the presence of a physician may affect an affiliate's decision to demand SSC services, especially if the dispensary requires considerable effort in time and travel. Curiously, despite the free distribution of drugs, the SSC reports the yearly destruction of large quantities of medicines that are not used at the dispensaries. The SSC maintains a relatively large essential drug lists consisting of 87 items. Further study is needed to explain this phenomenon.

Finally, the referral systems directing SSC enrollees to IESS services appears increasingly porous, leading to higher costs and poor relations with IESS medical staff. As suggested earlier, in theory, access is restricted through a review and authorization process. In 1991, the SSC approved over 24,000 referral requests representing 5.5 percent of total morbidity-related medical consultations provided in the dispensaries, and a 28 percent increase over the number of referrals registered in 1989. Moreover, in 1980, one of every 110 SSC physician consultations resulted in a referral to an IESS facility. By 1991, this ratio had decreased to one in every 20 consultations. In 1989, SSC affiliates who made up 33 percent of total SSC and IESS enrollees represented 11 percent of hospital discharges in IESS hospitals. In 1991, the SSC paid the IESS an estimated S/$810 million, representing seven percent of estimated total expenditures, for 6,556 SSC enrollees hospitalized in the latter's facilities. IESS officials maintain that the real costs of providing care dwarfs the SSC transfer.

3.3.7. Synthesis and Further Research

SSC provides an alternative and more affordable approach to health care coverage extension than traditional social security schemes. Despite questions concerning quality, efficiency, and impact, the primary health care approach taken by the SSC offers greater potential for reaching the rural population and addressing their health needs than the IESS's hospital and specialist-based modality. Moreover, unlike the IESS, the SSC coverage extension model is more in

line with the economic capabilities of Ecuador. Based on 1987 IESS health care costs, Mesa-Lago (1989) estimated that it would require from 23 to 34 percent of GDP to extend IESS services to the entire population.

The SSC's future is uncertain in part because of its dependence on IESS as its only source of financing. The IESS itself faces a severe financial crisis. Unless the government pays its obligations or the institution achieves radical improvements in efficiency, by the mid-1990s, the IESS may have to reduce expenditures for benefits, administration, and program operations. On paper, the SSC is financed through the IESS Health-Maternity Program (PSM). Between 1980-1988, the PSM incurred an accumulated deficit of US $62 million for medical care services and benefits provided to IESS affiliates only (Mesa-Lago, 1989). The current IESS premium for PSM contributes sufficient revenues to cover only about one-third of program expenses. The deficit is covered through transfers from other programs such as pensions. It is unknown what proportion of the deficit is represented by the SSC, and at least one analyst suggests that since the PSM is in effect bankrupt, the SSC probably derives its income from variety of programs and funds (Mesa-Lago, 1989).

Predictably, the SSC is unpopular within the IESS bureaucracy. IESS officials oppose further SSC coverage extension in part because of the high cost of expansion and of providing inpatient care to SSC affiliates. The government does not contribute its legal share of the cost, thus forcing IESS insured and their employers (or in all likelihood, the former's pension fund) to bear the financial burden. In short, financing can be reduced or withdrawn at any time.

This case study has highlighted a number of deficiencies requiring further study:

- Real costs are unknown. This is particularly the case regarding outlays for administration and inpatient care provided in IESS facilities.

- Utilization (and productivity) of services is alarmingly low despite epidemiological records that suggest the needs are high. Similarly, SSC impact on health conditions appears minimal.

- Premiums paid by affiliates are negligible in relation to other sources of income. Some officials claim that rural employers (of plantations and agri-industrial businesses) as well as producer associations and cooperatives take advantage of the token premiums to enroll their employees or affiliates. Many can afford to pay a higher share of the costs, thus allowing the SSC to target its subsidies.

- The SSC may discriminate against more dispersed, isolated, and generally poorer populations.

- Little coordination with the MSP or private sector.

- Coverage extension has fallen short of the goal of one million affiliates set for 1986.

SSC officials recognize a need for major policy changes aimed at achieving greater financial autonomy, or at least less dependence on a single institutional source; lowering the costs (and raising efficiency) of service provision and administration; exploring other low-cost models for coverage extension, especially for reaching more dispersed populations; and improving quality and impact.

Other questions with strong policy implications are worth exploring. It is well documented that employment and wage-based coverage and finance mechanism limits the possibility of social security coverage extension in developing countries. This is especially true in a country such as Ecuador where over 60 percent of the population does not participate in the formal economy. But this does not mean that contributing to the cost of health care is beyond the individual or collective means of all informal sector workers or traditional farmers. Can the community organizations, firms, cooperatives, and producer organizations that currently collect or pay premiums afford to pay a higher percentage of costs? How can the SSC target its subsidies to those who cannot?

Finally, Ecuador's Health Ministry also has extensive network of facilities in rural areas. Yet it is facing a severe financial crisis. A large number of urban and rural facilities have become dysfunctional due to lack of drugs, medical supplies, and personnel. An important policy issue is to explore the potential for merging the financing of MSP and SSC services while tapping the network of private providers to deliver care in many rural areas. This mixed model approach will depend of the supply of providers in any given area. Household demand studies show that a significant proportion of rural residents use private providers in market towns. If these providers are accessible, affordable, and perceived as higher quality by the rural population, can they be used for the provision of a subset of services currently provided by the SSC and MSP? In other areas, both private and public providers can be used.

3.4 CASE STUDY #7: RURAL SOCIAL SECURITY EXTENSION IN MEXICO-IMSS-COPLAMAR[35]

Mexico is a middle-income country with a GNP per capita of US $1,750 in 1988. Poverty incidence of 37 percent places Mexico at the midpoint among Latin American countries. The economic crisis of the 1980s resulted in drop of GDP per capita by 34 percent, the doubling of unemployment, a decline in real wages by one-third, and average inflation of 80 percent. Mexico is a heavily urbanized country with 71 percent of the population residing in urban areas in 1988, compared to 55 percent in 1965. Poverty incidence is 30 percent in urban areas but rises to 51 percent in rural areas. In 1987, about 27.3 million people lived in dispersed areas of less than 2,500 inhabitants, the official definition of rural. About 42 percent resided in villages of less than 500 inhabitants. According to the Mexican government, these latter areas are designated as "marginalized" because of the concentration of absolute poverty. Half of the rural sector consists of traditional farming (PREALC, 1982).

[35] This case study draws on Sherraden (1989, 1991, 1992) and Mesa-Lago (1992). The author is grateful to these researchers for supplying advanced copies of to-be-published materials as well as other documents published in Mexico.

In 1976, the Mexican federal government created General Coordination of the Plan for Depressed Zones and Marginal Groups (COPLAMAR), an agency organizationally linked to the Office of the Presidency. The goal of the new agency was to channel funds—originating from oil revenues—for social services in marginal areas. In 1979, COPLAMAR linked up with the Mexican Social Security Institute (IMSS) to form a program, IMSS-COPLAMAR (renamed IMSS-Solidaridad in 1988), to finance and provide health services to Mexico's rural population. Financed by the central government and partly by IMSS, the latter institution manages the program.

The large allocation of resources to IMSS-COPLAMAR resulted in the extension of health care coverage to many impoverished areas of rural Mexico where the population previously had little or no access to health services. At its height in 1985, IMSS-COPLAMAR covered 13 million people, 17 percent of the population and 57 percent of rural inhabitants in 31 states. It operated a large network of facilities including 3,246 rural clinics and 65 hospitals (*see Exhibit 3-24*). According to surveys and government estimates, a significant proportion of program clients lived in conditions of absolute poverty.

The IMSS covers private and parastatal employees and is the largest of four social insurance institutions that finance and provide health services to specific groups. The others include: Institute of Social Security and Services for State Employees (ISSTE), Institute of Social Security of the Armed Forces (ISSFAM), and Social Security for Petroleum Workers (PEMEX-PSSS). Taken together, in 1988, these institutions covered 43 million Mexicans, representing 52 percent of the population (Wilkie, 1989). Of this total, nearly 80 percent were covered by the IMSS. Most of the population covered by these social insurance institutions reside in urban areas.

The uninsured who cannot afford private services are covered in theory by the Federal Secretariat of Health (SSA) which administers a large network of clinics and hospitals as well as preventive and public health programs. SSA claims to cover about one-fourth the population but others suggest that real coverage is half that amount (Wilkie, 1989). The Federal District of Mexico City also operates hospitals and health centers for the uninsured. A federal program, Integral Family Development (DIF) provides mother-child care in urban areas while the National Indian Institute (INI) operates health services for Indian groups in rural areas.

In 1986, the program was partially dismantled under a decentralization policy. Resistance by IMSS-COPLAMAR as well as infighting within the Mexican Ministry of Health delayed decentralization and the transfer of IMSS-COPLAMAR operations to the state health directorships. In 1987, facilities in 14 states were transferred, but decentralization was halted in 1988 and the IMSS retained control in 17 states.

The program has been praised by a number of analysts as an example of rural coverage extension through the provision of relatively low-cost but effective health care provision (Mesa-Lago, 1992; Sherraden 1991, 1989; Cordera and Gutierrez-Trujillo, 1986; Sherraden and Wallace (in press); Velazquez Diaz, 1989; Wilkie, 1989). Based on budgetary data and facility statistical ledgers that register utilization and disease incidence, IMSS-COPLAMAR appears to have had a

positive impact on health care access and health status of the targeted beneficiaries. The program also provides health services at a substantially lower cost than other institutional providers, including the SSA.

It is difficult to determine the degree of risk-sharing in the IMSS-COPLAMAR scheme. The government subsidy is large (at least 60 percent), underwriting the total direct cost of service provision. The IMSS subsidizes the program's administrative costs probably through pension fund transfers. The real cost to the IMSS of administrating IMSS-COPLAMAR is unknown. IMSS-COPLAMAR beneficiaries do not pay premia or user fees. Their contribution consists of in-kind donations of labor and materials. The value of these contributions is difficult to calculate and varies considerably among the communities.

3.4.1. Institutional Description

IMSS-COPLAMAR's major objective is to extend health services to rural areas where access is limited or absent. The program was part of a wider institutional effort to improve living conditions and economic opportunities in impoverished rural areas. COPLAMAR, the program's initial funder, was founded in 1976 in the midst of the oil and credit boom, and disappeared in 1983 in the midst of a severe economic downturn. By presidential decision, in 1979, it turned its attention and resources to the traditionally forgotten rural areas. Between 1979 and 1983, Sherraden (1989) reports that it invested US $5 billion in a variety of development projects: roads, water systems, food storage facilities, electrification, employment generation, sanitation, and schools. Most funding was channelled through federal agencies and parastatals, such as IMSS.

IMSS won a COPLAMAR contract to extend health services in part because of its previous—albeit limited—experience with a rural extension program, known appropriately as the Social Solidarity Program (PSS). Initiated in 1973, PSS was an IMSS program that sought to experiment with alternative service modalities (primary health care) provided to uninsured groups, mostly in rural areas.[36] Financing was shared with the central government (60 percent) and the IMSS (40 percent). Between 1973 and 1979, PSS constructed 310 primary health clinics and 30 small secondary-level hospitals.

The COPLAMAR-IMSS link-up sought to accelerate the extension effort begun six years earlier by the latter institution. The contract stipulated the rapid extension of facilities and services. Exhibit 3-24 shows that IMSS accomplished the task at a record pace. In 1979 alone, it constructed 1,796 rural clinics and increased coverage from 2.6 million (under PSS) to 3.7 million, a 42 percent increase. By 1985, IMSS counted nearly 3,250 clinics and 65 hospitals serving 14.5 million inhabitants.

The period 1982-87 ushered in several organizational and institutional changes for the program. In 1982, COPLAMAR was dissolved by presidential decree, thus voiding the COPLAMAR-IMSS contract of four years earlier. In 1983, the government mandated the continuation of the program under IMSS authority. In

[36] IMSS's traditional social security model consists of the provision of hospital and specialty services to relatively well-off, salaried urban workers and employees.

general, program operations were unaffected by these changes. But in 1984, the government legislated the creation of a national health system with the SSA as the rector institution. One of the first assignments was to implement the decentralization of SSA and IMSS-COPLAMAR health service systems to the states, or more specifically, to state health departments. IMSS-COPLAMAR transferred infrastructure and personnel in 14 states between 1985 and 1987. These were generally the wealthier and least rural states served by the program. The decentralization process came to an abrupt halt in 1987 in part because of protests of deteriorating quality (under state administration) by IMSS-COPLAMAR clients and staff. In 1988, the program received a new name, IMSS-Solidarity, as well as renewed interest. The new administration of Carlos Salinas De Gotari directed the IMSS to continue coverage extension through infrastructure expansion. As illustrated in Exhibit 3-24, 713 clinics were constructed in 1989 and 1990.

EXHIBIT 3-24
NUMBER OF IMSS-COPLAMAR CLINICS AND HOSPITALS, SELECTED YEARS

YEAR	CLINICS	HOSPITAL
1978	310[1]	30[1]
1981	2,484	41
1985	3,246	65
1988	2,323[2]	51[3]
1990	3,054	52

[1]Refer to facilities constructed by PSS.
[2]920 clinics decentralized in 1987.
[3]14 hospitals decentralized in 1987

Source: Sherraden, 1989, 1991; Mesa-Lago, 1992.

COPLAMAR is a dependency of the IMSS but administered separately with a separate financing mechanism, service delivery modality, and personnel policy. The IMSS provides planning, supervision, and evaluation. Services are provided at two types of facilities: rural clinics and hospitals. The rural clinics provide nearly all program services. Each clinic consists of five rooms: waiting area, consultation room, two-bed infirmary, and physician's living quarters. In general, the clinics are located in dispersed rural hamlets according to surveys that measure poverty and access to services (Sherraden, 1991). Linkages to other facility networks, such as the SSA, are limited.

3.4.2. Enrollees

Exhibit 3-25 shows that in 1988, IMSS-Solidarity Program covered about 10 million persons, representing 12 percent of Mexico's population and nearly 40 percent of the rural population (Sherraden, 1989; Mesa-Lago, 1992). If we include the decentralized facilities, coverage increases to 14 million persons, or 55 percent of the rural population.[37] Coverage is measured by the number of persons registered (*adscritos*) with a particular facility. In 1986, Sherraden (1989) reports that the program covered 85 percent of the population in the catchment areas of the facilities. As shown in Exhibit 3-25, coverage has increased rapidly

[37] Before decentralization, the program covered 14.5 million persons in 1985. Officially, the government claims 65 percent coverage, including 69 percent of the population of traditional (subsistence) farmers and 87 percent of the Indian population (Velazquez-Diaz, 1989).

since the days of the PSS program, the precursor to IMSS-COPLAMAR. Between 1975 and 1988, the number of registered affiliates increased nearly 15-fold (from .67 to 9.9 million).

IMSS-COPLAMAR has attempted to locate facilities in the areas of greatest need. Selection criteria included a number of indicators of "marginality" including population size and dispersion, accessibility to water and electricity, distance from SSA facilities and other health services, etc. However, political pressure from municipal officials also has played a role in locality selection. Clinics were located to serve a total catchment area of 2,500 to 8,000 persons consisting of several dispersed communities of 500 to 2,500 people. Hospitals were designed for a population of 200,000 and serve as the reference facility for about 40 clinics. Location of the hospital responded to maintaining an average travel time of three hours between the clinics and hospital.

In general, IMSS-COPLAMAR has achieved its logistic objectives. In 1986, the rural clinics served an average of 4,000 people while the hospital served nearly 200,000 people (Sherraden, 1989). However, although rural clinics were to be located at least one hour from similar facilities, five to 10 percent of rural clinics are situated in communities where an SSA facility exists. Moreover, of the 42 rural clinics sampled by Sherraden, half were located at distances requiring more than three hours travel time to the nearest hospital.

EXHIBIT 3-25
IMSS-COPLAMAR: INDICATORS OF POPULATION COVERAGE SELECTED YEARS

YEAR	NO. OF REGISTERED BENEFICIARIES (000,000)	PERCENT OF TOTAL POPULATION	PERCENT OF RURAL POPULATION	PERCENT OF CATCHMENT AREA POPULATION
1975[1]	.67	1	3	33
1979	3.7	5	16	31
1982	9.7	13	48	59
1985	14.4	19	57	79
1988[2]	9.9	12	40	85

[1]Refer to PSS coverage.
[2]IMSS-COPLAMAR lost approximately 30 percent of covered population because of decentralization.

Source: Official data cited in Sherraden, 1989; Mesa-Lago, 1992.

Available data suggest that IMSS-COPLAMAR benefits the poorest communities within the rural sector. A 1981 survey of over 2,500 communities served by the program found that two-thirds of rural households lacked water, half lacked electricity, and 90 percent lacked sewage disposal (IMSS-COPLAMAR, 1988). Nearly one-half of households consisted of a single room and two-thirds had dirt floors. Transmissible diseases including diarrhea and parasitic disease were highly prevalent, and taken together represented the major cause of morbidity and emergency consultations. The situation was particularly critical in distant areas with dispersed populations of less than 500 inhabitants.

Mesa-Lago (1992) reports that half of IMSS-COPLAMAR facilities and population coverage is located in the poorest states: those with high indices of infant mortality, infectious diseases, illiteracy, lack of piped water, and sanitation services (e.g., Chiapas, Guerrero, Oaxaca, Hidalgo, S.L. Potosi, Tlaxcala). These are also the states with a high proportion of Indian groups and with the lowest levels of IMSS coverage.

3.4.3. Managerial Characteristics

IMSS-COPLAMAR affiliates are covered only for health services provided in the institution's facilities, and not for other risks (e.g., old age, workingman's compensation, etc.). With few exceptions, access to regular IMSS health service system is denied. IMSS-COPLAMAR provides services at two levels: (1) the community through clinic-based, and to a lesser extent, outreach services; and (2) regional hospitals. Unlike the high technology, specialist and hospital orientation of IMSS services, IMSS-COPLAMAR employs a preventive and primary health care approach to service provision, especially at the clinic level. The role of the hospitals is considered secondary in part to minimize costs at that level.

About 85 percent of all service contacts are provided at the rural clinic, the focal point of the IMSS-COPLAMAR service provision. Any family within a particular clinic's catchment area can use the services. Services provided include maternal/infant care, family planning, environmental health, health education, and detection and control of infectious diseases. The clinics also provide outreach services to nearby communities.

The hospitals provide outpatient, emergency, and hospitalization services, which represent about 12 percent of services. The latter consists of the four major specialties: pediatrics, gynecology, general surgery, and internal medicine. Inhabitants of larger towns where the hospitals are located have direct access to these services.

If more specialized care is required, IMSS-COPLAMAR affiliates can be referred to tertiary-level IMSS facilities. About three percent of services occur at this level. However, IMSS-COPLAMAR affiliates are not covered by IMSS services and are generally discouraged from seeking care at its facilities.

People desiring access to IMSS-COPLAMAR services simply register in the nearest clinic. No premium (or user fee) is paid.[38] However, communities and heads of households are asked to contribute in other ways. First, communities are required to donate land and heads of household contribute labor to the facility construction effort. Most construction materials are purchased by IMSS-COPLAMAR. Second, the communities are responsible for maintenance of the facility as well as participating in public health and outreach service provision. Activities include: latrine construction, garbage disposal, water system installation, food production, pest control, and home improvements. Third, IMSS-COPLAMAR have organized health committees as well as enlisted the support of municipal councils, traditional healers, and other organizations to participate in the

[38] User fees are charged on weekends.

planning of service provision. Finally, the program has trained nearly 50,000 volunteer health assistants who are assigned to oversee 10 families and participate in annual needs assessment.

Level of participation varies widely. Sherraden (1989) observed that the assistants tend to participate in service provision (to learn nursing skills) rather than visit their assigned households. Heads of households are asked to work 10 days per year in facility maintenance, public health, and outreach service activities. Service is rarely denied for non-participation, but some clinics stimulate greater participation by threatening to deny service or close the clinic (Sherraden, 1989). In some cases, clinics were closed for up to a year or the physician was removed for a short period because of lack of community participation. Most heads of household participate in family health activities such as latrine construction and home improvement. Although it is difficult to confirm the data, IMSS-COPLAMAR registers show between 30 and 40 percent of affiliated households participating in at least one activity. Community-wide projects are much less common. Estimates of value of in-kind contributions are unavailable.

IMSS-COPLAMAR is closely linked to its parent institution, IMSS. The latter entity is the source of significant proportion of middle-level managers and other administrative staff. Procurement and distribution of all supplies and materials (including drugs), vehicle maintenance, information processing, research, and in-service training are managed by the IMSS. IMSS-COPLAMAR pays for some but not all of these services (*see Section 3.4.5.*). Although hierarchically dependent on the IMSS central offices, day-to-day administration of IMSS-COPLAMAR is separate and highly centralized. State offices appear to have little autonomy.

Generally, both IMSS and IMSS-COPLAMAR are characterized by stable and qualified staff--unlike SSA and state health offices. Moreover, salary and benefits levels are higher than in government institutions. But salary differences exist for comparable positions between IMSS and IMSS-COPLAMAR. The latter pays less. Unlike the IMSS, the IMSS-COPLAMAR professional staff is not unionized.

3.4.4. Relations With Providers

Similar to the IMSS, IMSS-COPLAMAR employs a direct service delivery system. All staff are salaried employees, and most services are provided in IMSS-COPLAMAR facilities with the exception of referrals to IMSS tertiary-care hospitals. As mentioned earlier, the rural clinics represent the center of most program services and activities.

Architecturally, the rural clinics are the same. They consist of four rooms: waiting area, an office and examination room, a two-bed infirmary, and living quarters for the physician. Clinics are staffed by a physician and two clinic assistants. In addition to clinical duties, the physician has a number of responsibilities: supervision of assistants, administration and recordkeeping, preventive and promotional activities (in the clinic and communities), organizing community groups and work crews for community health projects.

During the early years of the program, it relied mostly on recent medical school graduates, *pasantes*. But by 1986, nearly two-thirds of physicians were on permanent contracts (*see Exhibit 3-26*). Most pasantes remain on the job for a year or less. But records show that the same holds true for permanent physicians. Sherraden (1989) found that although clinically competent, the *pasantes* were less effective in community work than the more experienced permanent physicians. She found that the clinics were generally clean and well-maintained and clinical records and utilization registers were up-to-date and in order. Sherraden attributes this to close and constant supervision. Supervisors are responsible for 15 to 20 clinics and tend to visit each clinic on a monthly basis. However, supervisors tend to over-emphasize clinic-based services and paperwork (completing statistical registers) and under-emphasize community work.

EXHIBIT 3-26
IMSS-COPLAMAR: RURAL CLINIC PERSONNEL BY CATEGORY, 1986

PERSONNEL CATEGORY	NUMBER	PERCENT OF TOTAL CLINIC PERSONNEL
PASANTES	634	14
PERMANENT PHYSICIANS	1611	35
RURAL HEALTH TECHNICIANS	139	3
CLINIC ASSISTANTS[1]	2192	48
TOTAL CLINIC PERSONNEL	4,576	100
SUPERVISORS	118	--

[1]Principal assistants only. An equal number of substitute assistants attend the clinic on weekends.

Source: Sherraden, 1989

Despite low salaries–pasantes make less than a clinical assistant–and isolation, motivation appear high among most physicians. Participation in the program results from 1) requirement for graduation (one year of social service); 2) high rate of unemployment among physicians; 3) the program tends to draw more altruistic individuals; and 4) participation may lead to (but not guarantee) a permanent or supervisory position with IMSS-COPLAMAR. Almost all supervisory personnel were former IMSS-COPLAMAR *pasantes*.

Usually young women from the community who are bilingual and have graduated from primary school are recruited to fill the two clinic assistants positions. The program also uses Rural Health Technicians in clinics located in distant communities, representing about six percent of clinics. Recruiting and maintaining physicians in these areas is difficult.

The 51 secondary-level hospitals contain from 20 to 75 beds (average 28). The facilities are staffed by residents in family medicine, pediatrics, gynecology, general surgery, internal medicine, and anesthesiology. The surgeon is considered the chief of staff. Data on human resources were unavailable. However, occupancy rates are relatively high for regional hospitals (83 percent in 1988, up from 63 percent in 1980). Average length of stay was 3.5 in 1987 (down from 4.0 in 1983). This suggests increasingly efficient use of service capacity.

3.4.5. Financing and Expenditures

Although both the PSS and IMSS-COPLAMAR programs are financed through the same entities, government and IMSS, the distribution of the burden is separate. During the period 1973-1978, the government contributed 60 percent of the cost of the PSS program while IMSS furnished 40 percent. With the onset of IMSS-COPLAMAR in 1979, government agreed to pay all capital and recurrent costs while the IMSS underwrites administrative, supervisory, and training costs. The financing arrangement for PSS, however, remains unchanged. Sherraden (1989) reports that between 1983 and 1986, the share of IMSS financing of the PSS-COPLAMAR programs ranged from 9 to 12.5 percent.

Similar to social security programs elsewhere, IMSS is financed mainly through payroll taxes supplemented by contributions from the government and from self-employed (voluntary) affiliates. In 1989, the total payroll tax as percent of salary was 21 percent shared by employer (15.6 percent), employee (4.5 percent), and government (0.9 percent). Self-employed pay between 14 and 17 percent of income.

The IMSS has entered a period of financial uncertainty. Wilkie (1989) reports that actuarial reserves as a percent of operating funds decreased from 17.9 to 0.4 percent between 1980 and 1988. In 1989, the IMSS experienced an operational deficit of US $83 million. The financial decline is attributed to the high costs of the regular health program, low investment yield, high administrative costs, and reduced contributions from both the government and private sector in part because of the severe economic downturn over this period. For example, between 1979 and 1987, real IMSS revenues declined by 36 percent.

The effect of IMSS-COPLAMAR on IMSS financial disequilibria is unknown. However, Wilkie claims that the IMSS contribution to the program may be more than the estimate reported by Sherraden. He also suggests that the IMSS Pension Program subsidizes IMSS-COPLAMAR.

IMSS-COPLAMAR claims that community in-kind contributions represent another important source of income. But verification is nearly impossible. In exchange for free care, communities are urged to contribute land, materials, and labor for the construction and upkeep of the facilities. They also participate in outreach activities involving preventive and public health interventions (e.g., latrine, well, piped water installation). In a sample of 42 communities, Sherraden (1991) found that participation varied considerably. For example, a majority of the residents in only half of the sampled communities had constructed latrines.

Official reports cite substantial community contribution. For example, between 1979 and 1982, COPLAMAR reports that beneficiaries contribute 108 million workdays, worth an estimated US $747 million (COPLAMAR, 1982; cited in Sherraden, 1989). However, this figure refers to all COPLAMAR programs. Data specific to IMSS-COPLAMAR are unavailable. In sum, whether the value of community resource contributions is significant is an open question.

In 1986, IMSS-COPLAMAR (including PSS) spent US $73.1 million on providing health care to nearly 10 million beneficiaries. Exhibit 3-27 shows that per capita expenditures for health care were significantly lower for IMSS-COPLAMAR

than for other public and social security health service systems. The costs of hospitals services provided in IMSS facilities to IMSS-COPLAMAR beneficiaries are not included in the cost estimates. Also, IMSS administrative costs probably are underestimated. Nevertheless, even if program expenditures are underestimated by 50 percent, per capita costs would remain far below most institutional providers.

EXHIBIT 3-27
A COMPARISON OF PER CAPITA HEALTH CARE COSTS FOR SELECTED PUBLIC AND SOCIAL SECURITY PROVIDERS, 1987

INSTITUTION	PER CAPITA EXPENDITURES (US $)	RATIO TO COPLAMAR
IMSS-COPLAMAR/PSS[1]	7.52	1.0
DIF	12.05	1.6
SSA	44.00	5.8
ISSTE	61.66	8.2
IMSS	69.35	9.2
PEMEX	182.00	24.2

[1]Cost of IMSS administrative support may be underestimated.
ISSTE: Institute of Social Security and Services for State Employees
DIF: Federal District of Mexico (Mexico City)
SSA: Health Ministry
IMSS: Mexican Social Security Institute (private and parastatal employees)
PEMEX: Social Security for Petroleum Workers

Source: Mesa-Lago (1992) Table 53.

Interestingly, IMSS-COPLAMAR provides services at one-fifth the per capita cost of the SSA. The gap results from the low-cost IMSS-COPLAMAR approach to health care that stresses the use of inexpensive personnel (general practitioners and clinic aides) coupled with volunteer assistance and community contributions to provide primary and preventive services. The approach downplays hospital utilization while emphasizing the use of clinics where 85 percent of all demand is met. In 1986, IMSS-COPLAMAR directed 45 percent of expenditures to curative services, while 28 percent were directed to preventive activities. In that same year, the IMSS Health Program spent 75 and 2 percent on curative and preventive services, respectively, while the SSA expended 41 and 15 percent (Sherraden, 1989). Exhibit 3-28 shows that, compared to other direct delivery systems, IMSS-COPLAMAR has achieved more coverage but with less monetary, physical, and human resources than other direct delivery systems.

The economic crisis has taken its toll on IMSS-COPLAMAR. Per capita expenditures decreased from a high of US $14 in 1982 to US $6.56 in 1986 (in constant 1986 US $). Over this period, salaries and number of permanent positions were reduced. Moreover, clinics reported shortages in medical supplies and construction materials.

3.4.6. Utilization and Impact

Utilization data drawn from facility registers do not permit an assessment of real coverage. Official statistics do not clearly define the beneficiary population or distinguish between first-time and subsequent users.

EXHIBIT 3-28
COMPARISON OF HEALTH CARE COVERAGE, RESOURCES, AND EXPENDITURES SELECTED PUBLIC AND SOCIAL SECURITY PROVIDERS, 1987-88

INSTITUTION	POPULATION COVERED	HEALTH CARE EXPENDITURES	PHYSICIANS	HOSPITAL BEDS[1]
IMSS-COPLAMAR/PSS	14	2	4	3
PEMEX	1	4	3	NA
ISSTE	10	12	15	10
IMSS	48	61	51	51
SSA	27	21	27	36
TOTAL	100	100	100	100

[1]1984

Source: Wilkie, 1989, Consejo Consultivo del Programa Nacional de Solidaridad, 1990; Mesa-Lago, 1992.

In 1986, per affiliate utilization rates for physician visits, prescriptions, and first aid treatment were 0.6, 0.4, and 0.1, respectively. Rates for two preventive services, immunization and chronic disease detection, were 0.5 and 0.8, respectively. Data on utilization previous to IMSS-COPLAMAR are unavailable.

Sherraden (1989) reports that per beneficiary utilization of curative services decreased while use of preventive services more than doubled between 1981 and 1986. Exhibit 3-29 illustrates the trend for consultations, prescriptions, immunizations, and chronic disease detection activities. The decline in prescriptions probably relates to shortfalls in supplies resulting from budgetary reductions. Although over 1.5 million "community activities" were registered in 1986, the per beneficiary rate (0.3) was significantly lower than clinic-based services.

Data drawn from facility registers show a significant decline in incidence of infectious disease in the communities where IMSS-COPLAMAR clinics are located. These improvements may not be exclusively attributable to the program. Exhibit 3-30 displays the incidence of selected communicable diseases over the 1981-86 period.

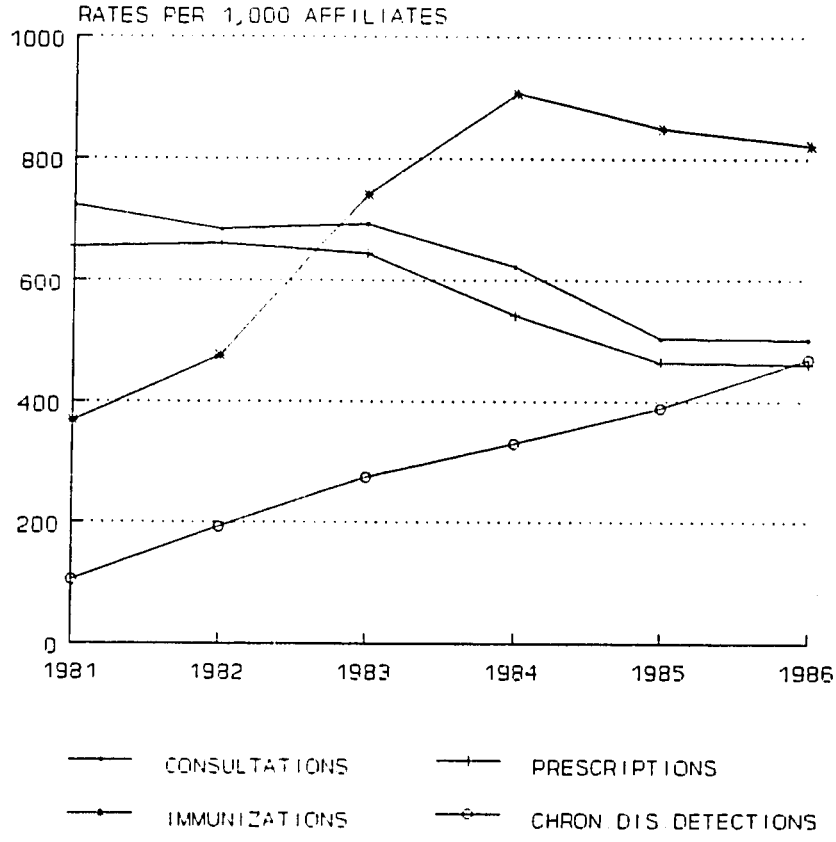
3.4.7. Synthesis and Further Research

With significant central government funding, IMSS-COPLAMAR has made a major contribution to extending health care services to the rural poor. In 1973, few rural groups had access to health services of any kind. By 1988, the IMSS-COPLAMAR service systems (including decentralized facilities) covered an estimated 56 percent of the rural population. Moreover, it appears that coverage

expansion was achieved in areas of dispersed population where absolute poverty is concentrated, need is greatest, and access non-existent.

Coverage extension was achieved during a relatively short period. Between 1979 and 1985, the program constructed nearly 3,000 rural clinics and 34 hospitals. Although performance varies considerable among the communities, the clinics appear to be well-maintained and community support is high. Due to budgetary constraints, however, maintaining adequate supplies has been a problem. Sherraden (1989) reports that facilities in remote indigenous areas were less well-maintained and there has been less acceptance of the program by the communities.

EXHIBIT 3-29
UTILIZATION OF SELECTED SERVICES, 1981-86

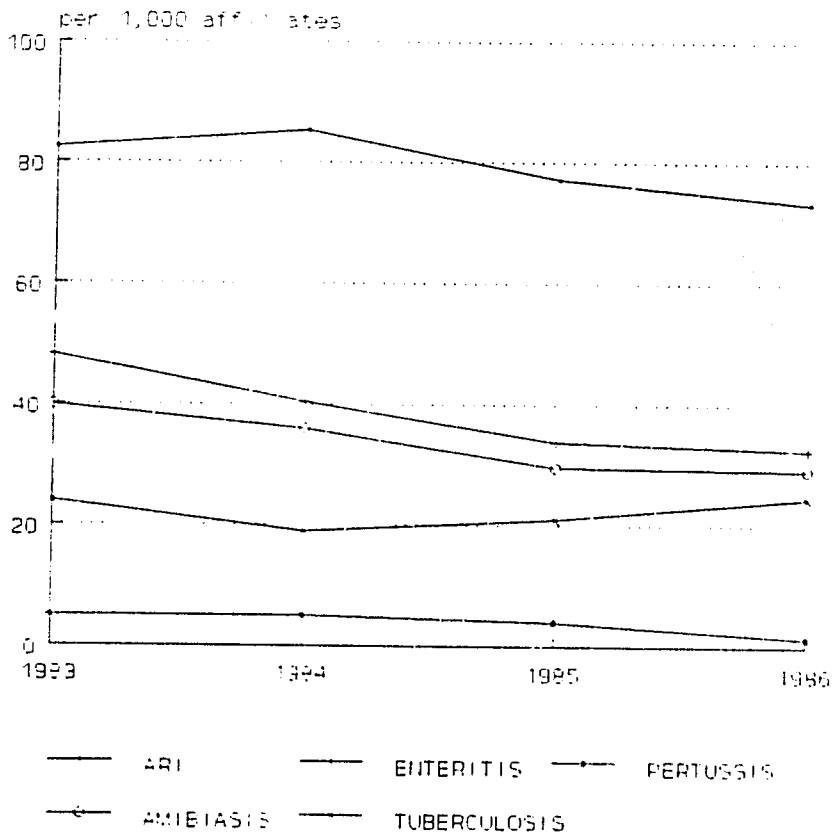


Source: Sherraden, 1989

Sherraden (1989) and Mesa-Lago (1992) applaud the IMSS-COPLAMAR programs as an example of how social security systems can achieve universal coverage. Few social insurance systems in Latin American have extended coverage beyond urban salaried workers. With strong government financial backing combined with the implementation of a low-cost health delivery model, IMSS was able to raise insurance coverage from nine to 50 percent of the rural population (combining those covered by IMSS and IMSS-COPLAMAR).

Performance data is deficient, however. Data on utilization, total costs, and access is lacking. Further, generally little information is known about community participation activities. It would be interesting to know the cost of administrative, training, and supervisory services provided by the IMSS. How critical to the financial survival of the program is the IMSS contribution? To what extent does the IMSS-COPLAMAR expenditures contribute to the overall IMSS operational deficit?

EXHIBIT 3-30
INCIDENCE OF SELECTED INFECTIOUS DISEASES, 1983-88



Source: Sherraden, 1989

IMSS-COPLAMAR is a tax-based, risk-sharing system, financed through general revenue and payroll taxes. The program can best be described as a supply-side innovation directing public subsidies for the purpose of rural coverage extension. Key demand-side factors such as ability to pay are not considered or are of secondary importance. Assessing the efficiency of the system is difficult. No information is available on referrals to IMSS-COPLAMAR and IMSS hospitals or the costs of services at each level. Despite the isolated and distant location of facilities, costs are less than expected because of the low-cost service provision model. IMSS affiliates have access to more sophisticated (and costly) range of services. However, administrative costs are probably high—typical of most social security administered direct delivery systems. Based on utilization data, moral hazard appears low and this probably reflects a number of factors: varying community acceptance of the program, geographical (and time) access to the facilities, and communities' cultural orientation toward non-traditional medicine.

An important issue is whether the government is better able to target these population groups through the IMSS than through the SSA or other direct government dependencies. A related question is whether the IMSS is doing the job at the lowest possible cost. Wilkie (1989) recommends that the IMSS transfer the program to the SSA. Yet, anecdotal evidence (Sherraden, 1989) suggest that quality has deteriorated considerably in the decentralized facilities. In an informal survey of physicians, Wilkie reports that IMSS clinics and hospitals receive the highest rating of all institutional providers. Yet, administrative costs of IMSS are the highest of any Latin American social security institute (17 percent in 1986). The proportion of administrative expenses represented by the IMSS-COPLAMAR is unknown.

4.0 APPROACH #3: NATIONAL INSURANCE SYSTEMS (EMPLOYMENT-BASED WITH INTENTION OF NATIONAL COVERAGE)

4.1 CASE STUDY #8: HEALTH INSURANCE IN KOREA

Until fairly recently, the bulk of health services in Korea was produced and distributed by a free market mechanism. This lead to serious inequity problems; rural and poor people had difficult access to any kind of medical care. However, health care has been recognized as a basic need and social goal in Korea, and it is no longer thought appropriate for it to be allocated entirely on the basis of ability to pay. As the first attempt in finding a solution, shortly after the introduction of a social security system, the Industrial Accident and Compensation Insurance Act and the Medical Insurance Act were enacted in 1963. The social insurance system offered voluntary membership, but due to limited financial resources (GNP per capita was below US$ 100 at the time) and lack of participation, little was accomplished. The Medical Insurance Act was amended in 1976-77 to make the voluntary social insurance scheme compulsory.

After first introducing compulsory health care insurance for industrial workers and their families in 1977, mandatory universal health insurance coverage for all Koreans was inaugurated less than 15 years later in 1989. Currently, 90 percent of the population is covered by various insurance schemes providing benefits for disease, injury, birth, and death. The remaining 10 percent of the population, the poorest, receive public assistance. Mandatory universal health coverage in Korea generates adequate revenue, enhances access to health care by providing the poorest with free care, and avoids adverse selection.

4.1.1. Institutions

Industrial Establishment Medical Insurance:

The Korean government worked toward universal health coverage incrementally, yet rapidly, by systematically increasing mandatory coverage among worker groups. First, it organized non-profit, non-competing health insurance societies among industrial workers. In 1977, firms employing more than 500 workers were required to participate in the Industrial Establishment Medical Insurance Scheme for workers and their families. Industrial workers were targeted as participants first for the following reasons: 1) They were the engine of Korea's economic growth and development. Their health and productivity were essential if the pace of economic development was to be sustained or increased. 2) Manufacturing employees were able financially to participate in the insurance scheme. 3) Workers in industry comprised a large pool for risk sharing. By 1983, industries employing more than 16 workers were required to participate in the industrial scheme. Today, insurance societies are organized at the firm level for major enterprises. Smaller firms are grouped into one society.

Special Scheme:

A compulsory scheme was instituted for civil servants, private school teachers, and their dependents in 1979. The following year, this special scheme was extended to military personnel and their families. All participants belong to one insurance society, the Korean Medical Insurance Corporation (KMIC).

Urban Regional, Rural Regional, and Occupational Insurances:

Beginning in 1981, self-employed, non-agricultural workers were encouraged to participate voluntarily in occupational insurance societies. In 1989, participation in Urban Regional Health Insurance became mandatory for the urban self-employed and unemployed and the Rural Regional Health Insurance program was organized for rural farmers and fishermen. Also, there was an unknown number of societies organized on occupational lines.

Public Assistance for Health Care:

Government-assisted medical care for the destitute and medically indigent began in 1977. It provides health care for the poorest 10 percent of the population based on income and asset levels, age, and migrant status. Policymakers realize that if society's goal is to ensure access to health care for all citizens irrespective of income and location, a general health insurance system might not provide the solution by itself. In fact, sometimes insurance arrangements drive up costs to such levels that health care is put out of reach of people with low to modest incomes.

Social Insurance Administration:

Korea's medical insurance schemes are supervised by the Ministry of Health and Social Affairs (MOSHA) at the national level, and at the city/county level by the Ministry of Home Affairs (MHA) which implements MOHSA policies. However, the actual operation of the medical insurance programs is under the control of the independent medical insurance societies. There were 313 non-profit, non-competing corporate and regional insurance societies in Korea in 1990, all administratively and financially independent. Each insurance society has its own management committee with representatives selected by society members and their employers. In theory, society managers are free to decide contribution rates, collect contributions, pay benefits, and are responsible to their local firm authority. In practice, not much managerial sovereignty is given to each society. There is little room for competition among societies, as all receive rules and guidelines from the central authority and function quite mechanically according to them (Yang, 1991).

4.1.2. Enrollees and Employers

The scale of medical insurance operation in Korea has expanded at an exceptionally rapid rate since the implementation of the program in 1977. The population coverage grew from only 8.8 percent of the total population in 1977, to 46.6 percent in 1986, to 90 percent in 1989 (Moon, 1991).

Industrial Establishment Medical Insurance:

When it was introduced in 1963, participation in the Industrial Medical Insurance Program was voluntary. In 1977, participation was made mandatory for industrial establishments employing 500 or more workers. Later it was extended to firms with more than 16 workers on a compulsory basis (in the case of five or more workers, on a voluntary basis). Workers' families are covered. Overall, coverage under this scheme increased rapidly from 3.14 million in 1977, which corresponded to 8.6 percent of the population then, to 13.29 million in 1986 or 32 percent of the population (*see Exhibit 4-1*).

Occupational Medical Insurance:

In 1981, nonagricultural, self-employed persons were brought under coverage on a voluntary basis. In 1985, there were 229,000 primary members with 725,000 dependents. In 1986, there were 1.1 million people covered under the scheme, or 2.64 percent of the population. Exhibit 4-1 shows some sources lump the coverage under this scheme with other community or regional schemes.

Regional Medical Insurance:

Before 1981, there were seven communities where residents organized a voluntary medical insurance system. Coverage increased from a steady 60,000 to 70,000 before 1981 to 269,000 in 1986. Beginning in 1981, six urban regions were covered compulsorily in an experimental effort to develop a model of community insurance schemes fit for Korea. During the mid-1980s, about 400,000 people were covered under this pilot project (*see Exhibit 4-1*).

Special Scheme Insurance:

The Special Scheme was instituted for the coverage of government employees, private school teachers, pensioners, and all their dependents in 1977 and came into force on January 1, 1979. Under this scheme, there were 4.33 million insured, or 10.4 percent of the population in 1986 (*see Exhibit 4-1*).

EXHIBIT 4-1
MEDICAL INSURANCE COVERAGE IN KOREA
(1000 persons)

	1977	1980	1986
Total Population	36412	38124	41569
Total Population Coverage	5298	11254	23748
% Insured	14.5	29.5	58.3
Medical Insurance (Total)	3203	9113	19362
% of Population Covered	8.8	23.9	46.6
Industrial Establishments	3140	5381	13294
% of Population	8.6	14.1	32.0
Policyholders	1185	1971	4304
Dependents	1955	3410	8985
Occupational Insurance	-	-	1131
Policyholders	-	-	n.a.
Dependents	-	-	n.a.
Compulsory Regional	-	-	339
Voluntary Regional	63	65	269
Occupational & Regional	63	65	1739
% of Population	0.2	0.2	4.2
Special Scheme	-	3660	4329
% of Population Covered	-	9.6	10.4
Policyholders	-	n.a.	1074
Dependents	-	n.a.	3255
Medical Aid	2095	2141	4386
% of Population Covered	5.8	n.a.	10.6

Sources: Ministry of Health and Social Affairs. *Major Policies and Programmes in Health and Social Welfare Services*. Republic of Korea: 1986. (p. 77)
Federation of Korean Medical Insurance Societies. *Outline of Medical Insurance in Korea*. 1986. (pp. 5, 8)
Kim, Young-Ju. *Health Care Financing in Korea*. Economic Planning Board, Republic of Korea, 1987. (p.38)
Singh, Har Mander. "National Strategies for the Extension of the Coverage of Medical Care Programmes." *Report of the Round Table Meeting on the Extension of Medical Care Programmes Under Social Security*. International Social Security Administration, Korea, 1983.

Medical Aid:

Eligibility for coverage is determined by specific income and wealth standards. As a practical matter, local government officials are empowered to identify the poorest 10 percent in each county and judge them eligible. There are three classes of assistance. None of the recipients pay premiums. The poorest of the poor, Class 1 recipients, do not make copayments. Class 2 recipients receive 40 percent assistance for inpatient services in urban areas and 20 percent elsewhere. Class 3 receive 50 percent reimbursement for urban inpatient care, 40 percent for inpatient services elsewhere, and 67 percent for outpatient care. If the poor are unable to pay the copayments, the government provides them with loans. The copayment scheme is designed to discourage indiscriminant use of medical care by the poor. However, copayments may discourage the poor from seeking needed health care. In 1986, 10.6 percent of the population was covered by this scheme (*see Exhibit 4-1*).

4.1.3. Management

4.1.3.1 Premiums, Benefits, and Equity

Insurance benefits are received in return for premiums. In the industrial and civil servant insurance programs, the amount of each employee's insurance premium is a fixed rate of the nominal wage earned, between three and eight percent. In regional and occupational schemes, the monthly contribution is determined by family classification based on assets and wages.

Health insurance benefits are determined by the government. The general medical insurance scheme provides benefits for disease, injury, delivery, or death. Benefits per person range from 45 to 80 percent of medical expenses and are available for 180 days a year with no monetary limit. However, low-probability, high-cost catastrophic care is not covered. Also excluded are expensive, high-technology medical services and cash sickness benefits. In addition, medical insurance societies provide grants for funeral and maternity expenses. Maternity care for an insured women is free for the first two children; the surviving expectant wife of an insured worker receives 50,000 won as a maternity grant. The funeral grant for the death of a worker or dependent is a lump-sum payment determined by the individual insurance carrier.

Korea has a large number of small insurers with from 60,000 to 200,000 members in a society (Yang, 1991). This means a single insurance society covers a small population and geographic area. Due to these relatively small risk pools, some insurance societies face systematically higher health risks. There are wealthy, healthy groups and poor, sick groups. A large financial burden for health care falls heavily on poor, sickly communities, exactly those who can least afford to pay it. With small risk pools, it is difficult to obtain cross-subsidization between the sick and healthy.

Some authors characterize the Korean system as a two-class system of health care. Due to the private sector orientation of the system, there is a maldistribution of resources between rural and urban areas. In 1985, 88 percent of all health care facilities in Korea belonged to the private sector. 80 percent of inpatient beds, 75 percent of doctors, 80 percent of dentists, 55 percent of

nurses, and 62 percent of medical technologists were private, for-profit. Urban areas are the most popular areas in Korea, growing fastest in population, income, and returns to health facilities. Therefore, urban areas are attractive to private health care providers. Nearly 90 percent of each practitioner type is in an urban area. 70 percent of all physicians are located in four cities. In recent years, the proportion of practitioners in rural areas has decreased, although there are absolutely more. About eight percent of physicians are located in rural areas where 35 percent of the population lives. However, 70 percent of the rural population resides within one hour of a primary facility and the bed-to-population ratio has increased significantly. In rural areas, public facilities and less highly trained practitioners provide the majority of care. Access to health care in Korea, even with universal insurance, is determined by income and location, not by need (World Bank, 1988).

4.1.3.2. Costs

The Korean health insurance programs experienced increasing costs and utilization during rapid expansion. Over the past eight years, the prices of inpatient services have tripled and outpatient service prices have doubled. The overall Consumer Price Index rose 60 percent during the same period. Thus, inflation in the health sector is outpacing the rate of change in general prices (Moon, 1991).

According to Moon, 67 percent of cost escalation is due to demand factors including growing incomes and expanding population coverage. From 1973 to 1985, per capita income rose from $250 to $2,000. The income elasticity of demand for health care is high in Korea, which means as incomes rise with economic development, consumers demand more health care services. Koreans like to doctor-shop and there are no barriers to multiple consultations with different physicians, expensive specialists preferred, for the same episode of illness. Furthermore, insurance benefits decrease the cost of obtaining care. Declining fertility rates and increasing life expectancies combine to bring about a steadily growing proportion of elderly. The growth rate of the population over age 65 was 3.95 percent in the late 1980s, compared to 1.25 percent in the OECD countries. More elderly demand more expensive care.

On the supply side, fee-for-service reimbursement to providers induces physicians to provide patients with unnecessary services in order to compensate for perceived low incomes. Primary, secondary, and tertiary care are not distinguished. Nor does the health care delivery system recognize the potential substitutability between different types of manpower. The patient preference for physicians, and the adequate supply of them, has pushed out of the market physician substitutes and medical technicians that can be both qualified and more cost-effective health care providers. Costly new technology pervades Korea's hospitals. There are more facilities equipped for heart transplants in Korea (38) than in the U.S. (20). Many of these high- tech services are rarely used. MOSHA recognizes the need to alleviate duplication of technology, but has been ineffective in controlling the purchase of new equipment.

4.1.3.3. Cost Control

There are three types of cost-sharing measures for each service: deductible, copayment, and benefit limit (180 inpatient days per year). The deductible is a flat fee of 2,000 won (approximately US$ 3 in 1986) for each physician visit. With the initial visit fee, minor illnesses, like a cold, are in effect not covered by insurance. In addition to the deductible, the patient pays coinsurance rates (the share of the medical bill paid by the patient) of 30 percent for clinical outpatient services, 50 percent for hospital outpatient services, and 55 percent for general hospital outpatient services. The coinsurance rate has been increased repeatedly for outpatient services everywhere except in public health facilities. The coinsurance rate for inpatient services is 20 percent across all types of providers (Yang, 1991).

The effective rate of coinsurance (sum of deductibles plus copayment) is 19.2 percent for outpatient care in a public health facility, 41.2 percent for outpatient care in a clinic, 65 percent for outpatient care in a hospital, 62 percent for outpatient services in a general hospital, and 20 percent for inpatient services regardless of provider type (Yang, 1991). Korea has one of the highest coinsurance rates in the world. Cost sharing is applied without regard to family income, creates a larger financial burden for low-income households, and is regressive.

In an attempt to establish a referral system and control health care costs by controlling demand, patients must seek care only from providers within defined geographic boundaries if they wish to receive benefits. Admission to a tertiary level hospital requires referral from a primary care physician.

4.1.4. Relations With Providers

4.1.4.1. Open Provider Network

The provider network is open but no reimbursement is made to doctor substitutes including midwives, pharmacists, and Oriental doctors. The insured can choose from more than 12,000 health care institutions in Korea, 99 percent of the nation's medical establishments. In 1985, there were 190 general hospitals, 323 hospitals, 8,225 clinics, six dental hospitals, 3,024 dental clinics, 555 midwifery clinics, 127 pharmacies, 451 health centers, and 25 Oriental clinics (FKMIS, 1986). In practice, most are in urban areas and rapid growth in the number of facilities has introduced a problem of underutilization.

The provider, hospital, or physician must submit a claim sheet for each patient. Reimbursement is made from the insurance society to the provider. Claims processing and reimbursement to providers are administered by the Korean Medical Insurance Corporation (KIMC) and the Federation of Korean Medical Insurance Societies (FKMIS). Inspectors verify a covered service is provided and the bill is accurate. 1,300 reviews are performed each day. Claims are not scrutinized very carefully. Adjustments are based on professional review committee. In 1987, 12.5 percent of claims were adjusted (*see Exhibit 4-2*).

4.1.4.2. Provider Compensation

Fee-for-service is the method of compensation for health care providers. Fees are negotiated at the national level by all concerned parties. The government initially introduced compensation schedules at one-half customary charges, assuming the increased utilization from insurance coverage would make up for the reduced fees. This had the effect of extra billing, charging the uninsured extra to make up for perceived losses before universal coverage. According to the World Bank, an uninsured patient could have been charged as much as twice that of an insured patient.

Now the government sets fees on a cost-plus basis at a level which offers most providers a profit. Fee schedules are reviewed annually, considering changes in the CPI, profit margins of sample providers, wage levels of medical personnel, and other changes in production costs. Fees are based on services provided (per diem fees) separate for diagnoses, treatment, and medications. There are different fees for the same services paid to general hospitals (relative price of 115), hospitals (relative price of 106), and clinics (relative price of 100) (World Bank, 1988).

Fee-for-service compensation gives providers little incentive to be cost efficient. Cost increasing behavior is always rewarded. Reimbursement based on fee-for-service leads to induced demand for services because it is in the provider's financial interest to provide them, especially benefit exclusion items which are higher priced, frequent visits, and excessive lab and high-technology services. Theoretically, it would be in the best interest of the hospital have the most cost-effective practitioner perform any service, since hospital reimbursement is based on services performed, not provider. However, the insurer does not consider the most cost-effective personnel for particular services when setting fees. Fee levels assume services are performed by physicians. Insurance reimbursements accentuate the role of the physician in health care and downplay the role of more traditional, cost-effective physician substitutes.

EXHIBIT 4-2
CLAIM REVIEW ACTIVITIES, 1987
(Unit: case, million won)

	Claim Amount		Amount Reduced	
	Case	Payment	Case	Payment
Inpatient	924,934	272,398	459,524	8,260
Outpatient	35,495,258	433,192	4,315,597	5,075
General Hospital	5,566,034	322,182	1,023,372	9,535
Hospital	2,164,102	56,721	2,164,102	56,721
Clinic	28,426,843	326,436	3,367,113	2,945

Source: National Federation of Medical Insurance, 1988.

4.1.5. Financing

4.1.5.1. Revenue

The Korean health insurance system is well-designed from the financial point of view. Most medical insurance societies are self-financing from contributions and income generated as gains on deposits. Program-specific contributions follow.

Monthly contributions paid by civil servants, private school teachers, and employees of industrial establishments are set between three and eight percent of monthly wages. Premiums are based on a grading system with respect to characteristics of the insured person, the type of industry, and the insurance society's financial status. Contributions are shared equally between workers and employers. In 1985, Industrial Establishment Societies' income from contributions was 414,035 million won and investment earnings were 29,030 million won. No information is available about contributions to the special scheme.

The amount contributed by self-employed persons to Occupational and Regional Insurance Schemes is determined by their level of income, the size of their asset holdings, and the number of dependents in each household. The entire contribution is paid by the workers themselves. In 1985, contributions to regional insurance societies totaled 5343 million won. The government subsidized 1,371 million won and investment income was 101 million won. For occupational societies, contributions totaled 29,583, investments 1,536, and subsidies 154 million won.

The overall social insurance system is based on equitable financing principles. The very poor are provided free care. The poor are provided virtually free care. The nonpoor pay insurance premiums linked to income and asset levels along a progressive schedule. Within each insurance society, those with higher

wages pay more for coverage. However, there is a problem with equity between societies due to the large number of societies with small risk pools. Societies organized among the poor and sickly are forced to pay for a higher percentage of health expenditures than those with wealthy, healthy members. Furthermore, the copayments and deductibles, which serve to prevent abuse of the system and provide a mechanism for influencing consumer demand for different types of facilities and services, are levied without regard to income. Coinsurance rates are the same for low- and high-income earners and are a regressive feature of Korea's medical insurance system.

4.1.5.2. Expenditures

Substantial increases in Korea's GNP over the past two decades has meant a growing demand for health services accompanied by increasing ability to pay for them. The privateness of health expenditure in Korea is remarkable. Among OECD countries, private expenditures account for 30 percent of all health expenditure on average. In contrast, 90 percent of total health expenditure in Korea is private; 77 percent comes from individuals, 65 percent from user charges, and 10 percent as premiums. Private expenditures on health rose from 2.6 percent of all expenditures in 1973, to 7.1 percent in 1985 (*see Exhibit 4-3*).

In 1985, the Medical Insurance System in Korea received claims for 50 million cases, one million inpatient and 49 million outpatient. The health insurance system paid out 748.6 billion won in benefits during 1986. 52 percent or 386.7 billion won were paid to members of the Industrial Insurance Scheme. Public employees received 152.6 billion won in benefits. Regional and Occupational Insurance Plans provided six percent of total benefits.

The proportion of administrative costs to total revenue was well over 13 percent on average, as high as 22 percent in 1988 for regional health insurance. These costs are almost double those in developed countries. The relatively high proportion of administrative cost is related to the multiple insurance society structure. The large number of small insurers provides opportunities for maintaining competition, methods for monitoring costs and promoting efficiency, and means for being responsible to local needs. Unfortunately, it offers little opportunity for economies of scale in administration. In 1988, a study team suggested administration costs would be lower if there were fewer, bigger societies and proposed centralizing administration at the provincial level. The government subsidized 15.3 percent of total insurance expenditures in 1988. Almost all of this went to regional health insurance plans in rural areas. Virtually nothing is offered to the industrial and civil servant societies. In addition, the government has been studying development of computer review methods and simplification of claims in order to improve administrative efficiency (Yang, 1991).

EXHIBIT 4-3
ESTIMATE OF NATIONAL HEALTH EXPENDITURES

	1970	1980	1985
Total Health Expenditure (billion won)	77.5	1396.5	3716.7
Total as % of GNP	2.5	3.8	5.1
% Total Health Expenditure			
Public	14	14	12
Private	85	73	67
Insurance	1	13	21

Source: World Bank. *Korea: Health Insurance and the Health Sector*. 1988

The Industrial and Special Schemes maintained a stable financial status with a fund of 10 to 11 months reserve. The Regional Health Insurance Societies experienced deficits all years except 1981 and 1988 (Moon, 1991).

4.1.6. Utilization

Before universal coverage was instituted, a 1983 SNUH Study found outpatient use 2.7 times higher for the insured person than the uninsured. Inpatient use was 2.1 times higher for the insured than the uninsured. Yonsei (1985) studied the effect of health insurance in a rural Korean province and found new coverage associated with a 37 percent increase in inpatient admission rates and a 66 percent increase in average length of stay. A health services utilization model developed at Seoul National University Hospital (SNUH) shows utilization is significantly affected by health insurance coverage. The model predicted a move from no insurance to full coverage would increase use by 50 percent. According to the World Bank, health insurance in Korea increased utilization by 80 percent. On average, it is estimated that the availability of insurance increases utilization of outpatient services by 100 percent, inpatient by 70 percent (Personal Communications, World Bank).

For the Industrial Scheme, annual outpatient visits per person increased from 4.7 in 1981 to 6.2 in 1987, and inpatient cases per 100 persons per year increased from 5.1 to 6.2 over the same period. Utilization under the Special Scheme increased as well with outpatient visits per capita rising from 0.5 in 1981 to 3.8 in 1987. During the same period, inpatient cases increased from 1.1 to 5.5 per 100 persons annually. Among Regional Insurance members, the use of in

patient services rose from 4.7 to 6.5 cases per 100 people per year and the use of outpatient services increased from 6.6 to 7.2 annual visits per person from 1981 to 1987.

4.1.7. Conclusion

Until recently, the bulk of health services in Korea was produced and distributed by a free market mechanism. This lead to serious inequity problems; rural and poor people had difficult access to any kind of medical care. However, health care has been recognized as a basic need and social goal in Korea, and it is no longer thought appropriate for it to be allocated entirely on the basis of ability to pay. After introducing compulsory health care insurance for industrial workers and their families in 1977, mandatory universal health insurance coverage for all Koreans was inaugurated less than 15 years later in 1989. Currently, 90 percent of the population is covered by various insurance schemes providing benefits for disease, injury, birth, and death. The remaining 10 percent of the population, the poorest, receive public assistance. Mandatory universal health coverage in Korea generates adequate revenue, enhances access to health care by providing the poorest with free care, and avoids adverse selection. Of interest to policymakers and researchers is how Korea administrates compulsory participation on a day-to-day basis. In the field, how are premiums collected from the self-employed and unemployed?

Some authors characterize the Korean system as a two-class system of health care. There is a maldistribution of resources between rural and urban areas. In rural areas, public facilities and less highly trained practitioners provide the majority of care. Furthermore, the level of financial support from insurance is one of the lowest in the world. Access to health care in Korea, even with universal insurance, continues to be determined by income and location, not by need.

The overall social insurance system is based on equitable financing principles. The very poor are provided free care. The poor are provided virtually free care. The nonpoor pay insurance premiums linked to income and asset levels along a progressive schedule. Within each insurance society, those with higher wages pay more for coverage, but there is a problem with equity between societies due to the large number of societies with small risk pools. Societies organized among the poor and sickly are forced to pay for a higher percentage of health expenditures than those with wealthy, healthy members. More information is needed about the ideal insurance society size and the benefits of competition among insurance societies.

Furthermore, the copayments and deductibles, which serve to prevent abuse of the system and provide a mechanism for influencing consumer demand for different types of facilities and services, are levied without regard to income. Coinsurance rates are the same for low and high-income earners and are a regressive feature of Korea's medical insurance system. How effective are cost control measures, all designed to increase the price of health care services to the consumer, when the demand for health care is price-insensitive? Are there other policies that might be more effective in curtailing demand, like the promotion of preventive care?

4.2 CASE STUDY #9: OVERVIEW OF HEALTH CARE FINANCING IN CHILE

The 1980 Constitution in Chile authorized the Chilean government to restructure health care either through private or public institutions. Chileans working in the formal sector pay a seven percent mandatory wage-withholding tax for affiliating with one of two health systems: the National Health Fund (FONASA) or ISAPREs (*Institutos de Salud Previsional*). FONASA is geared towards middle and lower-income households while ISAPREs are used more by middle and upper-income households (*see Annex Exhibit A-1*).

This report describes the institutional characteristics of these two health insurance schemes in Chile which together cover about 25 percent of the population. The remainder of the population seeks care from the National Health Service System (70 percent) or special medical programs for the armed forces (FF.AA. or *fuerzas armadas*) and national police (*carabineros*) (five percent) (Irarrazaval 1990a, 1990b; Arellano 1987; Scarpaci, 1988).

4.2.1. ISAPREs

Institutos de Salud Previsional, or Provisional Health Institutes (ISAPREs) are private pre-paid medical programs which have operated in Chile since 1981. The military government intended to divest itself of "health care for all" and to devote public resources mainly for the poor. ISAPREs were created to stimulate the private medical market and to provide inpatient and outpatient care on a cost-sharing basis. Some ISAPREs are for profit and others are commercial. They provide and assure the delivery of an agreed-upon set of comprehensive treatments and health maintenance services for enrollees under a prepaid fixed sum.

Organizationally, ISAPREs are derived from the public and private social security institutions called *cajas de prevision*. The *cajas* delivered comprehensive health services to white-collar workers. Indemnity-type commercial health insurance had not appeared in Chile because most of the prospective clientele for this market-upper-income households-had historically been covered by a social security system that strongly resembled private care. Today, ISAPREs resemble Health Maintenance Organizations in the U.S.A. in terms of financing and service delivery.

Law Decree 3626 of 1981 permitted formal-sector wage earners to direct their mandatory monthly withholdings for medical coverage (*cotizacion*) into either an ISAPRE of their choice or the FONASA program. This mandatory withholding (or medical tax) rose from four to six percent in 1983 and finally to seven percent in 1986. The increase responded to the military government's efforts to scale back public services through changes in health-care subsidy, regulation, and provision (privatization). ISAPREs must secure FONASA approval as a prerequisite to operation. Such approval depends on verifying that the ISAPRE has a minimum amount of working capital and the presence of deposits equal to one month's contributions by subscribers as a security for contract completion.

Mandatory payroll withholdings of seven percent directed voluntarily by ISAPRE beneficiaries do not pass through any public agency. A public agency, The Superintendent of ISAPREs, regulates only those aspects of service delivery which are required by law.

4.2.1.1. Enrollees and Employers

4.2.1.1.1. Membership and Population Coverage

Enrollment expanded sluggishly in the first half of the 1980s, despite estimates by the Director of FONASA that by 1984, one million Chileans (or nine percent of the total population) would be enrolled in over 100 ISAPREs. By 1985, about 487,000 Chileans were enrolled in 17 ISAPREs. Several factors accounted for this slow growth, including high monthly premia, the prolonged recession of 1981-83, and skepticism among users. Restrictive clauses on maternity and medical leaves were also factors. A number of ISAPREs even refused enrollment to women who did work outside the home. The 1986 Health Law (Law 18469) reversed the trend in low enrollments. General tax revenues directed through FONASA replaced those ISAPRE funds that had been legally required for paying medical and maternity leaves. This financing shift, in turn, released ISAPREs from a considerable financial burden. Since 1986, ISAPREs have reimbursed beneficiaries for wages lost from the fourth until the tenth day of absence from work (lost wages). FONASA pays for lost wages beyond 10 days and for 90 days of pre- and post-partum maternity leave. State intervention in maternity and medical leaves facilitated the rise in ISAPRE enrollment from less than half a million in 1985 to 1.4 million in 1988. During this same period, the number of ISAPREs increased from 17 to 31. Today, approximately 1.6 million affiliates (16 percent of the population) are enrolled in 34 ISAPREs. During the 1980s, the annual increase of ISAPRE affiliates averaged 50 percent (Miranda 1991; *see Exhibit 4-4*).

By the year 2000, an estimated 20 percent of the population is expected to be enrolled in these HMO-like programs (Miranda 1989). It appears that the largest ISAPREs are losing part of their market share, as well; between 1981 and 1988, the proportion of beneficiaries enrolled in the largest three ISAPREs fell from 74 percent in 1981 to 46 percent in 1988 (Scarpaci 1989). This suggests the emergence of a competitive medical marketplace.

In 1987, five new ISAPREs entered the market which were entirely owned by physician associations. This indicates that for-profit health care among physicians may be becoming more acceptable among providers.

4.2.1.1.2. Characteristics of Enrolled Firms

The derivation of ISAPREs from the *cajas de prevision* means that a number of them are concentrated within specific industries. One of the oldest cajas (*Caja Bancaria*) was confined to the banking industry and became one of the first ISAPREs: Banmedica. ISAPRE Banmedica is now open to the general public and referred to as an open ISAPRE (*ISAPRE abierta*). Of the 34 ISAPREs operating in 1992, 20 are open to any household that satisfies the eligibility criteria (*see Exhibit 4-5*).

ISAPREs which confine enrollment to particular firms or industries are called closed ISAPREs (*ISAPREs cerradas*). Chuquicamata, Shell Chile, El Teniente, San Lorenzo, and ISPEN are examples. Although ISAPREs generally have fewer dependents per plan than FONASA beneficiaries, open ISAPREs average 1.6 dependents (*cargas*) per plan versus 2.6 dependents for closed ISAPREs. Arrellano (1987) attributes this to a lesser degree of discrimination among the closed ISAPREs because of their focus on a captured market within certain industries such as public utilities, multinational firms, and mining corporations. Closed ISAPREs, moreover, devoted 6.8 percent of their total expenditures for preventive care and diagnostic tests, compared to one percent for open ISAPREs.

ISAPREs also vary according to the contractual arrangements they have with hospitals, individual group practices, and solo practices. These arrangements range from organizations like the HMO Kaiser plans in the western United States, to the closed-panel structures typical of other HMOs and IPAs (Independent Physician Associations) (see Scarpaci 1987 for a comparison of the U.S. and Chilean systems). No research to date has examined the administrative efficiency of these open and closed-panel ISAPREs, although the larger ISAPREs tend to be closed-panel ISAPREs and suggest certain inherent economies of scale.

EXHIBIT 4-4

ISAPRE ENROLLMENT, 1981-1990

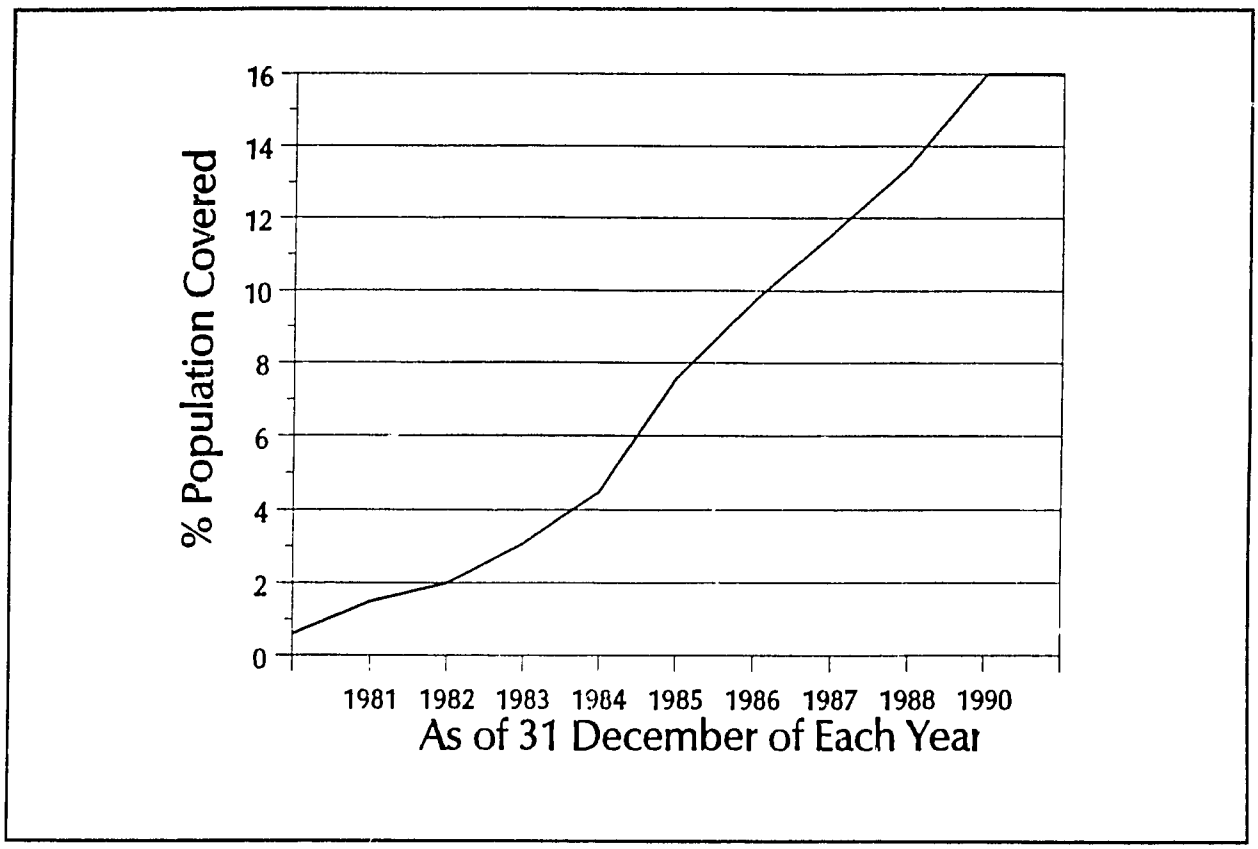
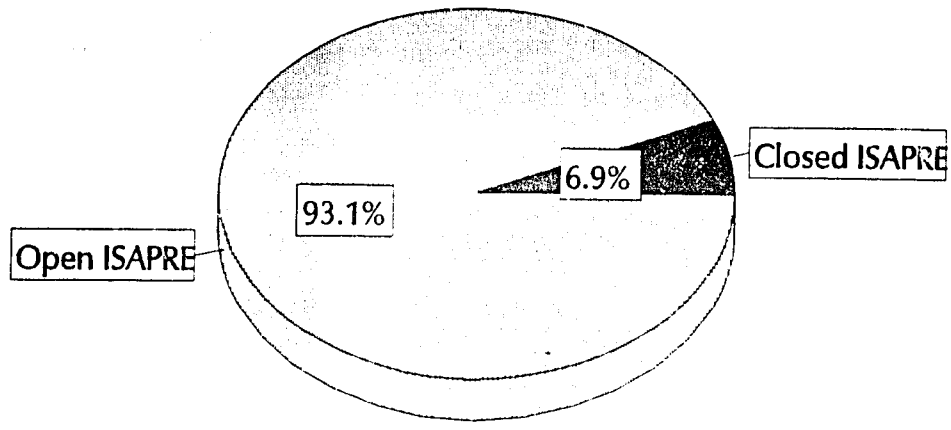


EXHIBIT 4-5

ISAPRE ENROLLMENT BY ORGANIZATIONAL TYPE, 1991



Source: Boletín Estadístico Trimestral del Sistema ISAPRE. II Trimestre 1991

4.2.1.1.3. Equity Issues

Several issues of equity have been resolved during the first decade of HMOs in Chile. These issues, as noted, include pre- and post-partum leave, medical leave (for both sexes), as well as restrictions for pre-existing medical conditions, psychiatric disorders, and discriminating against women in the reproductive years who do not work outside the home. The problem of AIDS and HIV-positive affiliates remains highly controversial, and potential applicants can be denied enrollment for either condition. Nonetheless, ISAPREs are aggressively marketed at upper-income earners.

> "It is now clear that the system favors mostly high income groups, in that the plans discriminate in relation to the income and number of beneficiaries (*cargas*). Workers with higher levels of income and smaller family [sic] will obtain more benefits." (Irarrazaval 1989, 150-151)

ISAPRE mandatory payroll deductions (*cotizaciones*), moreover, accounted for nearly 70 percent of all FONASA and ISAPRE deductions, suggesting a regressive distributional effect (Personal Communication, World Bank, Southern Cone Health Sector, 1988). In the late 1980s, ISAPRE beneficiaries averaged about four medical consultations per year, nearly twice the average among public users. The ISAPREs remain highly oriented towards curative care: only about one in 20 examinations are for preventive services (World Bank 1990, 128).

Because the 1979 Labor Code (*Plan Laboral*) changed the role of physicians in determining health-care policy, it is unclear to what extent physicians are satisfied with health-care restructuring. Prior to the Labor Code, all physicians were required to be affiliated with the Chilean Medical Association (*Colegio Médico*). Their input as policy stakeholders has remained severed since the 1979 Labor Code (Castaneda 1989, 75).

4.2.1.2. Managerial Characteristics

Several hundred benefit packages are available from the more than 30 ISAPREs operating throughout the country. Although the level and type of benefit structure varies according to price (and therefore subscriber income), a basic set of legally required benefits for primary medical care and hospitalization exists. Employees are free to choose any ISAPRE for a comprehensive bundle of health services, even if one exists for their own firm (i.e., ISAPRE Chuquicamata for copper miners). However, these cases are rare.

ISAPRE contracts usually exist for one year. On termination of employment for any reason, coverage usually ceases, although beneficiaries may make additional voluntary contributions to extend benefits.

As noted, there is a wide range of premiums. A basic premium for a family of four, with one working head of household, might begin at US $130. Comprehensive premiums exist beyond US $300. Premiums are also financed by at least seven percent of the mandatory wage withholding tax, though ISAPREs are free to negotiate greater compulsory deductions.

In addition to the seven percent withholding tax, individuals can make a voluntary contribution to the ISAPRE. For individuals whose salaries are low, they are eligible for a state contribution equal to two percent of their gross wages and salary.

As noted, the primary drain on ISAPREs prior to the Health Law of 1986 was disability and medical illness claims. Risk screening and closely applied actuarial tables have allowed most ISAPREs to avoid major losses, although by 1989, about one out of three ISAPREs had reported losses. Ability to renegotiate contracts annually provides an edge against long-term losses and serves as a primary cost-control measure. The Superintendent of ISAPREs handles only consumer complaints and imposes no cost-control measures per se in the medical market.

4.2.1.3. Relations With Providers

ISAPREs remain private enterprises. As noted earlier, five physician-owned ISAPREs were created in 1987. Increasingly, ISAPREs are contracting out beds with public hospitals, especially in smaller towns and in rural areas throughout the country (less so in Santiago). A World Bank SAL III loan aims to allow public hospitals "the right to enter into financial constraints with ISAPREs and to charge them the actual cost of providing services to their clients" (World Bank 1990, 139). There are virtually no linkages with other social security providers.

Each ISAPRE has a list of hospital and physician fees. Most ISAPREs provide a list of preferred providers who offer discounted prices. However, ISAPRE beneficiaries are not precluded from securing hospital or physician services from those who are not preferred providers. The consumer, of course, must incur cost differentials in such cases, and will do so usually through out-of-pocket co-payments or, in limited cases, private insurance "gap" coverage.

Each ISAPRE is equipped to handle consumer complaints. When claims are not mutually resolved, they are brought to the attention of the Superintendent of ISAPREs. Such cases, however, are rare. In 1988, for instance, only 62 complaints were filed with the Superintendent, and the office faulted the ISAPRE in only 18 instances (World Bank 1990, 139). In 1991, 202 complaints were filed in which cases ISAPREs were faulted 88 times (FONASA 1991, Tables 1.4.2 and 1.4.3).

Other inherent control measures for ISAPREs ensure that a sufficient stock of working capital is on hand for each firm. As well, the standard fare of provider and facility licensure and accreditation provide nominal quality-control measures. These safeguards notwithstanding, the workings of the marketplace as evidenced by consumer enrollment and attrition in the ISAPRE system are designed as the main quality-control measures.

4.2.1.4. Financing and Expenditures

ISAPREs are financed by a mandatory seven percent salary withholding, premia, and co-payments. ISAPRE affiliates spent an average 4.6 times more on health care than users of the public system in the late 1980s (Miranda, 1990). Exhibit 4-6 shows a break-down of their expenditures.

A few ISAPREs which began a decade ago (i.e., Lloyds) became insolvent and have closed. A number of ISAPREs annually report net losses. In general, though, the number of ISAPREs has steadily risen. In 1990, open ISAPREs reportedly earned a total of $9.9 billion pesos (about USD $33 million at 300 pesos to the dollar) (*El Mercurio* 7, March 1991).

4.2.1.5. Utilization

As noted, 20 of the 34 ISAPREs as of December 31, 1991 were open. However, in terms of the total number of affiliates in all ISAPREs, open ISAPREs consume 93 percent of the market share, leaving closed ISAPREs with just seven percent (FONASA 1991). For both types of ISAPREs, the average number of medical examinations per beneficiary in 1990 was 3.4. Again, because of the lower co-payments and great subsidy by employers, affiliates in closed ISAPREs averaged 4.4 medical examinations per beneficiary that same year. Closed ISAPREs also had about half the number of cesarean deliveries between 1986-1990 than did open ISAPREs (27.5 percent and 54.3 percent), respectively) (Revista Administración en Salud 1992, 21-23). These data suggest key differences in the frequency of utilization and cost-containment according to the type of ISAPRE.

4.2.1.6. Synthesis: Further Research

Key policy issues will continue to focus on:

- Differential risks among ISAPRE affiliates and financial incentives for ISAPREs to maintain coverage to higher-risk groups. These higher-risk groups include those suffering from catastrophic illnesses, the elderly, cancer patients, and the mentally infirm. ISAPREs continue to receive high evaluation for quality curative care in aesthetically pleasing settings.

- Outcome measures of preventive health services delivered by ISAPREs.

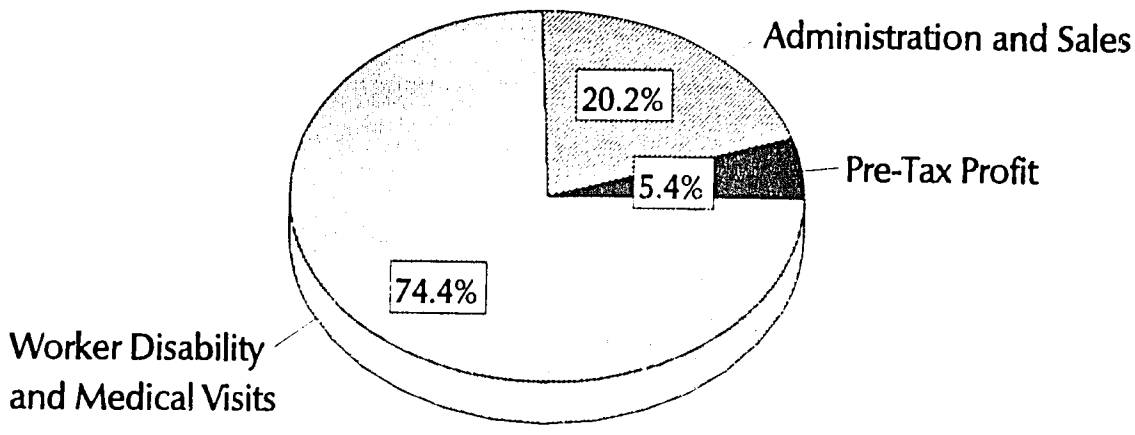
- The ability for ISAPREs to spread among middle-income workers, especially in industries where employers are able to purchase discounted care because of economies of scale. This will prove to be an important future market.

- The possibility of arriving at a standardized list of services (*un listado unico de nomenclatura*) available to all consumers to ensure improved information about market structure (*transparencia*).

- Expenditure differentials and health-status outcomes among closed versus open-ISAPREs.

EXHIBIT 4-6

ISAPRE REVENUES AND EXPENDITURES, 1990



Source: El Mercurio, 17 April 1991, p. C-1

- Charges remain that the ability of ISAPRE affiliates since 1981 to direct their mandatory seven percent health tax away from the public system and into the private sector has undermined public care. ISAPREs, therefore, "break with long-standing taboos against enterprises being able to 'profit' from people's illnesses" (World Bank, 1990, 138).

- How will it be possible to increase coverage among self-employed workers who cannot afford strict monthly payments for private care, yet who are not indigent?

The democratically elected government of Patricio Aylwin in 1990 has supported the continued development of ISAPREs. Previous debates among the opposition during the Pinochet regime about whether or not a developing country should allow such a large amount of mandatory wage withholdings to a relatively small amount of ISAPRE users appears to be a moot point in 1992. ISAPREs will remain and the Aylwin government has encouraged their expansion.

Specifically, the following issues are rife for further research:

- The extent to which ISAPREs can legally require more uniform services and minimize discrimination based on pre-existing conditions carries important applied and basic research questions.

- Closed ISAPREs have generally been less profitable (i.e., a greater percentage reporting losses) than open ISAPREs (World Bank 1990, 141) and larger ISAPREs (Banmedica, Consalud, Cruz Blanca) appear to be more successful than smaller ones, apparently because of economies of scale. What accounts for these trends?

- ISAPREs show a strong proclivity toward curative services which questions the comprehensiveness of their medical mission. Do price constraints generate this pattern?

- Is the health status of beneficiaries in closed ISAPREs higher than open ISAPRE affiliates because of greater utilization of both preventive and curative services?

- Which organizational designs among ISAPREs are most conducive in promoting the contracting of beds in public hospitals, given the apparent over-supply of beds in National Health Service System hospitals?

- How have physicians adjusted to their new role in health policy formulation given that mandatory affiliation with the Chilean Medical Association no longer exists?

4.2.2. FONASA: Institutional Description

Fondo Nacional de Salud, or National Health Fund (FONASA) is a semi-public and worker-financed system providing ambulatory and hospital care to mostly middle-income Chileans. Its public affiliation stems from a state-determined list of services and prices as well as funds from the national budget. However, all health-care providers (physicians, technicians, nurses, midwives, physical

therapists, and other ancillary personnel) in the FONASA are engaged in private practice at least part-time. Because it administers only administrative offices and lacks its own facilities, FONASA serves as an insurance device for program affiliates. In addition to its administrative support for FONASA affiliates, FONASA also allocates the budget for the National Health Service System which delivers care to lower-income and indigent Chileans under a separate medical-care program. Historically, FONASA evolved from the National Employees' Medical Service (SERMENA), a preferred-provider organization, which was created in 1938. SERMENA provided care only to white-collar workers (*empleados*) and was criticized by the military government for a "high level of fiscal health spending that was being channeled indirectly via the SERMENA mechanism to middle-income public sector employees and private individuals" (World Bank, 1990, 10).

In 1979, SERMENA was abolished and Law Decree 2763 created FONASA in its place. FONASA is guided by the "fee-election system." Although most SERMENA affiliates were government workers, FONASA has captured a broader enrollment base among non-public employees and allows both white and blue-collar (*obreros*) workers to freely select their medical program (whether it is FONASA, the National Health Service System, or an ISAPRE). The income of the beneficiary now chiefly determines the type of provider utilized, the co-payment requirement, and the specific service obtained. Most specialists are concentrated in the higher levels of care (II and III). Care is provided throughout the country and within one of the 26 FONASA-funded *Servicios de Salud* in which the beneficiary resides.

FONASA, like SERMENA, is also a voucher-based system (*bonos*) that affords consumers three levels of care. Price and the distribution of specialists among the three levels are the only defining features of each voucher level. However, in April 1991, physicians working in FONASA Level III requested higher levels of payment and/or additional payment (*bono compensatorio*); this request came after a 47 percent increase in FONASA payments to physicians. Still, Health Minister Jorge Jimenez de la Jara had to plead with doctors not to abandon FONASA (*El Mercurio*, 24 April 1991; *La Epoca* 16 April 1991; *La Segunda*, 16 April 1991).

Formal-sector employers direct seven percent of wages and salaries of all workers to the National Health Fund for the provision of inpatient and outpatient care. Pensioners may also select FONASA as their primary medical care organization, in which case deductions are automatically made.

4.2.2.1. Enrollees and Employers

All non-indigent workers are eligible to participate in FONASA. Irarrazaval (1990b), Arellano (1987), and Castaneda (1989) estimate that between 11 to 20 percent of all Chileans belong to the FONASA preferred provider system, though the higher end is more likely. The decision to opt for FONASA or an ISAPRE as the medical system of choice is largely a function of (1) the income of the wage earner(s) and (2) the number of dependents he/she claims.

It is therefore more by default than any planned decision that most firms have FONASA as the primary option for their employees. Only very large firms offering the private ISAPRE medical programs depart from this pattern. It must be recalled that firms do not enroll with FONASA; employees determine the destination of the medical tax to either FONASA or ISAPRE. Employers are merely

intermediaries as they direct payroll deductions according to employees' wishes.

4.2.2.1.1. Equity Issues

The underlying principle of FONASA as envisioned by policymakers in the late 1970s was to support a "free-election system" (*sistema de libre eleccion*). Such a system would enable consumers to enroll in medical programs according to their income levels or tastes. Given that the National Health Service System would provide medical care to the poor, FONASA's tri-level system would subsidize medical care for middle-income households and the working poor who opted for providers outside the public system. Accordingly, the following equity issues arise:

- Should the government allow a disproportionate number of providers to participate in the more expensive Levels II and II?
- Are the prices set for the more than 2,500 medical treatments and consultations based at "fair market" value?
- Should ISAPRE affiliates be allowed to direct their mandatory withholdings entirely into private health insurance firms without any payment to FONASA?
- To what extent do the separation of ISAPRE and FONASA medical taxes lead to an underfunding of the less-endowed FONASA system?
- To what degree is care in FONASA Level III clinically, financially, and aesthetically (hotel amenities) comparable to the least expensive ISAPREs?
- Referencing point "e," is it equitable to have scarce public services in FONASA competing with private sector ISAPREs in a developing country?

4.2.2.2. Cost Control Measures and Relations With Providers

FONASA adjusts the value unit (*unidad arancelaria*) periodically to accommodate rises in medical costs. Although there are technically no ceilings on service utilization, the prices are allegedly set at fair market rates. However, FONASA has not publicly disclosed the methodology behind this price determination (Castaneda 1989, 79-80).

As noted previously, FONASA provides only the administrative infrastructure of affiliates in its medical program as well as a portion of its budget. FONASA also provides the budget for the public health system, the National Health Service System. Many private and public providers work in FONASA, the National Health Service System, and exclusively in fee-for-service and out-of-pocket private medical care. A typical pattern of physician activity is working with FONASA or National Health Service System patients in the morning, and then devoting the latter part of the work day in private (or ISAPRE) practice. This

public-morning and private-afternoon pattern is also common in other Latin American countries. It is noteworthy that FONASA's linkages to private, public, and social security providers is mostly voluntary.

FONASA patients can be treated at any National Health Service System public hospital at Level I prices. Many private hospitals (*clinicas*) also accept FONASA vouchers, although mostly among the second and third levels of care. (It was noted in the discussion of physician payment systems above that as the level of care rises, the proportion of state (FONASA) subsidy decreases.)

The state has relinquished a significant proportion of medical consumers since restructuring began in the early 1980s. In doing so, it has passed along quality control measures to individual providers and group practices. The Ministry of Health provides normative criteria for the delivery of care through licensure and accreditation criteria. The spirit of the free-election system is to allow the market to sort out quality control measures. Quality control exists mainly by giving consumers options in selecting providers and levels of care which in turn generate competition. FONASA does accept and investigate complaints by its users, though these center around payment and reimbursement concerns more than quality issues. It also certifies standards among laboratories and diagnostic centers.

4.2.2.3. Financing and Expenditures

FONASA financing departs from the pattern under SERMENA. Relative contributions now derive from the following sources: fiscal support (about 41 percent, down from 52 percent in 1980); fixed payroll deductions from active salaried workers and pensioners (about 42 percent of financing); vouchers (about 16 percent); and other sources (sale of laboratory tests, vaccines, pharmaceuticals, etc.) (World Bank 1990, 12).

FONASA has a list of over 2,500 medical treatments and examinations. These treatments and examinations are fixed at a monetary value, multiplied by a peso-based unit value (*unidad arancelaria*), which is adjusted periodically and according to the three levels of care. This results in more than 7,500 possible prices (a matrix of three by >2,500 cells; see *Diario Oficial de la República de Chile*, 31 December, pp.12-53).

Nearly 60 percent of FONASA's budget is used to operate 27 health service districts (26 Servicios de Salud, plus an Environmental Sanitation Unit). About one-quarter of expenditures support payments to private health-care providers under the present free-election system, and another 13 percent finances a national supplementary feeding program (PNAC, *Programa Nacional de Alimentación Complementaria*). The remainder accounts for subsidies paid for workers' illnesses, medical services, and other items (World Bank 1990, 12). Although technically FONASA affiliates can procure care at any public facility run by the National Health Services System (*consultorios perifericos or postas rurales* for ambulatory care and hospitals for secondary or tertiary care), most users opt for private providers because of expediency and facility amenities. Funds are allocated to the Health Service Districts according to the number of personnel employed in each district and the type and amount of services delivered. A fee-for-service system called FAP (*Facturación por Atencion Prestada*) is derived from

a comprehensive list of medical-service prices. This list, in turn, determines the level of reimbursement given to each health district for their expenditures on goods and services.

4.2.2.3.1. Financial Equilibria

The FONASA system has a unique cost-recovery mechanism. Affiliates may select their providers (physicians, hospitals, laboratory, clinics) from throughout the private sector and costs of medical care are shared between the government and the beneficiary through the tri-level voucher system. The beneficiary first buys a voucher before seeing a doctor. With these vouchers

EXHIBIT 4-7
SUBSIDY LEVELS FOR MEDICAL EXAMINATIONS
(PESOS, MARCH 1992)

Level	I	II	III
Cost	$2,200	$2,350	$2,750
Voucher	1,100	1,100	1,100
Voucher-cost ratio	50%	46.8%	40%
Subsidy Levels for non-medical examinations and services			
Level	I	II	III
	50%	38.4%	31.3%

the patient pays half the cost of a medical examination, and the other half is paid in cash or by check. Exhibit 4-7 shows the proportion of subsidy for each level of care an for medical and non-medical services.

4.2.2.4. Utilization

4.2.2.4.1. Data on Enrollees by Service and Provider Type

Two defining trends in the use of FONASA services characterize the 1985-1990 period. First, the number of physicians affiliated with FONASA rose 25 percent, from 9,246 in 1985 to 11,592. Second, doctors have been increasingly affiliating in Level III care. In 1985, 27 percent of all FONASA doctors practiced in this most expensive level (III); by 1990, seven out of 10 doctors were in Level III, leaving only about one in eight physicians in Level I (*see Exhibit 4-8*).

FONASA care has shown a slow and uneven rate of growth between 1985-1989 while ISAPRE care rose in double digits over the same time. Moreover, the ratio of care given by FONASA and ISAPRE providers has flip-flopped. In 1985, the average number of examinations and services given by FONASA providers was 2.5 times greater than their ISAPRE counterparts. By 1989, though, FONASA providers were administering care at three-fourths the levels of ISAPRE providers (*see Exhibit 4-8*). This market-driven trend underscores the consumers' decided preference for ISAPREs over FONASA.

FONASA patients generally use National Health Service System public hospitals for secondary and tertiary care. To ensure financial accessibility, hospital services are priced at Level I. Greater variation in pricing exists for inpatient care.

EXHIBIT 4-8
CARE[1] GIVEN BY FONASA AND ISAPRE PROVIDERS, 1985-1989

Year	FONASA Care Given (a)	Annual % Change (b)	ISAPRE Care Given (c)	Annual % Change (d)	FONASA Care:Prov. Ratio (e)	FONASA Care:Prov. Ratio (f)	ISAPRE Care: Prov. Ratio (e)/(f)
1985	9,320,000	--	3,705,000	--	856	340	2.52
1986	9,152,100	-1.8	7,042,099	90	825	635	1.30
1987	9,010,050	-1.5	8,291,738	18	607	558	1.09
1988	9,999,682	11.0	11,427,269	38	647	739	0.88
1989	10,205,287	2.1	13,616,691	20	653	871	0.75

[1] Care includes medical examinations and clinical and diagnostic services by recognized providers of FONASA and ISAPREs.
Sources: Ministerio de Salud, Departamento de Coordinacion Informatica, cited in Miranda 1991, p. 47, Table 14. Columns (b), (d), (e)/(f) calculated by the author.

4.2.2.4.2. Utilization Control

FONASA was designed to deter excessive utilization of unnecessary medical care. The emphasis on greater individual financial responsibility derives from the free-election system philosophy: each according to his/her income and tastes, and with minimum public subsidy. Technically, therefore, there is no limit on the utilization of services.

FONASA is monitored by the Ministry of Health which ensures that patients are not charged more for vouchers than stipulated by the FONASA price list. Unlike SERMENA, the FONASA predecessor, it is believed that greater cost-accounting and less fraud exists under the FONASA preferred-provider system. FONASA has good accounting on the sale of its vouchers which are available at

FONASA offices nationwide as well as at certain commercial banks. Under SERMENA, however, physicians could more easily submit bills to SERMENA for reimbursement and with little auditing control.

4.2.2.5. Synthesis: Further Research

FONASA has avoided many of the weaknesses found in the SERMENA system. Improvements include allowing three versus two levels of care; increasing the list of ambulatory and hospital services available to beneficiaries; requiring patients to submit vouchers prior to physician requests for reimbursement; avoiding high degrees of underfinancing through increases in mandatory wage withholdings from four to seven percent; and providing partial state subsidy to middle and lower-middle income medical consumers who cannot afford fully private care through ISAPREs.

Several policy issues remain to be explored as FONASA enters its second decade. More research is needed to determine to what extent Level III care competes with ISAPRE care. FONASA prices are also too low generally to allow for a wide array of affordable hospital services outside National Health Services System hospitals (e.g., in ISAPREs' *clinicas*). Little state regulation other than setting the list of prices and service types means physicians have concentrated in higher (more costly) levels of care, setting up stratification based on providers' skills/specialties and users' incomes within the same system.

4.3 CASE STUDY #10: HEALTH INSURANCE IN CHINA

China's health care system is not a socialized one. Costs are shared by the government, state enterprises, local and private enterprises, rural communes, and private individuals In the past, focus was on decentralized administration and financing of health services with local control over local services and emphasis on preventive health.

Only a decade ago, China had one of the highest insurance coverages in Asia. In fact, until the early 1980s, 70 percent of its population was covered under some type of insurance. This represented a degree of health insurance coverage unparalleled in any other developing country. However, progress in health has been uneven. There are significant rural-urban and provincial variations in health conditions. Life expectancy in urban areas is 12 years higher than in middle income rural areas and 17 years higher than in low income rural communities (Panikar, 1986). The disease structure is mixed with the persistence of several infectious/parasitic diseases, even the reappearance of some thought to be eliminated, and the emergence of chronic diseases with little understanding of preventive methods for them.

4.3.1. The Impact of Economic Reforms on Health Insurance

Since 1980, China has implemented social and economic reforms which have brought great changes in the ownership and structure of the rural economy, affecting both health care delivery systems and financing. The household responsibility system was introduced as a replacement for the work-point system. This shifted responsibility for agricultural production from the collective to the household.

Previously, each collective had to meet a state crop quota and individual contributions to the quota were monitored by work points. The collective provided an administrative structure in rural areas. Communes, brigades, and production teams within the collective contributed to a public welfare fund which provided the major source of finance and delivery of health care in rural communities. Under the responsibility system, peasant households contract farm land for cultivation and each household delivers a quota of crops to the state for a low fixed price. Farmers are free to choose what to produce, and how to dispose of the excess after the quota. With the household contract system in agriculture, labor is freed from working in primary agricultural activities. More people are moving to the cities to seek opportunities outside agriculture and there is a growing number of township enterprises in rural areas that are privately or collectively owned. Social and economic reforms have eroded the community-based network which financed and delivered the vast majority of rural health care. Some of the old community insurance schemes disintegrated, and coverage dropped to 48 percent of the population by 1985. Now all rural health services are provided on a fee-for-service basis.

Today, health care insurance in the People's Republic of China is neither a uniform nor well-planned system. At best, one-fourth of China's people are well-covered by insurance. Ten to 15 percent have limited coverage. Six hundred to 850 million Chinese are uninsured and receive absolutely fewer health services (World Bank, 1990). Most urban residents benefit from inclusion in government or labor insurance schemes. The majority without insurance live in rural areas.

4.3.2. Institution

There are various types of health insurance in China:

- **Government Employee Insurance System (GEIS).** The GEIS, a government-paid health insurance program for government workers, was introduced in 1951 when public workers were paid only minimal cash allowances. It continues despite the adoption of salaried remuneration in 1956 (Prescott and Jamison, 1984). Expenditure on the scheme is appropriated through the Ministry of Finance and is administered by its Committee on Government Insurance.

  This category is not an insurance in the true sense, since there is no individual prepayment by its beneficiaries, the government employees. Rather, the entire tax-paying population absorbs the costs of medical care for government employees. This creates concern for equity as all taxpayers subsidize the health care of civil servants.

- **Labor Insurance System (LIS).** LIS was established in 1951 to cover workers and their dependents in state-owned enterprises, which at the time meant virtually all enterprises. This state-sector social security program, under the Ministry of Labor, is charged with the responsibility for social security (U.S. Social Security Administration, 1988).

- **Private Insurance Plans (Contributory Social Insurance).** With the advent of limited market-oriented economic reforms in 1980, the People's Republic of China has developed the need to offer social security insurance

coverage to employees of private enterprises and workers in state-owned enterprises who are hired under employment contracts. The new social security program for these workers was created in late 1986 and is now in the initial stages of implementation. It is run by local insurance boards that function in some 1,600 locations throughout the country (U.S. Social Security Administration, 1988).

- **Collective Insurance Systems (CIS).** These systems were organized voluntarily by county-level enterprises for their employees. CIS has changed considerably during the 1980s. Unfortunately, the literature is not clear about these changes. Have the majority of county-level enterprises been privatized? If so, are they now participating in the Private Medical Insurance Plans? There seems to be a consensus some Collective Insurance Systems still operate.

- **Rural Cooperative Insurance System (RCIS).** The RCIS began during the Cultural Revolution in 1966. Health insurance in rural areas, where 80 percent of the population lived, was organized and financed through a cooperative system at the level of the production brigade (which no longer exists). Rural cooperatives offered community-level health insurance or prepaid medical plans designed to fund accessible, low-cost, efficient health services for the poor and lower class peasants. The major theme was self-reliance with local control over local services.

  Coverage declined very rapidly as a result of the economic reforms. Now, individual farmers either pay for medical care out-of-pocket, or as contract workers covered under the new contributory insurance scheme.

- **Commune or Township Industry Insurance.** These insurance schemes were organized on a voluntary basis for employees of small township enterprises. Commune or township industry insurance does not exist anymore. Townships insure their workers through the Collective Insurance Systems at the higher county level.

4.3.3. Membership

- **GEIS.** Government workers and employees of Communist Party organizations along with those of cultural, educational, and scientific institutions receive the special coverage under government insurance. Because most state jobs are located in the urban areas, most members are urban. In general, only primary members are covered by the scheme, and dependents receive no benefit entitlements. In 1986, there were 22.5 million primary members of the GIS or about two percent of the population (draft of China Staff Appraisal Report, 1988). Coverage grew an average seven percent from 1980-87 (World Bank, 1990) (*see Exhibit 4-9*).

- **LIS.** All state-owned and collective enterprises are required to provide labor protection through the LIS. It is possible some of the private and township/village enterprises are covered under this system as well. The number of primary members of LIS was estimated to be 66 million in 1981. In addition, it was estimated that there were about 61 million dependents of these primary members. These estimates imply a total coverage in 1981

of 117 million persons including dependents, or about 12 percent of the total population (Prescott and Jamison, 1984).

With a slow annual rate of growth in LIS membership of 1.5 percent, there were 72 million primary members from state-owned enterprises and 36 million from collective enterprises in 1987 (World Bank, 1990). Combined, there were at least 108 million primary members with an estimated 60.48 million dependents. Thus, total coverage was approximately 168 million persons or 15 percent of the population (*see Exhibit 4-9*).

- **Private Insurance Coverage.** There were about eight million workers covered under this contributory program when it was introduced in 1986, which, even with the inclusion of dependents, did not exceed one percent of the Chinese population. However, this is the scheme which is expected to expand the fastest as the Chinese economic reforms progress and as increasing numbers of workers are covered under employment contracts. Employees of private enterprises, individual businesses, township/village enterprises, as well as individual farmers can now buy private medical insurance. The data in Exhibit 4-9 for township/village workers reflects clearly that this has been the fastest growing group, with an annual growth rate in membership of 18.2 percent. In 1989, there were 129 million workers covered with private medical insurance (World Bank, 1990).

- **CIS.** At the county level, there were approximately 26 million primary members and 20 million dependents in 1981. The 46 million total membership corresponded to 4.6 percent of the population. Adding to this the coverage under the formerly independent township system that is now part of CIS, 14 million additional members with 30 million dependents bring the overall CIS total membership to 90 million insured, or about nine percent of the population in 1981 (Prescott and Jamison, 1984).

EXHIBIT 4-9
MEMBERSHIP AND EXPENDITURE

Government Employee Insurance Scheme

Year	Primary Members (millions)	Expenditure (million Yuan)	Expenditure per Primary Member (Yuan)
1970	n.a.	336	n.a.
1980	15.80	668	42.28
1985	21.45	1544	71.98
1987	n.a.	2325	n.a.

Labor Insurance Scheme

Year	Primary Members (millions)		Expenditure (million Yuan)	Expenditure per Primary Member (Yuan)
	State & Collective	Township & Village		
1977	n.a.	n.a.	1958	n.a.
1980	88.7	29.1	2903	24.64
1985	101.6	65.7	7291	43.58
1987	108.0	93.4	17711	87.94

Sources: Prescott, et al. *World Health Statistics Quarterly*. 1984.
Bumgarner. Draft of Staff Appraisal Report, CHINA. 1988.

▲ **RCIS**. Less than a decade ago, the Chinese RCIS had been the single largest insurance system in Asia. In 1979, it was estimated that 80 to 90 percent of the Chinese rural population, 474 million people, were covered by the cooperative medical system, or 48 percent of the entire population of China. Within five years, only 40 to 45 percent of the rural population had such coverage (Hsiao, 1984).

The rural collective system has undergone more severe changes than the urban collectives due to economic reforms. Collective financing and popular support for cooperative medical systems diminished after the introduction of the production responsibility system (Prescott and Jamison, 1984). Parallel to the rapid and continuing decline of the cooperative medical system, the rising income of peasants stimulated a demand for higher quality medical care, which was not perceived to be

available through the cooperative system. Individual farmers now seek membership in private or county collective insurance plans, or go without health insurance. No recent estimate is available on the remaining coverage, if any, under the RCIS. It should be of concern to policymakers that the almost "three-quarters of China's work force not covered under social security is primarily made up of agricultural and village enterprise workers" (U.S. Social Security Administration, 1988). The high costs of health care for those without insurance may prevent some patients from seeking needed treatment. Social protection for the destitute, handicapped, and poor might become completely unavailable.

4.3.4. Benefits and Pattern of Delivery

GEIS. GEIS provides free outpatient and inpatient health services (excluding the cost of hospital meals) in government employee health clinics. Primary members are entitled to this free health care for life, but their dependents are not covered.

LIS. Like the GEIS, the LIS entitles primary members to free health care for life. In addition, dependents are entitled to 50 percent reimbursement of health care costs. LIS is characterized by rapid growth in benefits per worker, rising on average 19 percent per year from 1980 to 1987 (World Bank, 1990). Nearly every middle-sized enterprise has a general health clinic where their workers are treated. About one-fourth of all medical workers in China are employed in enterprise health clinics.

Private Insurance Plans. Little information is available on the benefits offered by private insurance plans. Generally, benefits are expected to be much more limited than those under the GEIS and LIS. Workers in large enterprises run by provincial, county, or other government units often have insurance plans similar to those found in state enterprises. Smaller firms offer partial health insurance, or a fixed monthly medical subsidy paid to each worker regardless of utilization. Delivery of health services is through local health stations.

CIS. These schemes generally offer lower reimbursement rates than the GEIS or LIS, typically around 70 to 80 percent for primary members and partial coverage for dependents. In addition to lower rates of reimbursement, there are copayments and ceilings on the total amount of benefit payments. Health services are delivered either through local private health clinics or local health stations.

RCIS. Rural cooperative insurance reimbursements varied according to the income of the brigade and the balance between revenues and expenditures of its cooperative medical fund. Generally, beneficiaries were entitled to free services and drugs at the village health station. If the brigade barefoot doctor referred a patient to a higher level (county or city) hospital, the insurance paid 50 percent of the bill. Some co-ops paid fixed amounts of 30 to 40 Yuan. If the patient was not referred, the commune paid nothing. (Note: Aside from the clinics and health stations

mentioned earlier, beneficiaries are entitled to free or partially reimbursable care at higher level institutions such as MOH hospitals, other health departments, and state enterprises, as well as collective organizations and enterprises.)

4.3.5. Financing, Expenditures, and Cost Control

Real spending per person on health is rising faster than incomes are growing. Per capita health spending has risen 500 percent in the past 20 years. China once provided a higher proportion of health care through public financing. This has changed radically. The public share of health care spending has declined from 35 percent (1975) to 18 percent (1987) of total health expenditure. In China, the trend is to substitute more private and insurance funding, though a decreasing proportion of the population is covered by insurance, for less public expenditure on health (World Bank, 1990).

Also, public health expenditure has shifted in focus from preventive to curative care. Hospital services have risen from 61 percent (1980) to 72 percent (1987) of the government budget for health care. Similarly, it is estimated that 80 percent of insurance and 50 percent of patient fees go to hospitals. 67 percent of total health care expenditures are on curative care, while prevention has decreased from 4.15 percent (1980) to 2.1 percent (1987) of total health costs (World Bank, 1990) (*see Exhibits 4-10 and 4-11*).

Health care delivery is changing to expensive, high-technology hospital services. All levels of government are accustomed to thinking economic development is linked to capital accumulation, and the health sector is no exception. China is increasing the share of public health funds spent on health care capital, advanced technology, and machinery. However, capital investments require subsequent annual budget outlays of 15 percent or more of their purchase price, and these recurrent expenditures are not publicly funded. Thus, by investing in medical technology, the public sector begins an expensive process which must be financed continually by the private sector. Consequently, higher level, technically intensive hospitals claim an increasing share of total health care expenditures, growing from 38 percent in 1980 to 48 percent in 1987. A decreasing share is allocated to less sophisticated township hospitals, 23 percent in 1980, falling to 18 percent in 1987. Lower level hospitals, most frequently located in rural areas, have long had lower occupancy rates, poorer facilities, fewer qualified staff, and lower reputations (World Bank, 1990).

Overall, health financing in China is characterized by 1) a reduced burden on the government with emphasis on provider self-financing, 2) an increased burden on private individuals and insurance at a time when insurance coverage is relatively low, and 3) a shift in focus from preventive to increasingly high-technology curative care. As a consequence of these changing health expenditure patterns, there is concern about the equity of health care delivery and financing. The shift in public health expenditures from preventive to curative services means a simultaneous bias toward urban and against rural funding. Increasing private sector financing at a time when economic reforms are eliminating communal systems of health insurance means more people, especially rural peasants, have access to medical care based only on their ability to pay for services.

Generally, there is a lack of cost control in the Chinese health system. Health care prices are rising due to a combination of cost-push and demand-pull forces. On the demand side, there are no copayments or deductibles in the government or labor insurance systems. Thus, there are no incentives for the insured not to overuse. Health care services in China lack an effective system of referral or triage. Common illnesses, which could be treated relatively inexpensively at lower level clinics or hospitals, are often treated at more expensive, higher level hospitals. Since an insured patient pays no portion of the treatment bill, there is no financial incentive for them to use the lowest-cost health service.

The Chinese government expects health care services to be self-financing. This implies prices for medical procedures must cover costs. However, there are practical difficulties with price setting in an economic system that has not allowed freely fluctuating prices for decades. Prior to the 1950s, prices for health care were set at cost. Between the 1950s and 1980s, health service prices were set below cost. Now, with an emphasis on self-financing, prices must reflect costs again. Older services that were available prior to the 1950s now are priced based on old pre-1950s costs (which are lower than current costs). This means traditional services are priced below current costs. Prices of new services, for which there are no pre-1950s references, are set by negotiation between the hospital, local health bureau, and local price bureau. Prices are based on expected cost per procedure, which means prices should cover costs spread over the anticipated number of procedures. It is in the interest of health providers to anticipate performing only a modest number of procedures (allowing them to charge higher prices per treatment) and then actually perform more treatments at higher prices to obtain more revenue. The pricing policy for drugs is deliberately set to provide a profit for the hospital.

The current pricing system has several disadvantages. Older technology is priced below cost and newer technology and drugs are priced above cost. This creates a financial incentive to over-prescribe new technology and drugs. Also, prices based on average costs do not reflect the depreciation of health care capital over time, so the economy is incurring a real loss by using up its health care equipment.

GEIS. Insurance for government employees is financed exclusively by the State Finance Budget, with no individual prepayment by its beneficiaries. Beneficiaries do pay an out-of-pocket registration fee equal to 0.1 Yuan for each visit (Cretin, et al, 1990). Benefits for government employees at the national level are financed out of the central government budget. Benefits for those at provincial levels are financed out of provincial budgets.

Annual expenditure per member averaged 84 Yuan in 1986, equivalent to about five percent of the average annual wage of public employees. Expenditure per person has grown over 12 percent annually. Richer provinces experienced higher per capita expenditures and growth rates. For data on GEIS expenditures, *see Exhibit 4-9*. It is plausible that the type of financing under the GEIS represents a sub-optimal use of health resources for two reasons. First, it involves a reasonably significant transfer of health benefits to relatively high-income

individuals from the taxpayers at large. This raises questions about the equity of the scheme. Second, since government-insured beneficiaries face a zero price for using health services, they have an obvious incentive to overuse services. The MOPH is aware of this inducement to inefficient utilization, but can only influence it indirectly. In some provinces, it has been offering incentive payments for counties in which the average GEIS expenditure per beneficiary does not exceed a certain norm. However, this has not been very effective.

LIS. The financing of LIS is treated as an addition to the enterprise wage bill, with no individual prepayment by the employee. Employers contribute a percentage of total factory income to the labor insurance fund before salaries are distributed and profits are taxed. This is an indirect public subsidy for workers' health care at least equal to the marginal tax rate of profits. The percentage contribution to insurance varies among factories and over time. Percentages are mandated by the province through the same process that approves annual factory production plans.

Estimates of LIS insurance costs are summarized in Exhibit 4-9. Insurance costs were estimated for state enterprise workers to be a total of 11.3 billion Yuan, for collective workers 2.8 billion Yuan, and for township and village enterprise workers 3.7 billion Yuan, adding up to 17.8 billion Yuan in 1987 (Bumgarner, 1988). These estimates are quite ad hoc. The insurance costs of collective workers are estimated to be half those of state enterprise workers, and costs of township/village enterprise workers are estimated at one-quarter of state costs. Insurance cost as a percentage of the wage bill is estimated to be highest for the state enterprises, 9.5 percent in 1987, while for the collective units it was 6.8 percent.

Despite the fact that LIS coverage includes dependents and GIS does not, the expenditures per primary member under LIS were lower than for the government scheme. This might indicate inefficient use of resources under the government insurance scheme. However, it might be due to the underestimation of collective and township/village enterprise workers' insurance costs. A third explanation is that benefits per capita might be more limited under LIS.

Private Insurance Plans. According to the U.S. Social Security Administration, private enterprises and contract workers contribute up to three percent of the employee's base wage rate for health insurance. An employer contribution is also involved. The private medical insurance plans are just being implemented and no estimates of revenues or finances are available currently.

CIS. These systems are organized and financed by county-level collective enterprises with contributions from smaller enterprises, businesses, and farmers, who elect to be members of the collective. Costs have risen more slowly than for other insurance schemes, from four percent of the 1980 total wage bill to seven percent of the 1987 total wage bill (World Bank, 1990).

RCIS. Although there was considerable variation throughout China, cooperative medical insurance systems generally took the form of pre-paid medical insurance plans. A rural cooperative's insurance was financed by annual prepayments from individual members, annual appropriations from the brigade's welfare funds, sales of traditional medicines, and registration fees. Revenues collected became the

cooperative medical fund. The financing of rural cooperative insurance schemes provided only a small pool for risk sharing and no opportunity for redistributive subsidies from richer to poorer brigades.

Each commune had two publicly accumulated funds contributed by production teams, reserve and welfare funds. The reserve fund (seven to 10 percent of gross income) could be used to finance hospital construction. The commune's welfare fund was comprised of two to three percent of its gross income. Each production team paid a certain amount from its welfare fund for each member subscribing to medical insurance. There was considerable variation in medical service premiums (annual membership fees) among communes. Fees were based on the commune's expenditure for treatment and medicine during the previous year. During the mid-seventies, the average annual expenditures for an average family of five was 7.5 Yuan, one-fifth to one-sixth of a family's average monthly income (Hu, 1981).

Village health stations promoted the use of herbal medicines, grown and processed locally. Proceeds went to the cooperative medical fund. In addition, a 0.05 to 0.10 Yuan visit fee to the health station was used to pay maintenance expenses and discourage indiscriminant use by commune members.

Villages and towns used approximately 52 percent of the cooperative medical fund to pay salaries, buy drugs, and buy equipment for the village health station and 42 percent to provide health insurance for villagers (LiMin, 1982). The services of barefoot doctors in the village health stations were financed separately, on the basis of work point claims on collectively distributed income. In at least 14 provinces in 1984, barefoot doctors also received a modest subsidy paid out of the provincial health budget. Now, barefoot doctors are self-financing.

To limit costs, rural co-ops instituted visitation fees, developed a referral network whereby patients had to visit a primary care provider in order to be referred to a higher level hospital, and practiced claims review. Initially, hospital fees were charged to a common commune account, but this resulted in unnecessary costs. Later, patients paid all their hospital expenses when receiving medical treatment. After the hospital bill was paid, the patient requested a refund from the commune for expenses. Requests for refunds were reviewed by a peer group.

EXHIBIT 4-10
ESTIMATED HEALTH SECTOR EXPENDITURES
(RMB millions-1980 constant prices)

	1970	1980	1987
Total	5865	10267	34994
Insurance	2969	4880	17453
Patient Fees	1569	1701	10750
Government Budget	1327	3586	6429
(share of total)	23%	35%	18%
Recurrent	1175	3016	4757
Capital	152	570	1672
(as share of budget)	11%	16%	26%

Source: Chinese Ministry of Public Health. World Bank Staff Estimates, 1990.

EXHIBIT 4-11
HEALTH EXPENDITURE RATIOS
(in percent)

	1975	1980	1985	1987
Health Budget: Total Received Health Costs	32	31	22	14
Health Budget: Total Government Budget	4	3.8	3.3	2.9
Health Budget: Gross Domestic Product	0.7	0.7	0.7	0.5
Total Health Costs: Gross Domestic Product	2.1	2.4	3.2	4.0

Source: Chinese Ministry of Public Health. World Bank Staff Estimates, 1990.

4.3.6. Utilization

There is no information about utilization of health care services by the insured in China.

4.3.7. Conclusion

Only a decade ago, China had one of the highest insurance coverages in Asia. In fact, until the early 1980s, 70 percent of its population were covered under some type of insurance. This represented a degree of health insurance coverage unparalleled in any other developing country. In the past, focus was on decentralized administration and financing of health services with local control over local services and emphasis on preventive health.

Since 1980, China has implemented social and economic reforms which have brought great changes in the ownership and structure of the rural economy, affecting both health care delivery systems and financing. The household responsibility system shifted responsibility for agricultural production from the collective to the household. In the past, the collective provided an administrative structure for insurance in rural areas. Communes, brigades, and production teams within the collective contributed to a public welfare fund which provided the major source of finance and delivery of health care in rural communities. Under the responsibility system, social and economic reforms have eroded the community-based network which financed and delivered the vast majority of rural health care. Some of the old community insurance schemes disintegrated, and coverage dropped to 48 percent of the population by 1985. Now all rural health services are provided on a fee-for-service basis, and the majority of rural residents are without health insurance. Researchers need more information about the current status of health insurance programs in China. In particular, are the poor provided any financial safety net for health care?

Today, health care insurance in the People's Republic of China is neither a uniform nor a well-planned system. At best, one-fourth of China's people, urban government and state enterprise workers, are well-covered by insurance, and 10 to 15 percent have limited coverage. Six hundred to 850 million Chinese are uninsured and receive absolutely fewer health services (World Bank, 1990). The majority without insurance live in rural areas.

5.0 APPROACH #4: LIMITED CATASTROPHIC COVERAGE

5.1 CASE STUDY #11: THE PHILIPPINE MEDICARE SYSTEM

5.1.1. Institution

The Philippine national health insurance program was established by law in August 1969 via Republic Act 611, otherwise known as the Philippine Medicare Plan. In January 1972, the first step in implementing the Medicare program was taken with creation of the Philippine Medical Care Commission (PMCC). PMCC is the government agency, under supervision of the Department of Health (DOH), that administrates the Medicare Program. It is governed by a Board of Commissioners with representatives from the Departments of Health, Labor, and Finance, administrating Medicare agencies, local governments, hospitals, doctors, beneficiaries, and employers. The institutional budget for PMCC operating expenses is funded by the national government.

5.1.1.1. Medicare Programs 1 and 2

The objective of the Medicare national insurance program was to gradually provide the entire population with viable opportunities for helping themselves pay for adequate medical care. There were to be two Medicare programs implemented sequentially. First, Program 1 was implemented to extend coverage compulsorily and automatically to formal sector workers affiliated with the existing social insurance system. The Social Security System (SSS), which covered private sector workers, and the Government Social Insurance System (GSIS), which covered workers in the public sector, collected Medicare contributions and processed and paid claims for their respective members (ISSA, 1983). Thus, the Medicare program was administrated through two existing machineries. This made its implementation smooth, and administration through this network continues today.

The plan was to learn from the introduction of Program 1 to formal sector workers, and to extend a second program to workers in the informal sector. To date, however, Program 2 has not been implemented, except on a trial basis in pilot areas. The pilot experiments have not been very successful so far. The experimental programs for informal workers had strong voluntary community participation initially, but over time participation dwindled away. The growth of a voluntary health insurance industry among informal sector workers is hampered by the low, irregular income structure of the majority. The provision of free hospital services by the government also reduces the risk of catastrophic illness and thus limits the population's need to insure. It is not clear when Medicare Phase 2 will be fully implemented.

5.1.2. Membership

All employed and self-employed persons with 1,800 pesos or more in annual income are eligible for coverage under Medicare Program 1. Program 1 has been expanded through the years to cover dependents, including spouse, children, and parents of the primary member (in 1973), retirees (GSIS in 1974, SSS in 1990), and the self-employed earning less than 1,800 pesos yearly on a voluntary basis (SSS in 1983). Tenants and seasonal workers in agriculture, domestic workers in

private homes, and employees of foreign governments or international organizations are excluded from coverage. In 1990, there were 4.6 million primary Medicare members with 18.9 million dependents. The number of dependents and retirees is increasing. The dependency rate, which indicates the degree to which members support dependents and retirees, shows the burden remains low, but is rising (Gamboa, et al., 1991) (*see Exhibit 5-1*).

During the first year of the program, 14.4 percent of the Philippine population participated in Medicare. Coverage reached its peak between 1985 and 1986 at 53 percent and has declined to 38 percent of the 1990 population. In 1990, Medicare covered 23.5 million with 16.8 million contributing to the SSS and 6.7 million to GSIS. The average annual rate of growth in coverage is nine percent. The 4.6 million Medicare primary participants in 1990 represented about 20 percent of the estimated 21.8 million people employed (Gamboa, et al., 1991). Despite the social insurance's compulsory nature and long-standing administrative mechanism, it has been difficult to obtain full participation. The structure of the labor force, with 45 percent in agriculture, 39 percent in services, and 16 percent in manufacturing, does not facilitate compliance (ILO, 1990).

EXHIBIT 5-1
MEDICARE PROGRAM COVERAGE
(in Millions)

Coverage	1972	1980	1990
Total Coverage (members and dependents)	5.59	17.56	23.47
% SSS	90.90	75.30	71.40
% GSIS	9.10	24.70	28.60
% of Population Covered	14.40	36.50	38.20
Total Number of Members (excluding dependents)	1.78	4.35	5.06
SSS Members	1.27	3.30	3.76
GSIS Members	0.51	1.05	1.30
Members as % of Employed	14.24	26.52	19.95

Source: Philippine Medical Care Commission

5.1.3. Management

Medicare benefits extended to employees and their dependents include hospital accommodations for a maximum of 45 days per year, allowances for drugs and laboratory examinations, professional consultations, and surgical operations. Cosmetic surgery and purely diagnostic care are not covered. The level of coverage, or maximum peso allowance, varies by type of service and category of hospital. Maximum benefits are fixed, but are adjusted from time to time. The adjustments in benefits effective January 1991 are presented in Exhibit 5-2.

EXHIBIT 5-2
SCHEDULE OF BENEFITS FOR MEDICARE CLIENTS
(effective January 1991, in pesos)

Services	Type of Hospital		
	Primary	Secondary	Tertiary
Room and Board	45	80	100
Drugs per Confinement			
Ordinary	495	660	705
Intensive	937.50	1125	2025
Catastrophic		2535	2895
Lab/X-ray per Confinement			
Ordinary	105	250	440
Intensive	225	575	875
Catastrophic		1125	2670
Max Professional Fees			
Ordinary			
GP	250	250	250
Specialist	375	375	375
Intensive/Catastrophic			
GP	375	375	375
Specialist	625	625	625
Family Planning Procedures			
Vasectomy	250	250	250
Tubal Ligation	400	400	400

Source: Philippine Medical Care Commission, *The Medicare Primer.*

Support value is the proportion of medical costs financed by Medicare. At its inception, the program was to work toward supporting 70 percent of private hospital expenditures. It has never achieved this goal. In fact, support values are diminishing instead of increasing. Expenses incurred greater than Medicare benefits are shouldered by the patient. The amounts paid out-of-pocket by beneficiaries averaged 72 percent of total charges for GSIS and 52 percent for SSS in 1990 (Gamboa, et al., 1991).

In 1989, support values for primary level services were 66.2 percent, followed by secondary at 46.1 percent, then tertiary at 45.8 percent. This means the highest out-of-pocket expenditures were incurred by patients treated in tertiary facilities. Yet, Medicare's benefit structure encourages the use of higher level facilities by paying absolutely more for services delivered at these facilities (even though the higher Medicare reimbursement represents a smaller portion of total hospital charges). Since drugs and physician services frequently have to be paid by the patient as well, often financial coverage is even lower than official support values (Solari, 1988).

5.1.4. Relations With Providers

Medicare links public financing with the private provision of health care within a closed provider network. Members must go to PMCC-approved facilities. In 1990, there were 1,506 public and private accredited hospitals, about 82 percent of hospitals nationwide. 650 hospitals were primary, 605 secondary, and 251 tertiary. 21.5 percent of the country's physicians, 11,336, were Medicare affiliates (CRC Factbook, 1990).

A 1984 study indicates Medicare had a significant impact on the growth of hospital capacity, especially in underserved areas, during the initial years of the program. A later study indicates Medicare has not improved accessibility to health care in a significant way during recent years.

After using health services, beneficiaries file a Medicare claim with the hospital and the hospital requests reimbursement from SSS or GSIS. Claims processing can be improved, particularly for GSIS, which takes five to six months on average to reimburse a provider. GSIS claims processing is centralized in Manila. SSS has decentralized claims processing at the regional level, speeding up the process considerably and generally reimbursing providers within 30 days. Private hospitals may opt to collect user charges rather than risk delayed Medicare reimbursements.

Medicare reimbursements are made directly to the provider on a fee-for-service basis. The level of compensation for professional services is based on whether hospitalization is surgical or non-surgical in nature. Surgeons are paid on a scale developed by PMCC. Anesthesiologists earn one-third of the surgeon rate. Non-surgeons receive a fixed amount per day with accredited specialists compensated at higher rates than GPs.

Incongruencies exist between actual health care costs and reimbursement fees. Expenditure on drugs is the largest share of government hospital costs, yet financial support from Medicare for drugs is least. Operating room fees

constitute a relatively small share of public and private hospital costs, while they rank third for Medicare reimbursement.

PMCC has not been forceful enough to reach an agreement with health care providers about the prices to be charged to Medicare for specific services. Like all other health care systems, growth in demand for services and rising production costs are pushing health care prices up. If prices rise and the absolute level of coverage remains the same, support values decline and insured patients are forced to pay higher out-of-pocket expenditures. However, increased payments by Medicare in a market that has demonstrated willingness and ability to pay high out-of-pocket sums may be acting as an inflationary force. Increases in Medicare benefits may drive up health service prices further (Gamboa, et al., 1991).

Compensation based on fee-for-service creates strong financial incentives for providers to overprescribe unnecessary services. To counter this incentive, Medicare imposes maximum expenditure allowances depending on the type of service and category of hospital. Also, PMCC maintains a priority list of high-risk hospitals and has instituted a regular system of hospital monitoring. Controllers scrutinize hospital clinical monthly reports of operations (CMROs) and compare current with previous levels. Hospitals have been found to overstate bed occupancy rates by increasing daily patient admission and prolonging patient confinement.

5.1.5. Financing and Expenditures

Most sources consider health insurance in the Philippines to be in its youth. Health insurance and health maintenance organizations do not as yet contribute significantly to health care financing. In 1985, health insurance accounted for only 4.1 percent of total health expenditures in the Philippines. Of this, compulsory health insurance, including Medicare, contributed around three percent. Private expenditure was 74 percent of total spending on health care, half of which came from out-of-pocket payments. According to REACH, the Medicare program is not fulfilling its objective to provide beneficiaries with a viable means of helping themselves pay for adequate medical care. The benefits are very limited and the financial coverage is very low (Solari, 1988) (*see Exhibit 5-3*).

5.1.5.1. Revenue

Revenue for Medicare comes from premium contributions, investment income, and penalties and is held in a Health Insurance Fund under two separate accounts, one for SSS and another for GSIS. Total premiums received by SSS and GSIS in 1990 were P777 million and P349 million, respectively (*see Exhibit 5-4*). The premium contribution takes the form of a payroll tax shared equally by the employee and employer at 2.5 percent of the salary. The salary base upon which contributions are calculated has a ceiling beyond which the contribution remains the same. The maximum salary is to be P2,500 in 1992 and will increase to P3,000 in 1993. The ceiling allows all workers with a salary higher than the maximum to pay the same premium paid by lower salaried workers. For example, an employee receiving P15,000 per month pays P25, the same as an individual earning P1,750. The wage ceiling makes the Medicare financing scheme regressive because insurance premiums

and worker earnings do not increase proportionately. But, in this social insurance program, the healthy subsidize the sick, and individuals without families subsidize retirees and dependents.

EXHIBIT 5-3
SOURCE OF FUNDS FOR HEALTH CARE EXPENDITURE, 1985

Sources	Amount (in billion pesos)	% Contribution
Taxes	2.85	19.6
Government Operating Income	0.16	1.1
Local Aid	0.50	3.4
Foreign Assistance	0.27	1.8
Household Spending	5.37	36.9
Insurance Benefits	0.60	4.1
Others (Private)	4.80	33.1
TOTAL	14.55	100.00

Source: Intercare, 1987.

Collection income has been increasing absolutely at an average rate of 19 percent over the past five years, with the highest rates of change occurring immediately following adjustments in the salary contribution ceilings. This means growth in Medicare revenue is not derived so much from an increase in membership as from higher premium contributions due to higher salary ceilings. Income from collections as a share of total Medicare income has been declining, most sharply for SSS.

Income from investment in government securities is becoming a substantial portion of total income for SSS. In 1990, SSS obtained 52 percent of its total revenue from premiums and 48 percent from investments. In contrast, GSIS obtained 71 percent of its total income from premium collection (*see Exhibit 5-4*).

5.1.5.2 Expenses

All Medicare expenses are charged to the Health Insurance Fund. The single biggest expense is benefits. In 1990, the benefits paid by SSS and GSIS totalled P710 million and P442 million, respectively. Benefits paid by GSIS as a portion of their collection income is nearly double that of SSS. Annual increases in benefits appear to be due to increases in the prices of medical services. There was a large increase in benefit payments for 1990, from 1.6 percent to 58.7 percent. However, when adjusted for inflation in the health sector, this represents only a 10 percent increase in real benefits. Therefore, the majority of the increase in benefit payments was due to increased prices, not increased utilization rates (*see Exhibit 5-4*).

Administrative costs are a small proportion of Medicare premiums, limited to a maximum of 12 percent by law. Operating costs per capita in 1990 were about three pesos. This small share of income spent on operating costs is not necessarily a positive indicator, given the perception of widespread abuse and long reimbursement delays in the Medicare system. For example, GSIS and SSS differ widely in their operating expenses. In 1990, GSIS spent P8.5 million while SSS spent more than seven times as much. It cost SSS P60 million to decentralize administration, computerize, and implement fraud monitoring. Limiting insurance fraud and benefit delays has proven costly for SSS. Some argue it would be more cost effective to centralize rather than decentralize Medicare administration. Three different independent government agencies (PMCC, SSS, GSIS) manage the Medicare system and, some believe, prevent the full exploitation of economies of scale for more efficient and coordinated operations.

5.1.5.3. Financial Solvency

Each year from 1979 to 1989, Medicare collected more in premiums than it spent on medical expenses. By 1990, the Medicare system had accumulated 5.2 billion pesos in reserves, most coming from SSS with 4.5 billion pesos in reserves (*see Exhibit 5-4*). The SSS had a reserve capacity (number of years current reserves can last given current expenditure levels) of six years, the GSIS 1.4 years. Actuaries recommend two to three reserve capacity years for a healthy insurance program. Accumulating reserves by maintaining low support levels and increasing insurance premiums may not be in society's best interest, however.

5.1.6. Utilization

The number of members who claim Medicare reimbursements and get paid has been rising. In 1990, there were 1.2 million Medicare beneficiaries, 56 percent from SSS and 44 percent from GSIS (*see Exhibit 5-5*). This represents a rate of availment (beneficiaries served/total coverage * 100) averaging 6.5 percent for the combined programs, 5.36 percent for SSS, and 10.36 percent for GSIS. The difference in use rates between SSS and GSIS may be due to several factors. GSIS members include high-risk groups (police, fire, military) that may use medical services more frequently than a typical worker. Also, many private companies finance benefits voluntarily or as part of collective bargaining agreements between employers and organized labor (*see Exhibit 5-6*). Some companies operate their own health facilities, while others contract the services of medical

professionals, hospitals, and other facilities, including HMOs, for the medical needs of their employees in addition to Medicare coverage. The primary health care provided by private firms may decrease the need of SSS members for the curative care offered by Medicare.

EXHIBIT 5-4
FINANCIAL PERFORMANCE: MEDICARE, SSS, GSIS
(page 1 of 2 pages)

	1972	1980	1990
TOTAL MEDICARE			
Total Income (million pesos)	102.24	490.99	2124.51
Collections (million pesos)	100.67	446.72	1126.84
% Income from Collections	98.50	91.00	53.50
Investments (million pesos)	1.57	42.22	987.09
% Income from Investments	1.05	8.60	46.46
Other Income (million pesos)	0	2.05	0
% Income from Other Sources	0	0.40	0
Total Expenses	13.95	337.47	1221.00
Benefit Payments (million pesos)	12.82	318.65	1152.32
As % of Collections Income	12.70	71.30	101.30
Average Value per Claim (pesos)	232.09	262.62	939.99
Operating Expenses (million pesos)	1.13	18.82	68.68
As % of Collections Income	1.10	4.20	6.00
Cumulative Reserves (million pesos)	88.10	298.38	5203.46
Years Reserve Capacity (Cumulative Reserves/Total Expenses)	6.30	0.88	4.26
SSS			
Total Income (million pesos)	57.84	329.82	1616.05
Collections (million pesos)	56.71	290.55	777.44
% Income from Collections	98.00	88.10	48.10
Investments (million pesos)	1.13	38.22	838.61
% Income from Investments	2.00	11.60	51.90
Other Income (million pesos)	0	1.05	0
% Income from Other Sources	0	0.30	0

EXHIBIT 5-4 (CONTINUED)

	1972	1980	1990
Total Expenses	8.11	207.65	770.72
Benefit Payments (million pesos)	7.70	203.83	710.50
As % of Collections Income	13.60	70.20	57.80
Average Value per Claim (pesos)	228.78	272.40	1092.47
Operating Expenses (million pesos)	0.41	3.82	60.22
As % of Collections Income	0.07	1.30	7.70
Cumulative Reserves (million pesos)	49.27	241.88	4583.15
Years Reserve Capacity (cumulative reserves/total expenses)	6.08	1.16	5.95
GSIS			
Total Income (million pesos)	44.40	161.17	508.46
Collections (million pesos)	43.96	156.17	359.98
% Income from Collections	99.00	96.90	70.80
Investments (million pesos)	0.44	4.00	148.48
% Income from Investments	1.00	2.50	29.20
Other Income (million pesos)	0	1.00	0
% Income from Other Sources	0	0.60	0
Total Expenses	5.84	129.82	450.28
Benefit Payments (million pesos)	5.12	114.82	441.82
As % of Collections Income	11.60	73.50	122.70
Average Value per Claim (pesos)	327.25	246.89	767.69
Operating Expenses (million pesos)	0.72	15.00	8.46
As % of Collections Income	1.60	9.60	2.40
Cumulative Reserves (million pesos)	38.83	56.50	620.31
Years Reserve Capacity, (cumulative reserves/total expenses)	6.65	0.44	1.38

Source: Philippine Medical Care Commission

EXHIBIT 5-5
BENEFICIARIES SERVED AND UTILIZATION RATES

	1972	1980	1990
TOTAL MEDICARE			
Beneficiaries Served (thousands)	65	1315	1230
Rate of Availment	1.16	7.46	5.24
SSS			
Beneficiaries Served (thousands)	43	805	687
Rate of Availment	.85	6.09	4.10
GSIS			
Beneficiaries Served (thousands)	22	510	543
Rate of Availment	4.31	11.75	8.07

Beneficiaries = people who availed of services claimed and received reimbursement
Rate of Availment = (Beneficiaries Served/ Coverage) x 100

Source: Philippine Medical Care Commission

Even though absolutely more members are using services, these users represent a smaller proportion of the increasing Medicare membership. From 1987 to 1990, both GSIS and SSS exhibited declining availment rates. In contrast, rising utilization rates during the late 1970s brought about a serious attempt to closely monitor providers and reduce fraud. The current decline in availment rates may represent more stringent claims review. However, reduced utilization is not desirable if individuals who need medical care and have Medicare insurance do not avail of health services.

EXHIBIT 5-6
COMPANY-FINANCED HEALTH-RELATED BENEFITS
IN COLLECTIVE BARGAINING AGREEMENTS
1985

	Number of Companies Providing Benefits	
Benefits Covered	Number	Percentage
Both employees & dependents	23	56
Free consultation	23	56
Free medicines with allowable reimbursements	19	45
Free dental services	22	52
Hospital provisions greater than Medicare	24	57
Surgical and operation cost covered	13	31
Hospital loan allowed	3	7
Medical fund for employees	14	33
Family planning	22	52
Retirement	18	43
Insurance plan	17	41
Memorial plan	5	12

Source: Philippine Department of Labor and Employment

5.1.7. Conclusion

The Philippine national health insurance program was established in August 1969 to gradually provide the entire population with viable opportunities for helping themselves pay for adequate medical care. There were to be two Medicare programs implemented sequentially. First, Medicare Program 1 was implemented to extend inpatient coverage compulsorily to formal sector workers affiliated with

the existing social insurance system, the Social Security System (SSS) covering private sector workers, and the Government Social Insurance System (GSIS) covering workers in the public sector. Despite the mandatory nature of the program, only 20 percent of formal sector workers participate in Medicare today. Researchers need to examine alternative methods for increasing compliance, especially among the low income workers.

The plan was to learn from the introduction of Program 1 to formal sector workers, and to extend a second program to workers in the informal sector. To date, however, Program 2 has not been implemented, except on a trial basis in pilot areas. The growth of a voluntary health insurance industry among informal sector workers is hampered by the low, irregular income structure of the majority. The provision of free hospital services by the government also reduces the risk of catastrophic illness and thus limits the population's need to insure.

Most sources consider health insurance in the Philippines to be in its youth. Health insurance does not as yet contribute significantly to health expenditures. In 1985, health insurance accounted for only 4.1 percent of total health expenditures in the Philippines. Of this, compulsory health insurance, including Medicare, contributed around three percent. Private expenditure was 74 percent of total spending on health care, half of which came from out-of-pocket payments. The Medicare program is not fulfilling its objective to provide beneficiaries with a viable means of helping themselves pay for adequate medical care. The benefits are very limited and the financial coverage is very low.

5.2 CASE STUDY #12: KENYA - NATIONAL HOSPITAL INSURANCE FUND (NHIF)

Until recently, the government has been the majority provider of health services in Kenya, offering free health care since independence in 1963. Like many developing countries, Kenya's public health sector has been plagued by chronic underfunding while the demand for health services has grown steadily. Now, the policy of free health care is under revision with the government gradually withdrawing from its role as majority provider. The government acknowledges it must 1) restructure and reorganize the health sector, and 2) use nongovernment resources (insurance and cost-sharing) more effectively to achieve health objectives. Currently, social financing is fairly undeveloped in Kenya because prior free care created no incentive for private citizens to pool resources in anticipation of health risks. As health services are no longer free, it is the purpose of this study to examine the role of the National Hospital Insurance Fund (NHIF) in providing social financing for health care in Kenya.

Kenya's NHIF was founded in 1966, shortly after independence, to provide contributors with inpatient health insurance. Its immediate purpose was to offer upper income groups of all races access to private, high-quality hospitals (previously restricted to non-Africans), thereby alleviating overcrowding at free service government facilities. Until recently, administration of the fund, including levels of contributions, benefits, and reimbursements, had remained approximately the same since 1966. Currently, health officials are challenged to update the insurance system by restructuring its administration and management, automating a manual claims process, modifying a regressive contribution scheme, and revising a reimbursement schedule that has little relationship with actual health care costs.

5.2.1. Administration

The NHIF is a statutory body established by Parliament. It is managed as a government department of the Ministry of Health (MOH) with its administration funds allocated by the Treasury. NHIF's budget is reviewed and approved by MOH. In practice, an increase in the administrative budget for the Fund is synonymous with a decrease in MOH's budget. NHIF must reimburse the Treasury at the end of the year for all its administrative expenses.

Staff is seconded from the Ministries of Health and Finance. Therefore, the level of staffing is subject to the generosity of the Secretaries of Health and Finance. Workers have no opportunity for promotion while at the Fund. Consequently, they leave quickly and experienced staff are rare. Salaries are paid by the ministry from which the employees are seconded, but NHIF reimburses the supporting ministries for salaries at the end of the year. In the past, NHIF suffered from inadequate staffing (Kariuki, 1985). While permanent positions have increased to around 400, the number of employees is low relative to the volume of manual work.

A proposal, the Draft National Hospital Insurance Bill, was prepared by the NHIF and MOH and submitted to the National Assembly in 1991 for restructuring the Fund. It addresses organization and administration, financing (including contributions and benefits), and the claims process. The NHIF and MOH propose to transform the NHIF from a parastatal to a state corporation managed by a Board of Trustees under the MOH. The intent is to promote efficiency and remove bureaucratic red tape. However, the Board is to be comprised of representatives from the MOH, Ministry of Finance, NHIF, employers, hospitals, and contributors, which does not suggest a reduction in bureaucractic red tape. If the transformation occurs, NHIF will exercise control over its budget, be able to increase contributions and benefits without an act of Parliament, and hire its employees.

5.2.2. Membership

In 1967, its first year of operation, 40,000 workers contributed to the Fund, the majority of whom were government employees (Kariuki, 1985). Membership was mandatory for employed adults (18 years and older) earning at least 1,000 Kenyan shillings (Ksh) per month. In 1972, membership in the Fund was extended to adults earning less than Ksh 1,000 per month on a voluntary basis. Recently, there have been sharp increases in the rate of joining. From 1985 to 1989, total enrollment rose by 33 percent from 600,000 to 800,000 members (Alexandre and Franey, 1989). Currently, NHIF is estimated to have a primary membership of one million people. On the assumption the typical Kenyan family has six members, about six million individuals are covered by the Fund (Wang'gombe, 1992).

Under NHIF regulations, no person 65 years or older is allowed to be a voluntary contributor to the Fund. It is inequitable that a person enjoy the benefits of the scheme when s/he faces a low risk of needing medical care, and be denied benefits at the age when s/he is most susceptible to illness. Kenya

needs an insurance scheme that covers every Kenyan, without regard to age or employment. With the proposed amendments to NHIF regulations, coverage should be expanded to a higher level.

5.2.3. Benefits

Benefits covered by NHIF have not changed since 1966. Inpatient services, up to 180 cumulative hospital days per family, are covered at NHIF-approved facilities, including private hospitals, and nursing and maternity homes. Officially, there is no deductible or copayment. In practice, NHIF reimbursements, especially to private hospitals, are insufficient to cover all costs of care. Hospitals bill patients if costs are greater than insurance reimbursements.

A significant expansion of benefits is proposed, which would include: outpatient services provided by an approved facility (with an outpatient spending cap of Ksh 1,000 per contributor per year); 50 percent of the costs of spectacles, dentures, and routine medical exams; at least 60 percent of the costs of artificial limbs, crutches, and wheelchairs for contributors only; up to Ksh 5,000 burial expenses; Ksh 150 for the services of a registered midwife for out-of-hospital births; and benefits for health care received abroad if approved by the NHIF Board of Trustees. In addition, benefits are to cover government hospitals for the first time. This will provide public sector institutions with much-needed revenue. Unfortunately, proposals do not specify whether operations or private clinics will be covered. Their coverage should increase the quantity of private health services.

5.2.4. Financing

5.2.4.1. Revenue Collection

The required monthly contribution of Ksh 20 had been fixed for 23 years and could not be changed without an act of Parliament. Under current regulations, workers are divided into income groups, with the first group earning Ksh 1,000 to 2,500 per month, and the last Ksh 15,000+ per month. Members of each income group pay a single fixed monthly contribution. As income rises, so does the contributions ranging from Ksh 30 to 320 per member per month. Voluntary members pay a flat rate of Ksh 60 per month. Employers collect NHIF contributions via deductions from wages and transfer these in a timely manner to the Fund through the purchase of revenue stamps. Then stamps are distributed and placed on employee NHIF membership cards. The Inspectorate Division inspects employers to ensure they maintain proper records, make contributions to the fund, and administer contribution cards and payment stamps properly. Between July 1988 and April 1989, over Ksh 1.3 million in late contributions and penalties were collected from inspections of Nairobi-area employers. Penalties accessed are prescribed by law and include a fine of Ksh 4,000 and possible prison sentence. There is a five percent penalty on late premiums (Alexandre and Franey, 1989). Historically, it has proven difficult to collect mandatory contributions from the self-employed and unemployed because there is no administrative structure in place to enforce compliance.

The employer pays no share of the employee's health insurance contribution. However, all public employers and many private employers provide direct subsidies to their employees to help cover out-of-pocket medical expenses. The government subsidizes a large share of the costs of treatment for its employees through the Public Service Medical Benefit Scheme. This assistance covered both outpatient and inpatient care until 1989, when it was limited to inpatient services.

The regressive nature of the original system of revenue collection has been significantly revised in a way that makes compulsory membership fees more progressive, requiring richer members to subsidize the costs of care for poorer members. Individuals with higher incomes pay larger contributions for the same benefits-enhancing equity. However, within income groups, those earning less continue to pay a larger percentage of their income for the same benefits. All premium discrimination should be removed. Contributions should be equal for all members receiving the same income, and increase as a percentage of income as income increases. This is important because benefits do not discriminate. As a consequence, the upper-income groups use more expensive health facilities because they can afford to pay what is not covered by NHIF, the Fund pays a higher per diem to these facilities, and NHIF pays greater amounts of benefits to its wealthier contributors.

In addition, it is proposed the employer contribute 10 percent of an employee's monthly contribution (to be deducted from the employee's salary). Furthermore, it is recommended contributions be divided into two components, one to cover benefits during the contribution period and another, treated like a deferred benefit, to cover claims thereafter.

5.2.4.2. Expenditures

Exhibit 5-7 offers a comparison of NHIF claims made by hospital category. Expenditures are skewed toward private hospitals, and nursing and maternity homes which serve higher income patients. A 1988 Nairobi area study found 41 percent of patients in private facilities were high income (greater than Ksh 2,500 per month) and 51 percent were middle income (Ksh 700-2,499 per month) (Forgy, 1989). Private facilities comprised 26 percent of the NHIF-approved facilities in 1987/88, yet they claimed 58 percent of total reimbursements. 30 percent of NHIF facilities were community and mission hospitals which received 40 percent of reimbursements. Only two percent of reimbursements were received by government hospitals, 44 percent of NHIF facilities (Alexandre and Franey, 1989).

There was an uneven distribution of payments within hospital categories. In 1987/88, 16 of 55 private facilities were responsible for 87 percent of total private claims. Alone, one institution was responsible for 14.6 percent of total private claims (Alexandre and Franey, 1989). Does this reflect use patterns or fraud? Unfortunately, there is no available information on the percentage of patients treated in each facility and the relative severity of illnesses which would account for longer stays in more expensive hospitals. Data which would provide this information have been collected by NHIF, but have not been analyzed. Furthermore, the NHIF system offers no incentives to minimize unnecessary utilization or prolonged hospital stays. By only covering inpatient services, NHIF creates the incentive to perform outpatient procedures in a hospital.

The Fund has been operating with a growing surplus of premiums over claims. Financial solvency is important for the Fund, but too large a surplus may indicate too few benefits and too low reimbursement rates. NHIF proposes to use surpluses as loans to medical or health-related projects. However, funding of such projects is performed already by MOH. NHIF funding would duplicate efforts and is not advised by consultants. Investment of the Fund's surplus is recommended.

5.2.5. The Claims Process

The Fund operates on a fiscal year, from July 1 to June 30. June is renewal month, when all contributors must return their contribution cards from the prior year so new ones can be issued. Each month, stamps are placed on the back of the contribution card by employers or oneself (if voluntary or self-employed member) to indicate the required contribution has been paid. Up-to-date membership cards must be submitted with claims. There are two types of claims: general claims filed by the patient after s/he has received treatment and paid the provider; or NHIF reimbursement to the patient. Hospital claims are filed weekly by each hospital and reimbursement for patient care is made to the hospital.

NHIF pays more than 10,000 claims per month, manually. There is concern about suspected fraud in private hospitals and nursing homes. Some hospitals are suspected of billing NHIF for patient stays that did not occur. Also, it is suspected that some contributors allow non-members to use their cards. Claims are reviewed to control fraud. Processors certify the patient's contribution has been made, sufficient information is provided about the illness episode, and the claim has been filed within 90 days of service. Fund officials state approved claims are almost always paid within two weeks of their receipt. However, health care providers report it takes much longer. Many indicate the claims process is so slow they must send a representative to NHIF to collect their reimbursements. Clearly, if coverage is extended to outpatient services, automation of the claims process is necessary.

EXHIBIT 5-7

COMPARISON OF NHIF CLAIMS BY HOSPITAL CATEGORY FY 1985 AND 1988

	FY 1985			FY 1988		
	Claims Made (Ksh)	% of Total	Number of Facilities	Claims Made (Ksh)	% of Total	Number of Facilities
Hospital Type						
Private	54,871,575	50.6	32	77,947,951	57.8	55
Community/ Mission	51,653,808	47.8	55	53,780,971	39.8	62
Government	1,976,220	1.8	18	3,201,015	2.4	91
TOTAL	108,501,603	100	105	134,929,937	100	208

Note: Does not include claims for home confinement and foreign medical care.
Sources: NHIF records; Kariuki, "The National Hospital Insurance Fund—Progress, Problems, and Prospects," December, 1985.

5.2.5.1. Reimbursement

An inpatient facility must be NHIF approved to receive reimbursement. NHIF-approved hospitals are inspected to ensure they meet requirements which serve as a basis for per diem (flat fee per day) reimbursement rates. Approval criteria are unspecified in the literature. Hospitals compete for NHIF patients with amenities like special or free food, and private or semi-private rooms.

The level of compensation is administratively decreed varying by type of facility and location. Currently, there are six classes of hospitals based on estimation of their level and quality of services. Each class of facility receives a per diem rate irrespective of the actual service it provides a patient. Rates vary to Ksh 450 per day (Mutungi, 1992). Reimbursement rates are lowest for government hospitals which are paid a flat fee per admission. All hospitals are reimbursed at a flat rate per case for maternity services.

NHIF reimbursement bears little resemblance to actual provider cost. At more expensive facilities, reimbursement is only a small fraction of the actual bill. Within Nairobi, most full- service private hospitals charge more than Ksh 1,000 per day, but the maximum reimbursement is Ksh 450. If insurance reimbursement is insufficient to cover charges, hospitals bill the patient and the patient must

pay the difference. In contrast, NHIF reimbursement is greater than medical charges at rural mission hospitals, and in some cases subsidizes the cost of care to the poor. Reimbursement accounts for approximately one-third of mission hospitals' total revenue (Forgy, 1989). Reimbursement for government hospitals has been so low historically there have been few claims submitted to NHIF because remuneration is insufficient to cover the administration costs of filing a claim. Furthermore, government hospitals are discouraged from filing claims with NHIF because any revenues generated go to the MOH.

The NHIF recognizes it must bring reimbursements in line with provider costs, while creating incentives for quality care and cost control. It is developing a reimbursement scheme based on a "standard" for cost and quality which rewards hospitals for higher quality and cost effectiveness. Exhibit 5-8 presents a proposed reimbursement schedule.

5.2.6. Conclusion

Kenya's NHIF was founded in 1966 to provide contributors with inpatient health insurance. Until recently, administration of the fund, including levels of contributions, benefits, and reimbursements has remained approximately the same. Today, rates of joining this health card system are increasing sharply. Expenditures continue to be skewed toward private hospitals where urban, high-income residents who can afford to pay the unpaid balance of hospital bills are served. Currently, health officials are engaged in updating the insurance system by restructuring its administration and management, automating an extremely slow manual claims process, modifying the contribution scheme, and revising a reimbursement schedule that has little relationship with actual health care costs.

EXHIBIT 5-8

NATIONAL HOSPITAL INSURANCE FUND
PROPOSED REIMBURSEMENT SCHEDULE

Quality Range	1991 Infla. Adj. Cost	1991 Capit. Adj. Cost	Old Rate	New Rate
21 to 25				90
26 to 30				120
31 to 35			80	150
36 to 40	145	152	160	180
41 to 45	801	841	200	210
46 to 50	220	231	200	240
51 to 55	449	471	250	270
56 to 60	315	406	250	300
61 to 65				330
66 to 70				360
71 to 75				390
76 to 80	1,362	1,430	350	420
81 to 85	2,325	2,442	450	450
85 to 90				480
91 to 95	2,038	2,140	450	510
96 to 100				540

Source: Siegrist R. B. Trip Report and Technical Notes for NHIF Unit-Costing Study in Kenya, 1992

6.0 APPROACH #5: PRE-PAYMENT PLANS (GOVERNMENT/SOCIAL SECURITY LINKAGES TO PRIVATE PROVIDERS)

6.1 CASE STUDY #13: SOCIAL SECURITY - PRIVATE SECTOR LINKAGES IN URUGUAY - INSTITUCIONES DE ASISTENCIA MEDICA COLECTIVA (IAMC)[39]

6.1.1. Institutional Description

Health care financing and delivery in Uruguay consists of a defiantly complex mosaic of programs, delivery systems, and insurance and financial arrangements involving a variety of government, parastatal, and private institutions. The Uruguayan health sector is characterized by strong public-private linkages at multiple levels. This case study focuses on the role of private HMO-type organizations, Instituciones de Asistencia Medica Colectiva, in the provision of health care to population groups covered by (and financed through) social security, private insurance, and special government programs.

Uruguay is one of the pioneer countries in Latin America in terms of developing population and risk coverage (including health) through social security. Since the turn of the century, social security has developed in a fragmented and stratified manner, incorporating occupational groups and economic sectors according to their ability to pressure the state for coverage. Despite relatively universal coverage of the economically active population and generous benefits, inequities exist among population groups in terms of eligibility for, level of, and geographical access to benefits. The social security system consists of an array of institutions which in turn consist of an array of programs that, depending on the specific group (e.g., teachers, military personnel, banking employees, etc.), provide coverage for a wide range of social risks. These include: pensions, old-age benefits, health insurance, unemployment compensation, disability, work accident and sickness compensation, and maternity allowances.

What is interesting about the Uruguayan health insurance experience is the predominance of private HMO-like organizations, known as Institutions of Collective Medical Assistance (IAMCs). Through a variety of financial arrangements, these organizations provide comprehensive health care to a significant proportion of the country's population. They have their roots in the mutual aid societies that covered social risks (old age, disability, occupational risks, maternity, and unemployment) for immigrant and occupational groups since the mid-1800s. Moreover, unlike most social security systems in developing countries that provide medical care coverage, the Uruguayan social security fund (DGSS) does not provide health services directly to its members through its own network of facilities. In Uruguay, the indirect pattern is dominant. Social Security finances about 40 percent of total IAMC enrollment. Members enrolled through individual and group plans constitute the remainder. Since the late 1960s, the government has attempted to regulate premia paid by individual and group enrollees. This highly politicized, on-and-off regulatory process was

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[39] This case study draws on Mesa-Lago (1992) and Meerhoff and Rigoli (1992). The author is grateful to Ricardo Meerhoff for comments on an earlier version of this paper.

discontinued in early 1992. Before entering into a discussion of the IAMCs, it is useful to explore the IAMCs position within the Uruguayan health sector.

6.1.1.1. Institutional Linkages and Legal Framework

Typical of health care systems throughout the region, Uruguay developed a stratified system. Although overlap occurs, six subsectors can be distinguished. The IAMCs are linked to each subsector.

(1) **Public:** Consists of the Ministry of Public Health (MPH) and affiliated state agencies, Administración de los Servicios de Salud del Estado (ASSE), and the University Hospital of Montevideo, that cover the uninsured population. As stipulated in a 1989 law, MSP is to take on an increasingly regulatory role while the ASSE, a semi-autonomous MSP dependency, gradually will take over management of all public facilities. The ASSE/MS operates the largest network of facilities including 60 hospitals (representing 63 percent of all hospital beds) and 200 ambulatory facilities. In general, the quality of services provided at these facilities is perceived to be poor. The University Hospital in Montevideo, the only public tertiary-level facility in the country, contains an additional five percent of hospital beds. In areas in which the public sector lacks inpatient facilities or functional specialized equipment, the MSP contracts with IAMCs for specific services. To a lesser extent, the opposite is also true: IAMCs contract with public facilities to provide services to IAMC enrollees.

(2) **Military and Police Insurance:** Consists of two health service and insurance systems, SSFFAA and SSPP, covering the military (SSFFAA) and police (SSPP), respectively. Coverage includes active and retired personnel and their families. Each operates a single hospital located in Montevideo, representing four percent of hospital beds. It is financed through military and police payroll deductions, government subsidies, and copayments at point of service. Outside of the capital, SSFFAA and SSPP beneficiaries receive services at MSP facilities or at private facilities contracted directly or through IAMCs.

(3) **Social Security: Sickness Insurance:** Social security is administered through the Social Insurance Bank (BPS) for the Sickness Program of the Social Security Directorate (DGSSE). As mentioned above, the BPS does not directly provide any services covered by the social security regimen. Rather, through payroll deductions, it finances the provision of curative services through the IAMCs. With some exceptions, the law requires that private sector employees and workers participate in the BPS-administered Sickness Program and affiliate with an IAMC. The BPS covers a large proportion of the salaried work force and a segment of the self-employed and informal sector (*see Section 6.1.2.*). Also, a minority of civil servants, (e.g., workers employed by the Ministry of Transport and Public Works) and parastatal employees participate in social security. They receive services at IAMCs under contract with the BPS.

(4) Social Security: Professional Risks Insurance: The State Insurance Bank (BSE) administers a national professional risk program (and fund) which covers workingman's compensation as well as medical care for work accidents and illnesses. BSE has its own hospital (140 beds) in Montevideo but contracts with IAMCs elsewhere in the country. It is financed through a mandatory payroll tax paid by employers.

(5) Regulated Private Insurance/IAMCs: Sometimes called the "mutualist" or "sickness fund" subsector, this subsector overlaps with the social security-financed health insurance discussed earlier. It consists of BPS-insured workers and people insured by the sickness funds through individual and collective policies. All enrollees receive services at the IAMCs. By law they provide "complete and equal" services to all enrollees. Enrollment in a particular IAMC depends on membership in a mutual aid society or physician cooperative usually depends on place of employment. However, it also relates to labor union or professional association membership, occupational, ethnic, and religious group affiliation, employer, or place of residence. All enrollees are free to enroll in the IAMC of his or her choice. Premia prices vary but, in the past, price increases were heavily regulated (often frozen) by the Ministry of Economy and Finance. In addition to benefits and prices, the government also sets standards of care, membership floors, and personnel and equipment requirements. To summarize, this subsector can be divided along two dimensions that correspond to different institutional and financial mechanism(s) that link consumers with providers:

- *Social Security (BPS) Insured*: Workers covered by the BPS are enrolled in the IAMC of their choice. The services are financed through BPS-administered payroll deductions. (see the discussion in paragraph [3]).

- *Individual and collective affiliation*: Most IAMC members are not insured through the BPS. Many Uruguayans are enrolled in IAMCs through individual membership or through collective arrangements. This is due in part to the low coverage of dependents and retirees by the BPS-administered Sickness Program. Further, parastatal employees, workers in large private industries, and some civil servants are covered by special health insurance packages established by their agencies, usually through collective agreements. These groups are not covered by the BPS. Many enroll their employees in the IAMC of their choice. Finally, central government agencies (most ministries) provide a cash allowance to their lower-income employees to enroll in any IAMC. To receive this benefit, however, the employee must demonstrate proof of membership in an IAMC.

(6) Other Private: This sector consists of independent private facilities. Taken together, the private sector contains 13 percent of total hospital beds. IAMCs contract private facilities if the bed capacity or technology available in their own facilities is insufficient. Private facilities derive income from traditional insurance carriers, facility-specific prepayment plans, and fee-for-service payments. Some parastatals

and large private firms contract private institutions (and IAMCs) to deliver care to employees.

(7) **Special Programs**: Two programs are indirectly related to the IAMCs:

- **Mother-Infant Program**: Some groups, such as microenterprise owners, newspaper street vendors, small farm producers, dependents of BPS-insured, domestics, and women and children receiving family allowances, are covered for maternity and infant care through a special government program. An undetermined number of these groups are not entitled to regular curative care coverage under Social Security's Sickness Program. The Maternal-Infant program is financed by the firms together with government, but administered by the BPS. The BPS provides maternal-child services in its own facilities (one maternity hospital and six ambulatory clinics) but also contracts with IAMCs or private facilities for outpatient and hospital care, especially in the "interior" states. The BPS does not operate facilities outside of metropolitan Montevideo.

- **Social Financing of High Technology Services**: In 1979, Uruguay initiated an innovative social insurance mechanism to make expensive treatment and surgical procedures-requiring specialized skills and technology-accessible to the entire population. A 1979 law created the Institutos de Medicina Altamente Especializada (IMAEs). The IMAEs are specialized medical centers that for the most part are located within IAMC and private hospitals with the technological and human resource capacity to perform specialized procedures. Procedures covered under the program include: hemodialysis, renal transplants, hip replacement, and cardiovascular surgery. In effect, these procedures are added to the general benefit package covered by the BSP and IMACs' insurance schemes. Diagnostic tests required for these procedures are also covered. These services are available to all Uruguayans and are financed by a US $1 monthly surcharge on insurance premia payments (to IAMCs and private insurance carriers). The IAMCs and private insurance companies collect and transfer the funds to the National Resource Fund, a parastatal established to administer the program. For public employees, the government pays the "cost" of the treatment. A special commission sets protocols, authorizes treatment, supervises program services, and sets "costs." Although only limited information is available on the program, one source maintains that before the onset of the program (in 1979), only 25 Uruguayans received hemodialysis, in part because of lack of equipment. In 1989, however, 750 people-representing all income groups-were treated on a continual basis (Rigoli et al., 1989).

6.1.1.2. Organizational Characteristics

In 1991, 47 IAMCs operated throughout the country. Thirty-three provided services to metropolitan Montevideo, the nation's capital where nearly 50 percent of population resides. IMACs vary considerably in terms of ownership, organization, and physical plant. Some are associated with mutual aid societies

and thus owned by the contributing members, usually related to an ethnic, religious, or occupational group. The membership elect a governing board which in turn oversees management. A minority of the mutual societies are closely linked to professional associations. This is the case for the country's largest IAMC, Centro de Asistencia del Sindicato Médico de Uruguay (CASMU). Increasingly, however, IAMCs are owned by physician groups. This category of IAMCs are usually known as medical cooperatives. These entities also contract with physicians who are not cooperative members.

All IAMCs own and operate ambulatory clinics. However, not all operate inpatient facilities or own sophisticated equipment. IAMC-operated hospitals contain about 22 percent of hospital beds. IAMCs lacking hospitals and diagnostic facilities contract with private facilities or other IAMCs to provide general and specialist services to members. In short, some correspond to a staff-model HMO in which all or most services are provided in a single facility. Others resemble two-tiered independent practice associations (IPAs) in which IAMCs contract a network of providers to deliver services to enrollees. Still others appear to be a hybrid of the above two models: most services are provided in a single facility but additional providers are contracted to provide services unavailable in the flagship facility.

By law, IAMCs are non-profit organizations and are exempt from national and municipal taxes. In a strict sense, the sickness fund, mutual aid society, and IAMC are often the same entity. Similar to many U.S.-based HMOs, these organizations integrate the financial and health delivery functions to provide services to enrollees. To varying degrees, they manage the cost of the care that they provide.

In theory, they bear the financial risk for the services they provide. The BSP pays a fixed capitation payment for all Social Security-enrolled members. Individuals that enroll voluntarily, e.g., those not covered by social security, face a higher premia. But even these payments are regulated. The government sets benefits and limits the ability of these entities to raise the price of premia.

6.1.2. Enrollees and Employers

6.1.2.1. Population Coverage

Statistical series exist for the BPS-insured and IAMC-affiliated populations, but estimates vary. Assessing MSP coverage is more difficult. Exhibit 6-1 presents coverage estimates by source of financing and service provision. It is difficult to estimate real coverage by type of provider for a particular funding source. As mentioned, the IAMCs have financial arrangements with both public and private institutions (e.g., MSP, BPS, SSFFAA/SSPP, parastatals, ministries, etc.). Based on Mesa-Lago's (1992) calculations, approximately 46 percent of the population has access to IAMCs through direct affiliation or through BPS financing. However, real affiliation is probably higher because of the aforementioned special arrangements with other public and private institutions. For example, based on enrollments declared by the IAMCs, Meerhoff (1990) claims 51 percent of the population was covered by IAMCs in 1990 through a variety of public, private, and social security financial arrangements.

EXHIBIT 6-1
ESTIMATES OF HEALTH COVERAGE
BY SOURCE OF FINANCE AND PROVIDER, 1987

SOURCE OF FINANCE	PROVIDER	PERCENT COVERAGE (Pop: 3,057,000)
GOVERNMENT	MSP	27.2
	BSP/IAMCs[a]	0.4
HEALTH INSURANCE		
BSP (payroll tax)	IAMCs	15.4
Individual/ Collective	IAMCs	30.8
SSFFAA/SSPP	SSFFAA/SSPP MSP[b] IAMCs[b]	10.2
OTHER[c]	PVOs IAMCs PRIVATE	3.9
UNCOVERED[d]	--	12.1
TOTAL	--	100

[a]Maternal-infant services: An undetermined number of people are provided these services in IAMCs outside of Montevideo.

[b]Outside of Montevideo.

[c]Financing can take on various forms including: employer contracts with private facilities, government contracts with IAMCs, employer-based provision, and other private arrangements.

[d]Refers to those without institutional coverage.

Source: Mesa-Lago (1992); Márquez (1989); Saldaín (1988).

The BPS (through the IAMCs) covers a greater percentage of low-income workers than most social insurance systems in Latin America. The Uruguayan have made considerable headway in extending health coverage to certain segments of the informal sector. Mesa-Lago (1992) estimates that 27 percent (26,600 people) of the BPS-insured in 1988 were "potentially" poor, including groups such as rural workers, domestic servants, and informal-sector microenterprise owners. In terms

of the economically active population (EAP), Mesa-Lago estimates that over two-thirds of all jobs were covered by the BPS in 1987, including one-third (92,300) of total non-salaried or informal-sector jobs (271,600).

6.1.2.1.1. Equity of Coverage

Despite extension of coverage to traditionally excluded low-income groups, inequities persist. Population coverage and benefit levels vary according to economic activity, age group, residence, and income.

While nearly universal insurance coverage exists for formal sector private and public employees, two-thirds of non-salaried employment is not covered. These groups include the self-employed without a fixed place of work and unpaid family members. Even within the formal sector, coverage varies considerably. For example, while nearly 90 percent of jobs in the industrial and commerce sectors are covered, only 55 percent of rural jobs and 21 percent of domestics are covered through health insurance schemes.

Children (more than three months of age) and spouses (except maternity) are not covered through BPS insurance. Workers must purchase supplemental coverage for their dependents from IAMCs or send them to the MSP for services. Some observers suggest that a significant but undetermined proportion of IAMC members are dependents of BPS-insured workers.[40]

For completeness, some groups (informal sector and domestics) not covered by the BPS Sickness Insurance Program as well as an undetermined number of dependents of BPS-insured are entitled to state-financed mother infant care at BPS facilities. Outside of Montevideo, the BPS contracts with IAMCs to provide these services to these groups.

IAMC enrollees are concentrated in the capital. For example, in 1987, although 44 percent of the population resided in Montevideo, 68 percent of total IAMC members resided there. Over 71 percent of the capital's population was affiliated with an IAMC while only 26 percent in the rest of the country. In other words, outside of metropolitan Montevideo, nearly 75 percent of the population is uninsured by BPS or unaffiliated with a IAMC.

Exhibit 6-2 presents the results of a 1982 household survey that examined institutional access to health care by income levels. Although not fully defined, institutional coverage referred to a person's membership status, or "right" to services coupled with utilization practices. The percent distribution of institutional coverage shown in the Exhibit excludes about 20 percent of the population, which were not covered by any institution. In 1982, nearly 54 percent of the population had access to IAMC services through BPS insurance or direct affiliation. Institutional coverage was directly related to income. Affiliation with IAMCs increased significantly with income. Only 34 percent of households earning at the lowest third of incomes had access to IAMCs, compared to 72 percent of the highest third.

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[40] A 1982 household survey found that nearly one-third of all children (ages: 0-14) were enrolled in IAMCs (Apezechea, et al. 1984: cited in Mesa-Lago, 1992).

Uruguay's age structure is one of the oldest in Latin America. More than 10 percent of the population is 65 years of age or older. With a median age of 33, compared to 25 for most Latin American countries, Uruguay's population pyramid resembles several European countries (Márquez, 1989). The dependency ratio of population 65 years and older to the working-age population, ages 15-64, was 17.1 in 1985 and is projected to increase to 19.5 in 2000. The aging population will place increasing strain on systems financed by the government, social security, and private sector. Although social security provides pension coverage for over 70 percent of all workers, it does not cover pensioners through the Sickness Program. They face two choices: purchase IAMC coverage on an individual basis or seek care in MSP facilities. The 1982 household survey found that the IAMCs covered 46 percent of the population over 60 years of age. Mesa-Lago suggests that during the 1980s, increases in IAMC premia coupled with a decline in the real value of pensions due to inflation probably resulted in a significant reduction in IAMC coverage of this population group.

EXHIBIT 6-2
DISTRIBUTION OF INSTITUTIONAL COVERAGE OF POPULATION BY HOUSEHOLD INCOME, 1982
(percentages)

INSTITUTION	TOTAL INSTITUTIONAL COVERAGE	BY INCOME (Thirds)		
		LOWEST	MIDDLE	HIGHEST
MSP	25	55.4	28.7	11.0
IAMCs[a]	45	33.9	53	71.8
SSFF \A/SSPP	8	5.9	12.2	11.7
OTHER[b]	2	4.8	6.1	5.5
TOTAL	80[c]	100	100	100

[a]Includes those covered directly by IAMCs and by BPS sickness program.
[b]Refers to those covered by BPS mother-infant program and public and private programs.
[c]Approximately 20 percent of the population was uncovered.

Source: Acuna et al., 1989; Apezechea et al. (1984), Cited in Mesa-Lago, 1992.

6.1.3. Managerial Characteristics

6.1.3.1. Benefits and Premiums

The BPS-administered Sickness Program provides comprehensive coverage of preventive, ambulatory, and inpatient services, including medicine. Exclusions include elective plastic surgery, ambulatory psychiatric care, and dental services (except extractions). Expensive high-technology procedures are also excluded but, as noted in Section 6.1.1, are covered through the IMAE-based insurance program. As explained above, children older than three months and spouses are excluded from BPS sickness benefits. Some are covered through the government-financed mother-infant program administered by the BPS.

In general, benefits provided to BPS-insured as well as individual and group enrollees are standardized. To a lesser extent, premia levels (and user fees) were also regulated. Since the mid-1980s, the government has moved to deregulate the sector in a piecemeal fashion, resulting in greater variation in premium and benefit levels for individual IAMC enrollees. However, some price regulation may still exist through the government's Price Control Directorate. Before the 1992 changes, controls were imposed for premia paid by individuals, mutual aid societies, unions, and employers. The MSP continues to define a basic service package. Despite some negotiation between the IAMCs and the BPS, the latter's capitation payments to the former vary little. (*See Section 6.1.5.*).

6.1.3.2. Cost Containment

IAMCs receive relatively the same total capitation payment for each BPS-insured member. Also, they charge the same premium for each individual and collective enrollee-regardless of the enrollee's age, the IAMC's unit costs, or the amount of services provided. In theory, the IAMCs should compete for these two segments of the market. They have an incentive to reduce high-cost utilization or keep members healthy to lessen future service demand. However, although no study has examined this issue, it appears that many IAMCs lack effective cost control measures. Márquez (1989:50) summarizes the findings of an exploratory study of IAMC cost controls:

> The IAMCs' income is fixed but volume of services varies greatly; they have not been able to control utilization, to rein individualistic clinical behavior, to prescribe and enforce diagnostic and treatment standards.

Part of the problem may rest with physician compensation systems. In a study of the physician labor market, Meerhoff (1988) found physician compensation takes on two dominant forms in IAMCs: salary (69 percent of physician income) and flat rate fee system (20 percent of income). The latter relates to the payment of flat fee per physician-patient contact, regardless of the service provided. This system provides an incentive to the physician to stimulate often unnecessary utilization. For example, it is common knowledge that physicians paid through this system direct patients to return for an office visit to renew a prescription, often called "milking the prescriptions."

Meerhoff also found that most IAMC physicians work for two or more IAMCs (28 percent work for three or more)[41] to maximize their income from salaried employment. (Most also have private practices.) In addition to work-shirking, we can hypothesize that multiple employment results in costly utilization patterns through superficial examinations, high use of diagnostic services, poor continuity of care, etc. Moreover, since salaries vary considerably, the lowest paying IMACs probably have greater difficult controlling physician behaviors. A number of the cooperative IAMCs have introduced cost containment measures including: prior authorization, second opinion surgery, copayments, etc. Further study is needed to examine the effects of these measures on utilization patterns.

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[41] Accounting for public and private sector positions, physicians average 2.7 employers and over 40 percent of physicians have three or more jobs.

Finally, although copayments were introduced in the 1970s to deter excess utilization,[42] in the 1980s, some IAMCs reduced or eliminated copayments as a market strategy to attract new members. Others offered supplementary services at no additional cost to the enrollee. Thus, any revenue gains from increased volume of enrollees probably was offset by losses due to higher utilization.

Other factors may affect the financial viability IAMCs. First, although the IAMCs promote the notion of consumer free choice as stimulating competition among the IAMCs, it is unknown the degree to which they actually compete for clients. While enrollees are free to elect and change IMACs, many IAMCs are affiliated with professional associations and mutual aid societies. The latter are closely linked to occupational, religious, and ethnic groups. Members may be informally obliged or channeled to specific IAMCs. For workers living outside of the capital, affiliation often depends on place of residence. Only 18 IAMCs serve the 17 interior states.

Second, the country's aging population increasingly strains the financial status of the IAMCs (Meerhoff, 1992). Uruguayans 65 years of age and older are expected to represent over 12 percent of population in 2000, compared to 10.7 and 8.9 percent in 1985 and 1970 respectively. IAMCs with a greater proportion of members in this age group face higher costs.[43]

6.1.4. Relations With Providers

As providers, they are at risk to deliver the legally mandated comprehensive package of services either through their own network of physicians and facilities or through contracts with others. As suggested earlier, it appears that most IAMCs do not place the facilities or physicians at risk for the services delivered to IAMC enrollees. All IAMCs operate at least one outpatient clinic, and salaried employment of physicians is the dominant compensation system in these facilities. Salaried compensation of certain categories of physicians is also common in IAMC-operated hospitals.

Approximately half of the IAMCs do not operate inpatient facilities. Rather, they contract with private hospitals, physician groups, and solo practitioners to provide general and specialist services to enrollees. Little information exists on how IAMC pay hospitals and other institutional providers.

The IAMCs that are physician-owned cooperatives present another case in point. Since the law stipulates that all IAMCs are non-profit organizations and thus no annual surplus can be shared with providers, the cooperatives may have little leverage with their physician owners to contain costs. Apparently, their organizational objective is to channel a large volume of patients to their network of physician-owners. However, since income is fixed in accordance with

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[42] In 1985, user fees for ambulatory services were US $1 for a medical consultation, US $.50 for a prescription, and US $2.50 for a home emergency visit (Solari, 1985).

[43] A 1987 study of utilization patterns of the country's largest IAMC, Centro de Asistencia del Sindicato Médico, found that although 12 percent of affiliates were 65 years of age or older, they consumed 24, 31, and 28 percent of ambulatory medical visits, drugs, and diagnostic tests respectively. This age group also represented 32 percent of hospital discharges (Meerhoff, 1987).

the number of enrollees, probably some utilization control exists, or fees charged by providers are sharply discounted.

Scarpaci (1990) maintains that the IAMCs and their providers disregard their inefficiencies and lack of cost containment, and pass on their rising costs to the enrollees in the form of yearly increases in copayments. After government eliminated fixed and uniform premia and capitation payments in the early 1980s, the IAMCs also have negotiated large increases in premia and BPS capitation payments. For example, between 1982 and 1985, the real value of IAMC premia increased by 28 percent in Montevideo.

6.1.5. Financing and Expenditures

6.1.5.1. Financing

The main source of financing for the IAMCs are capitation payments paid by the BPS and premia contributed by individual and collective enrollees. Meerhoff (1989) reports that these sources represented 84 percent of IAMC income in 1987, while user fees and contractual arrangements represented seven and eight percent of revenues. Enrollees usually face copayments at the point of service for certain ambulatory services. However, as mentioned earlier, these payments may be subject to price controls or sometimes are waived by individual IAMCs. In 1987, the average per member income for IAMCs in Montevideo and the Interior was US $11.50 and US $8.90, respectively. No data were available on total revenues of the IAMCs.

The BPS collects a seven percent payroll tax to finance the health program. Three percent is paid by the employee and the remainder by the employer. To facilitate the entry of low-income groups into the BPS, the contribution rate is lower. For example, the contribution base for domestics is 85 percent of the national minimum salary. The BPS has contractual arrangements with most of the country's IAMCs to provide services to BPS-insured.

BPS capitation payments to IAMCs are based on a complex formula that in turn is based on IAMC-supplied fee schedules. The BPS pays less per capita insured than the per capita premia charged to individual or collective enrollees. Although little information is available on the BPS reimbursement system, one source maintains that the BPS pays no more than the average premium per enrollee across all IAMCs, often on a retrospective basis. (Meerhoff, 2/28/92). Because of the comparatively low BSP payment, an undetermined number of IAMCs that market to higher income groups (and charge higher premia) illegally screen potential members to minimize the number of BPS-insured enrollees.

6.1.5.2. Expenditures and Financial Equilibria

Exhibit 6-3 shows the distribution of health expenditures by subsector. Expenditures for health services in IAMCs represent nearly 40 percent of total expenditures. However, as noted earlier, IAMC services are also financed through SSFFAA, SSPP, and special arrangements with parastatals and large companies. In short, the IAMCs probably represent a greater proportion of total expenditures than indicated in the table. For example, Acuna, et al. (1989), estimate that

IAMCs represented 55 percent of all expenditures in 1986, while the public sector spent 33 percent.

BPS expenditures for medical care under the BPS-administered Maternal-Infant and Sickness Program represents a low five percent of total social security expenditures. Expenditures for pensions represent about 83 percent. Approximately 86 percent of Sickness Program expenditures are for IAMC reimbursement. Between 1982 and 1987, the Sickness Program registered a deficit, increasing from 5 to 32 percent of revenues (five to 25 percent of expenditures) (Saldaín, 1988). The deficit can be attributed to expansion of BPS coverage to lower-income groups, rising health costs at IAMCs, and employee and employer evasion of BPS registration and contribution. The deficit is financed through direct government transfer that are in turn financed from general revenues and a sales tax. Since the BPS only covers 16 percent of the population, mostly middle-income, private-sector employees, the government contribution has a regressive effect. However, Mesa-Lago cautions that, since 1984, BPS has incorporated low-income informal sector groups and in 1987 it abolished salary ceilings ("topes") in setting the contribution rates. Consequently, the regressivity probably has decreased.

EXHIBIT 6-3
DISTRIBUTION OF TOTAL HEALTH CARE EXPENDITURES BY SUBSECTOR, 1985

PROVIDER	PERCENT DIST.
PUBLIC SECTOR	
MPH	15.1
SCHOOL OF MEDICINE	3.7
OTHER	1.7
ARMED FORCES/POLICE	
SSFFAA	4.6
SSPP	1.6
REGULATED PRIVATE:	
IAMCs	13.0
BSP-financed	26.5
Individual/collective	
PRIVATE FOR PROFIT[a]	30.3
TOTAL	100

[a]Probably includes some IAMC expenditures for services provided to members of unregulated insurance plans.

Source: Meschani de Roitman (1987); cited in Márquez (1989).

The government also subsidizes the financing of health care provided by the SSFFAA, SSPP, and parastatal agencies. The two former institutions contract services to IAMCs outside of Montevideo. Parastatals provide coverage to their employees through a variety of modalities: direct service provision, contracts with IAMCs, and reimbursement of fees provided at IAMCs. In 1982, only 12 percent of employees in parastatals and military personnel were in the lowest quintile of family income, while 40 percent fell into the highest quintile (Mesa-Lago, 1989). By way of comparison, during that same year, 54 percent of MSP users were in the lowest income quintile.

Between 1981 to 1987, 31 (of 80) IAMCs closed in part because of changes in government regulations. For example, IAMCs will less than 20,000 members had to close or merge with others. Many chose the latter option. Further, if total IAMC membership in any interior state were greater than 20,000, the IAMCs mandated to merge. In addition, an undetermined number of IAMCs went bankrupt. It is difficult to tease out the causes of the large number of bankruptcies. They were probably the result of a combination of factors: price regulation, economic crisis, and inefficiencies.[44] Between 1968 and 1984, premia were frozen by the government on more than one occasion. Some IAMCs charging lower premia at the time of the imposition of these controls were forced out of business. Since late 1984, prices were allowed to rise according to a price index. The premia increases after 1984 combined with an economic downturn induced a 6 percent decline in IAMC affiliation in 1985. Since that time, however, the expansion of BPS coverage has resulted in increases in affiliation.

6.1.6. Utilization

Data on utilization of IAMC services is sparse. However, consonant with previous discussion of inefficiencies, weak cost containment measures, and overconsumption of medical services appear to plague the IMACs. Lack of control of physician practice patterns is a serious problem. In 1985, IAMCs reported an average of 5.4 medical consultations per enrollee. By contrast, the MSP reported 2.4 visits per person. The Pan American Health Organization recommends an average of two consultations per person per year. A study of utilization patterns in 1988 of the largest IAMC, CASMU, recorded high per-enrollee outpatient utilization rates during a 12-month sample period: 7.9 medical visits, 11.5 drugs, and 3.4 diagnostic exams (Meerhoff and Rigoli, 1992). The authors estimated the average per enrollee cost for outpatient care alone was US $95 during the study period. Enrollee yearly premia payments were approximately US $120.

6.1.7. Synthesis and Topics for Further Research

Uruguay has achieved nearly universal population coverage for health care. The country's health care institutions developed in a fragmented manner since the founding of mutual aid societies in the mid 1800s. By the 1960s, Uruguay had a number of fully developed institutions that were financing and providing health care to a large segment of the population. The distinguishing characteristics of the Uruguayan health sector are the high degree of insurance coverage and the predominance of the social security-financed indirect service delivery modality. Currently, over 60 percent of the population is covered through a variety of insurance schemes that link private providers to individuals, groups, employers, social security funds, and public programs. Delineating these often overlapping linkages is no easy task.

Unlike most social security health care programs in developing countries, workers covered by the Uruguayan Social Security Fund (DGSS) select the provider of their choice through enrolling in an IAMC. IAMCs are perceived to provide higher-quality care, and most Uruguayans would prefer receiving medical attention

[44] The elimination of nearly 38 percent of IAMCs during the 1980s may have been beneficial to the IAMC sector in terms of reducing the duplication of facilities and services, especially in Montevideo.

in IAMCs than in MSP facilities. However, due to the lack of information of costs, utilization, and quality of care—at least what is available from secondary sources—it is difficult to assess the IAMCs or identify lessons learned from the BSP-IAMC partnership.

In addition, Uruguay may represent an atypical case in developing countries. As suggested, the emergence of the indirect service pattern is related to the historical development of the health sector and predominance of mutual aid societies. Moreover, coverage extension was facilitated by a number of factors atypical of many developing countries. For example, Uruguay is a relatively well-off, middle income country (per capita GNP US $2,620); has the second lowest incidence of poverty in Latin America (20 percent); is highly urbanized (85 percent of the population), and compared to most developing countries, contains a small informal sector (20 percent of the economically active population), or conversely, has a high percentage of salaried workers (Mesa-Lago, 1992).

Despite these caveats, the Uruguayan experience may present some important lessons for countries seeking extension of social security and state-financed health coverage through the private sector. The following issues merit further study:

- It is generally accepted that the *direct* service delivery pattern, the approach embraced by most social security and government-financed health care systems in developing countries, fosters low quality of care, inefficient service delivery, moral hazard, and ultimately, high costs. However, relatively little is known about the advantages and disadvantages of the *indirect* approach represented by the BSP-IAMC linkage in Uruguay. Does it contribute to greater patient satisfaction, more efficient service delivery, and lower costs than direct service systems? Comparing these elements across a sample of services and patients in IAMCs and in BSP and MSP direct service systems would provide the information to assess the advantages and disadvantages of the two delivery modalities.

- As suggested earlier in this case study, IAMCs face an uncertain financial future. An aging population combined with inefficiencies, price controls on premia, and lax application of copayments may contribute to financial difficulties. An in-depth analysis of utilization, demographic characteristics of enrollees, administrative costs, etc. of a sample of IAMCs would tease out the effects of these factors on these organizations' financial equilibria. A related study would be to compare how the different physician compensation systems (e.g., flat fees, salaries) affect utilization management and the cost of service provision.

- Through the BSP, IAMCs provide services to a small segment of the informal work force. To be sure, the BSP-administered program represents one of the few attempts by a social security institution to cover informal sector groups. Nevertheless, whether the BSP-IAMC partnership can serve as an extension mechanism to other informal sector groups is unknown. Mesa-Lago (1992) and Saldaín (1988) maintain that the IAMC premia are too high for direct coverage of informal sector groups. Even for low-income workers (formal and informal sector) covered by the BSP, an undetermined number cannot afford to purchase IAMC supplementary coverage for their families.

Furthermore, Mesa-Lago (1992) suggests that low contributions of these groups combined with the difficulty of collecting the payment may contribute to the growing deficit of the BSP-administered medical program. (The BSP requires a yearly government subsidy to cover the deficit.) A study assessing the coverage of informal sector workers can address the following questions: What are the collection, administration, and service costs of providing health care to informal sector workers? What percent of the BSP Medical Care Program deficit does this coverage represent? How can evasion of contributions be minimized? What type of worker-BSP-government cost-sharing mechanism is feasible to enable low-income BSP enrolleess to afford the cost of family coverage?

6.2 CASE STUDY #14: HMO AS SOCIAL SECURITY SUBSTITUTE: PUBLIC - PRIVATE COLLABORATION IN THE DOMINICAN REPUBLIC - SEGURO MEDICO PARA MAESTROS[45]

In 1985, the Dominican Teachers Union (ADP), together with the Ministry of Education, Fine Arts, and Culture (SEEBAC), formed Seguro Medico Para Maestros (SEMMA) to provide medical services to the country's primary and secondary school teachers. SEMMA was the product of a collective agreement between the government and the ADP. At that time, the government had offered the teachers health coverage through the Dominican Social Security Institute (IDSS). Because of the perceived low quality of care, meager coverage of dependents, and concentration of facilities in large cities, the teachers rejected IDSS subscription.[46] Instead, they preferred access to higher-quality services through contractual arrangements with private providers. Interestingly, the ADP threatened to strike if the government moved to enroll them in IDSS. The final agreement called for the creation of an Iguala (SEMMA) managed by the ADP in coordination with SEEBAC.

This short case study focuses on the SEMMA experiment in 1990, its fifth year of operation. It focuses on organizational characteristics, managerial features, and provider relations. No data were available on SEMMA income and expenses. Utilization rates of enrollees were also unavailable.

Pointing to its relatively comprehensive coverage, low costs, and popularity among enrollees, both ADP and SEEBAC officials maintain that SEMMA represents an effective approach to health care financing and delivery. Indeed, some SEMMA representatives claim that the insurance scheme delivers higher-quality health care at a lower price to the government than would have been the case through the IDSS. They attribute SEMMA's performance to its innovative financing mechanism in which the financial risk of health service delivery is shared among enrollees, government, and private providers. Before turning to the specific features of the SEMMA insurance scheme, a brief discussion of the characteristics of Dominican Igualas is in order.

Igualas Médicas are private HMO-type companies that combine the financing, organizational, and health delivery functions to provide comprehensive services to enrollees. Essentially, they are prepaid plans that to varying degrees manage

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[45] La Forgia (1990) and other data collected by the author are the sources for this case study.

[46] In 1987, the IDSS covered approximately five percent of the population.

the care they finance. As prepayment systems, they cover certain future events. In other words, payment of the premium entitles the enrollee to a specified quantity of services (e.g., number of outpatient visits, bed days, etc.) during a stipulated time period. In contrast, traditional insurance schemes that emphasize catastrophic coverage are based on the probabilities of "unknown" future events. "Iguala" refers to the "equal" monthly fee contributed by (and shared between) employer and employee in return for a predetermined package of services. Igualas generally offer more comprehensive coverage for a lower premium than indemnity health insurance companies operating in the Dominican Republic. Many were founded during the late 1960s and early 1970s as a response to physician oversupply.

Igualas tend to market group plans that are sold to relatively small and mid-size private companies, and to a lesser extent, to large parastatals. In 1990, there were over 20 Igualas in the Dominican Republic providing services to approximately 500,000 subscribers, or about seven percent of the country's population.

With few exceptions, the Igualas are not profit-oriented enterprises. They are established by physicians for physicians. Igualas provide the financial mechanism that makes private health services affordable to a greater number of Dominicans than traditional fee-for-service practice. The organizations' main business objective is to channel a relatively large volume of patients to a single facility, or more importantly, to a closed network of affiliated owners. Most Igualas have small administrative staffs and seek to cover fixed cost.

6.2.1. Institutional Description and Population Coverage

Exhibit 6-1 illustrates the financial and service delivery structure of SEMMA. Seventy-five percent of the premium payment to SEMMA is contributed by the government while the remainder is deducted from teacher salaries. SEMMA does not own or operate facilities. In 1990, it contracted with over 60 facilities located throughout the country to provide general and specialist services to enrollees. All contracted facilities are located in urban centers. In Santo Domingo, the nation's capital, four facilities (and associated medical groups) are under contract with SEMMA. According to SEMMA regulations, each teacher must enroll in only one facility where she (and her family) receives all medical care. SEMMA tends to contract facilities that operate an Iguala or at least accept enrollees from other Igualas. Nevertheless, it is important to note that SEMMA does not contract with other Igualas in order to gain access to a wider provider network. Rather, it contracts private hospitals that possess the institutional capacity to provide enrollees with the services stipulated by and affordable to SEMMA.

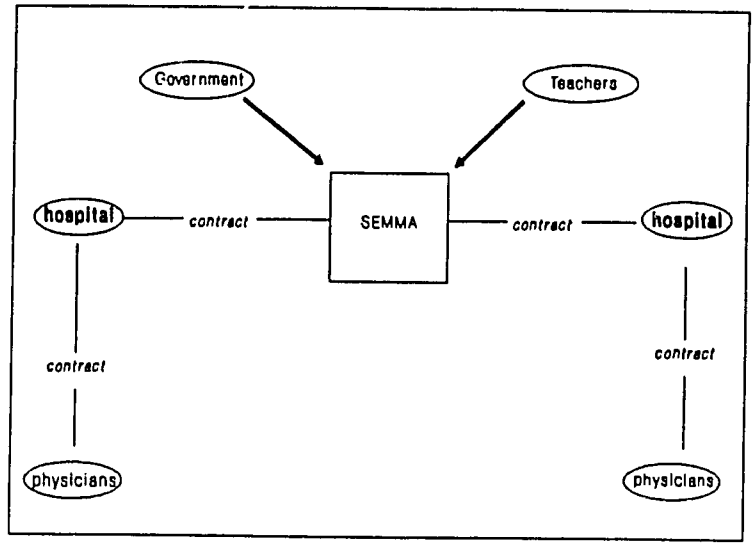
In 1990, SEMMA's enrollment reached over 103,000 teachers and dependents. Spouses are covered as well as dependents until 18 years of age. Retired teachers receiving a pension through SEEBAC also are covered, but lose coverage if they accept private or public employment (other than from SEEBAC). For a small monthly surcharge, survivors of deceased teachers can maintain their membership in SEMMA.

In the Dominican Republic, public school teachers do not represent a privileged segment of the labor force. Teachers' wages are significantly lower

than most types of salaried employment. For example, teachers earned RD $500 monthly in 1990. In contrast, the minimum wage for private sector workers was RD $700. Moreover, before the advent of SEMMA, teachers enjoyed few benefits, exemplified by their exclusion from IESS, which covers most private sector salaried workers. A Dominican economic research center determined that in 1990, RD $733 was the minimal monthly income needed to permit a family of five to avoid a situation of "extreme poverty" (CIECA, cited in Isla, 1990).

EXHIBIT 6-4

SEMMA: FINANCING & SERVICE DELIVERY STRUCTURE



6.2.2. Managerial Characteristics

SEMMA offers comprehensive coverage of outpatient and inpatient services. However, utilization ceilings and copayments are common for many services. Exhibit 6-2 compares SEMMA with other Igualas for selected services. Similar to most Igualas, SEMMA limits outpatient medical visits (12 per year) and does not cover medicines, dental care, and routine preventive check-up. Simple or "routine" laboratory and radiology tests are covered in full, but more "sophisticated" exams (e.g., T4, IgA, and x-rays with contrast media) require a 50 percent copayment.[47] Other diagnostic tests such as sonography, EKG, and Endoscopy also require a 50 percent copayment. In 1990, most routine tests costs RD $25 while "sophisticated" tests could cost from RD$100 to $500. In short, outpatient diagnostic services could require a substantial out-of-pocket copayment by SEMMA enrollees. Nevertheless, the percent copayment often is applied to a discounted price that is negotiated between SEMMA and the facility. Well-baby check-ups and immunizations are covered within the 12-visit utilization ceiling. Yearly PAP smears are fully covered.

[47] Tests that are fully covered and those requiring copayments are stipulated in the enrollee's manual.

EXHIBIT 6-5
PREMIUMS AND BENEFITS FOR SELECTED IGUALAS, 1990

	ADSME	GMA	GMC	SDS	SIMAG	SML	SEMMA
MONTHLY PREMIUM (a)	$35 p/p	$35 p/p	$40 p/p	$78 p/p	$45 p/p	$60 p/p	$24 p/p
OUTPATIENT SERVICES							
MAX. NO. OF VISITS P/YR.	15	12	12	15 ($5 copay.)	15 ($5 copay.)	unlimited	12
MEDICINES	not covered	not covered	not covered	not covered	not covered	not covered	not covered
EMERGENCY(c)	FC	FC	$75 p/visit ceiling	FC	FC	$600/yr ceiling	FC
LABORATORY	$400/yr ceiling	"routine": FC others: 50% copay.	$500/yr ceiling	$500/yr ceiling (w/ 20% copay.)	FC except for "complex" tests	$1,000p/yr ceiling for all diagnostic tests	"routine": FC others: 50% copay.
X-RAY	$400/yr ceiling	" "	$500/yr ceiling	" "	" "		" "
INPATIENT SERVICES							
MAX. NO. OF BED-DAYS P/YEAR	31	60	30	unlimited	45 ($300 deductible p/case)	unlimited	5 per case
USE OF OPERATING ROOM	$250 ceiling p/case	FC	$2,000 ceiling	FC	FC	FC	FC except for "complex" surgeries
ANESTHESIA	FC	FC	includes all hospital care	FC	$1,000 ceiling p/case	FC	FC
MEDICINES	$600 ceiling p/case	FC except for "complex" chemotherapies	" "	$100 p/bed-day 50% copay. above $100 max.	" "	$500 p/yr ceiling	FC

Note: All figures in RD pesos: RD $7.28=U.S. $1 (7/90).
Note: FC means FULL COVERAGE (no restrictions and no charge).
(a) As of July, 1990.
(b) SEMMA capitates providers at RD $12 per enrollee.
(c) Includes physicians' services, medicines, and consumables. Copayments are applied to discounted prices.
Source: La Forgia, 1990

SEMMA provides full coverage for inpatient and maternity services in semi-private rooms. There is a five-day length of stay limit per admission. Inpatient medicines are full covered. Similar to outpatient diagnostics, a 50 percent copayment is applied to inpatient tests that are deemed "sophisticated" by SEMMA. Certain "expensive" surgeries (e.g., some ophthalmological and cardiovascular procedures) require a significant copayment. The enrollee's contribution is negotiated with SEMMA on a case-by-case basis. If a sizable copayment is required, SEMMA may cover all or part of it but then the enrollee repays SEMMA through additional salary deductions. Other procedures are not covered. SEMMA provides full maternity coverage but does not cover maternity for enrollees under 19 years of age or for unwed women.

In 1990, SEMMA's monthly premium was approximately RD $24 per enrollee. The teachers pay approximately RD $6 per person. There was no premia discount per additional family members. Thus, for a family of four, RD $24 was discounted from a teacher's salary. The remainder (RD $45) was paid by the government. As shown in Exhibit 6-2, this amount represented half the premium price charged by most Igualas. For this relatively low premium, the enrollee received a comparable package of services, albeit with higher copayments, more limited choice of providers, and greater restrictions on utilization.

As mentioned, copayments are the principal cost-control mechanism utilized by SEMMA. These are applied to more expensive diagnostic tests and to some surgical procedures. To a lesser extent, costs are controlled through SEMMA-imposed limits on bed-days and outpatient medical visits. Upon enrollment, SEMMA requires a one-month waiting period before a member can receive medical care. The policy excludes a large number of conditions. In addition, the following treatments are not covered: physical therapy, rehabilitation surgery, and any non-surgical treatment of cancer. An enrollee can be referred to another SEMMA-contracted facility for certain services unavailable in his designated facility, but all referral must be reviewed and approved by SEMMA.

6.2.3. Relations With Providers

Unlike other Igualas, SEMMA does not directly contract or receive claims from physicians. Rather, it capitates affiliated facilities and total payments depend on the total number of enrollees. In 1990, capitation rate was RD $12 per enrollee, half the per capita premium rate (RD $24). The remainder went to administrative costs, reserves, and expenses related to services not covered (or partly covered) by the regular benefit package.

SEMMA places the facilities at risk to provide the services stipulated by contract. Physician compensation systems vary among facilities. Most SEMMA-contracted facilities pay physicians, usually specialists, on a fee-for-service basis. Some combine fee-for-service with salaried employment. In no case do the facilities capitate physicians or physician groups. Fee schedules and wages are negotiated between facility directors and the physician group and solo practitioners associated with the facility. The capitation or premium payment is usually the result of a tripartite negotiation: government (SEEBAC), teachers (ADM), and facilities.

What makes SEMMA attractive to some facilities is its large volume of members. For others, however, the low capitation payment makes it equally unattractive. Several facilities have refused to renew their SEMMA contract because the cost of service provision to enrollees increasingly exceeds revenues. For example, in 1989 one large Santo Domingo facility cancelled its contract with SEMMA, claiming that they could not deliver the services stipulated in the contract for the premium. SEMMA officials claim that the cancellation stemmed from two factors: (1) physicians affiliated with the facility's demanded higher (fee-for-service) compensation than the low SEMMA premia would permit, (2) the facility's inability to control utilization, and (3) many enrollees transferred their membership to other facilities because of perceived "second-class" treatment by facility specialists.[48] Anecdotal evidence suggest that inefficient management of service delivery was a key reason for the facility's inability to contain costs. For example, enrollees were given direct access to specialists and few controls existed on the latters' clinical decision making regarding diagnostic exams, hospital admissions, and inpatient medicines.

Other facilities have profited from SEMMA affiliation. Their performance stems from efficient utilization management, perceived high quality of care, large volume of enrollees, and relatively low physician compensation. This is the case of Santo Domingo's Alcántara and González hospital (HGA), which enrolled nearly 30,000 teachers and dependents in 1990. In that year, the majority of teachers working in metropolitan Santo Domingo subscribed to HGA. HGA directors reported 1989 profit representing about 40 percent of SEMMA revenues. SEMMA officials maintain that a facility needs at least 1,000 enrollees to break even. However, they produced no data to support this assertion.

HGA established a referral system that controls and monitors SEMMA enrollee access to specialty, diagnostic, and inpatient services. For example, HGA has hired several general practitioners to attend to SEMMA members. These salaried employees are the insured's first contact with the facility. Moreover, any referral to specialists or non-routine diagnostic exams must be approved by a medical supervisor. Unlike all other Igualas, HGA does not permit direct access to specialists who are paid on a fee-for-service basis.

Fees paid to specialists who attend SEMMA enrollees in HGA are generally 50 percent lower than fees paid by other Igualas. For example, the 1990 fee schedule paid specialists RD $15 for an outpatient visit, $250 for a normal birth, $250 for an appendectomy. Most other Igualas paid at least double for the same services. SEMMA officials claim that HGA is the most popular facility contracted by SEMMA, and there have been few complaints concerning service and quality.

Although strong competition exists among Igualas to obtain group plans with private firms, whether private facilities compete for SEMMA enrollees is an open question. As suggested, a growing number of facilities do not accept SEMMA, claiming that the capitation payments are too low. To be sure, in 1990, even HGA

[48] Many physicians resent the Igualas for the discounted fees they demand for affiliation. There is a tendency to price-discriminate, providing cursory treatment to the Iguala patients or requiring longer waiting time (until all full-pay patients are attended).

was pressuring SEMMA for either a substantial increase in the capitation rate or a change in the compensation system. HGA sought to eliminate the capitation system in favor of fee-for-service reimbursement.

6.2.4. Synthesis and Topics for Further Research

SEMMA provides an example of an innovative pre-payment scheme to extend services to uncovered groups. Public-private financial collaboration together with effective but low-cost service provision are the key to SEMMA success. Without the government contribution, it is unlikely that the teachers could afford the premium. It is important to note that employers pay from 50 to 100 percent of premia for employees enrolled in most Iguala plans.

SEMMA appears to offer a higher quality product at a lower price than the IESS. For example, Duarte, et al. (1988) estimated that in 1987, the IESS spent US $48 per affiliate on medical services alone—not including administrative costs. In 1990, per capita outlays for SEMMA were approximately $40, but this figure includes total costs (for capitation payments, administration, special benefits, etc.). Although IESS coverage is more comprehensive and includes tertiary several services not included in the SEMMA benefit package, teachers perceive SEMMA to offer higher quality services. To be sure, few teachers desire IESS coverage.

The SEMMA model requires the existence of HMO-type organizations, or at least a well-organized group practice whose members are familiar with cost-containment methods, particularly utilization management. The most successful SEMMA-affiliated facilities are those that operate their own Igualas or have ample experience providing service Iguala enrollees. The HAG gatekeeper requirement coupled with referral protocol are examples of effective cost-management practices. At the same time, SEMMA-affiliate facilities are concerned about providing high quality of care, in part to attract new members or maintain high levels of membership.

An interesting research topic would be to analyze the organization of the service delivery system for a number of providers that accept SEMMA enrollees. How do these providers differ in terms of selection of physicians, reimbursement systems, and utilization management? Are there perceived differences in quality among enrollees? What are the factors that influence a teacher's selection of a provider?

Another issue of relevance is whether a SEMMA-like model can be used to extend services to other groups, particularly in the informal sector. Rather than subsidize generally low-quality, inefficient direct service systems, the government can explore financing health care for low-income groups and individuals through an Iguala arrangement This would require the identification of an appropriate grouping mechanism to create a sufficiently large risk pool to attract the interest of Igualas. Microenterprise lending associations provide such a vehicle. A research project could test and implement one or more models with corresponding benefit packages, utilization limits, and restrictions in which these groups are linked with one or more Igualas. As in the case of SEMMA, financing can shared between the government and the enrollees.

6.3 CASE STUDY #15: PHILIPPINE MEDICARE-HMO TIE-UP

6.3.1. Institution

The Philippine Medicare-Health Maintenance Organization (HMO) tie-up is an experimental project linking social and private health insurances. For some time, the government's Medicare system has sought to increase customer benefits, especially to extend coverage to outpatient services, but has been unable to do so. The coverage of outpatient services requires some form of managed care network with controls for utilization and experience with health delivery systems Medicare does not possess. However, HMOs are private companies that contract with health facilities and providers, usually at discounted rates, to provide medical services to their members. Through control of affiliated providers, emphasis on preventive care, and discounted rates, HMOs provide health care services at lower costs than other insurers. A tie-up contract between Medicare and HMOs offers increased health benefits to members and providers without increased premiums. The tie-up introduces to the Philippine health insurance market an insurance plan with a low level of outpatient benefits, thereby increasing choice for consumers and competition between standard Medicare, regular HMO, and tie-up programs.

This experimental link between Medicare and HMOs was conceptualized in 1987 by the Philippine Medical Care Commission (PMCC), the supervising body of the Medicare system. 15 HMOs were invited to participate in the tie-up. In September 1988, formal agreement was reached between Medicare and the first HMO member, HealthKard. Eight months later, Pamana became the second of two HMOs in the tie-up scheduled to run for 2 1/2 years, ending in February 1991.

Medicare is administrated by two social security agencies. The Social Security System (SSS) serves private sector employees and the Government Social Insurance System (GSIS) serves public sector workers. SSS and GSIS collect Medicare premiums and remit the contributions of voluntary tie-up members to their respective HMOs. The tie-up is overseen by a coordination committee representing the HMOs, the SSS and GSIS, and the PMCC. Together, members work out problems and submit recommendations to the PMCC Board.

6.3.2. Membership

6.3.2.1. Eligibility and Participation

Workers eligible to participate in the tie-up include all Medicare enrollees living and/or working in metro Manila or working in branch offices of metro Manila-based companies. A member must have made contributions to the Medicare system for at least three of the previous nine months. As long as applicants fulfill the requirements above, the HMOs cannot reject Medicare members who wish to enroll.

Initial and subsequent quarterly validation of tie-up memberships are reviewed by SSS and GSIS. The Medicare systems give priority to the initial validation, which on average takes from two to four months. Thus, quarterly validations are even further delayed. If a member is not validated in a

subsequent period but receives medical care during that period, the cost of claims is shouldered by Medicare up to the level of regular Medicare benefits.

By August 1990, there had been 173,469 applicants (excluding dependents) for the tie-up program, revealing a level of customer interest unanticipated by Medicare or the participating HMOs. At the same time the program had 85,384 verified primary members or 254,299 members and dependents. Fifty-six percent of dependents are children below age 15. Sixteen percent of dependents are over age 60. Given there were approximately 2.23 million Medicare members in metro Manila, membership in the experimental program represented 7.8 percent of the eligible population. Roughly 64 percent of the members were affiliated with Pamana. Overall, member retention rates were very high. The percentage of active tie-up members who withdrew from the program was one percent (PMCC, 1991).

6.3.2.2. Marketing the Tie-Up

The participating HMOs are responsible for selling the tie-up program to Medicare members. Usually this is done through the personnel offices of employers. Pamana uses a separate sales force paid a salary rather than commission to promote membership. HealthKard uses its regular sales force, paid on commission. There is little financial incentive to sell the HealthKard tie-up as commissions are contingent on the remittance of premiums, which are delayed by SSS and GSIS. The target market for tie-ups consists of big, labor intensive companies. Pamana and HealthKard also target government employees and public school teachers. 47 percent of firm participants in the tie-up are from the manufacturing sector, 11 percent from government, and six percent from retail. Only five percent of the members are affiliated with the tie-up as individuals (PMCC, 1991).

Younger and healthier people enroll in the tie-up while the sickly remain in the regular Medicare program. The age of the typical tie-up member is 33 years, with 2/3 of all participants under the age of 34. As most members are young, they have few dependents, 1.2 on average. The HMO tie-up is offered to workers who are least at risk of illness. This means the healthy do not subsidize the sick, because the sick are not targeted for membership. In addition, catastrophic cases are reverted to the regular Medicare program after their initial servicing by the HMOs. The sickest members of the tie-up end up being served by Medicare (PMCC, 1991).

6.3.3. Management

6.3.3.1. Benefits

The Medicare-HMO tie-up offers customers a little more hospitalization coverage than Medicare and some outpatient services, though fewer than the regular HMO program. Unlike Medicare, HMOs provide free and unlimited physician consultations and routine dental care as outpatient benefits. For a comparison of Medicare and tie-up benefits see Exhibit 6-3. HMOs try to encourage primary and preventive care which can, over time, reduce the demand for more expensive curative care.

The support value (share of expenses paid for by the tie-up) for inpatient benefits is 33 percent, compared to 30 percent for the regular Medicare program (PMCC, 1991). The support value under the experimental program is higher than Medicare's for all diagnostic groups (ordinary, intensive, catastrophic) and for all levels of care (primary, secondary, tertiary). However, the support values of both the regular Medicare program and tie-up program are relatively low. Private consumers in the Philippines must pay the majority of their health care costs.

6.3.3.2. Cost-Control Measures

HMOs are for-profit institutions. They have developed an advanced system of cost control. However, closely monitoring medical care costs requires increased management and administrative expenses. The tie-up project is characterized by low utilization of funds for medical services and high marketing and administrative expenses.

HMOs keep costs low by using salaried staff and practitioners, owning their own health care facilities or using others at negotiated rates, engaging in a variety of services which allows for economies of scale, targeting their members, and monitoring for eligibility and fraud. Tie-up members must use an affiliated provider in an affiliated facility to enjoy full benefits. The patient must be referred for hospitalization through the proper network. Before entering an affiliated hospital, tie-up members must go to their HMO office to secure a letter of authorization for admission, in addition to their patient ID card. (However, the HMO must cover a tie-up member's expenses even if the member does not obtain authorization prior to hospitalization.) On entering the hospital, all members must pass through a gatekeeper. The gatekeeper is an on-site representative of the HMO who keeps track of patients, handles problems, and liaisons between the hospital, physicians, and HMO.

In addition to administrative procedures, patients and providers face financial incentives not to overuse medical services. Covered services, inpatient and limited outpatient care, are clearly specified. Outpatient care is free under the tie-up while copayments are necessary for hospitalization. It is necessary for providers to report service to the HMO within 24 hours of delivery. Special services, like high-technology scans, require special authorization.

6.3.4. Relations With Providers

HMOs offer the direct provision of medical services, using the same provider network for both regular and tie-up programs. The providers affiliated with HealthKard and Pamana are located primarily in the metro Manila urban areas as well as some provinces. Of 52 hospital affiliates, 33 are located in metro Manila, and 15 of the 24 affiliated clinics are located in the city. Health care facilities are in the proximity of the majority of the member population (PMCC, 1991).

Not all HealthKard-affiliated providers opted to participate in the tie-up, while all Pamana affiliates participated. Hospitals usually give HMOs a line of credit; benefits are deducted from the patient's bill and the hospital is reimbursed by the HMO. However, some affiliated hospitals require tie-up members to pay their bills in full and let the patients collect benefits directly from the HMOs.

More than half of all claims, 61 percent, are for services provided by nonaffiliated hospitals (PMCC, 1991). Tie-up members use nonaffiliated providers for two reasons: 1) Patients argue they select their physician and go to the hospital where s/he practices. If the hospital is unaffiliated, the tie-up pays only 80 percent of Medicare benefits. 2) Some affiliated hospitals are more expensive than nonaffiliated hospitals. Often, the additional benefits are less than the additional costs of attending the more expensive affiliated hospitals. Therefore, a financial incentive exists for the patient to select an unaffiliated provider. The tie-up program needs to remove this incentive and affiliate with hospitals and doctors that charge lower rates (government and semi-government practitioners).

Affiliated practitioners receive from the HMO lower fees for consultation than they normally charge, and are not allowed to cover the shortfall by charging the patient. General outpatient consultations are to be free for all members of the tie-up. Several practitioners believe low fees are compensated for by the extra patients brought through affiliation with the tie-up. Hospital physician-coordinators (gatekeepers) are paid on a fee-for-service basis. Provider payment schedules for a variety of services appear in Exhibit 6-3.

There is confusion among providers, patients, Medicare, and HMOs about the reimbursement process. HMOs are responsible for patient and provider education about the tie-up program and there is room for improvement here. As of September 1990, only one-third of the 1,066 claims received had been settled. Some tie-up members seek reimbursement for claims from the Medicare system, not their HMO. Consequently, all claims received by SSS and GSIS from metro Manila are reviewed to make sure they do not come from tie-up members. The average period between the discharge of a patient and reimbursement of their claim by the HMO is 65 days for properly routed claims. It takes almost twice as long to settle misrouted claims, 128 days, and the proportion of misrouted claims is high. As the claims procedures become more familiar, it is expected the lag between claim filing and reimbursement will shorten (PMCC, 1991).

EXHIBIT 6-6 - PHILIPPINE MEDICARE HMO TIE-UP AND REGULAR MEDICARE BENEFITS
(in Pesos)

Benefits	Medicare	Tie-up
INPATIENT		
1. Room & Board/Day		
Primary	30	40
Secondary*	45	45
Tertiary	50	60
2. Ordinary Cases		
Drugs and Medicines		
Primary	265	290
Secondary	350	450
Tertiary	375	475
X-ray/Lab		
Primary	85	110
Secondary	200	250
Tertiary	350	450
3. Intensive Cases		
Drugs and Medicines		
Primary	500	540
Secondary	600	700
Tertiary	1,080	1,180
X-ray/Lab		
Primary	180	205
Secondary	460	560
Tertiary	700	875
4. Catastrophic Cases		
Drugs and Medicines		
Primary	-	-
Secondary	1,350	1,500
Tertiary	1,540	1,800
X-ray/Lab		
Primary	-	-
Secondary	900	1,100
Tertiary	2,135	2,350
5. Professional Fees		
General Practitioner/Day	35	40
Max ordinary case	200	500
Max intensive/catastrophic case	300	600
Specialist/Day	50	55
Max ordinary case	300	750
Max intensive/catastrophic case	500	950

EXHIBIT 6-6 (CONTINUED)

Benefits	Medicare	Tie-up
6. Surgical Family Planning Fees		
Vasectomy*	200	325
Tubal Ligation	350	350
OUTPATIENT		
1. General Consultation	None	Free,unlimited
2. Minor Injuries	None	Free
DENTAL	None	Free as follows: Simple tooth extraction; treatment of burns, lesions, infections; temporary fillings; recementation; consultations
OPTOMETRIC*	None	free,unlimited
LAB AND X-RAY*	None	At discounted rates
UNLIMITED DOMICILIARY CARE*	None	At discounted rates

* Generally, HealthKard and Pamana offer the same benefits. For these services benefits differ slightly.

Source: PMCC, "An Evaluation of the Medicare-Private Health Insurance Tie-up Project," April 1991.

6.3.5. Financing and Expenditures

The Memorandum of Agreement between Medicare and the participating HMOs calls for SSS and GSIS to prepay up to three months of contributions to the HMOs. However, delays in remittances from Medicare take from 60 to 125 days. SSS has no established schedule for paying the HMOs. GSIS remits premiums at the end of the period covered. This means the HMOs are collecting premiums at least three months late.

The monthly premium price for the tie-up program is the same as for regular Medicare membership, 25 pesos per member, including dependents. All workers pay the same premium to Medicare regardless of their income level. Therefore, the tie-up is characterized by a regressive contribution scheme.

In 1989, Executive Order 365 mandated increases in Medicare benefits without any increase in premiums. HMOs were concerned about the financial feasibility of this. A reserve fund was created in November 1989 from which HMOs could draw a flat fee per member in the event hospitalization costs exceeded 50 percent of contributions. No drawings were necessary.

Generally, a smaller share of the Medicare premium goes toward medical services under the tie-up plan. In part this is because utilization rates and health care costs are relatively low. Drugs are the biggest medical expense. Administrative and marketing costs, including sales commissions, supplies, advertising, utilities, wages, and salaries are high in comparison to the regular Medicare program. Higher administrative costs are to be expected, to some degree, because the HMOs manage a delivery network and have better claims control.

The tie-up project also raises the administrative costs for SSS and GSIS. Additional staff is a direct cost of the experiment. Indirect costs include delays in processing claims, delays in collection inspection, and mistakes. For example, sometimes Medicare remits a contribution to both HMOs for the same member, or employers do not pay the required contributions to SSS and GSIS for HMO members. In anticipation of cost increases, an administration charge of 0.75 pesos per active member per month is deducted from the Medicare contribution before it is remitted to the HMO. This fee is close but not adequate to cover fully the increased administrative costs to Medicare from the tie-up.

The tie-up is profitable for HealthKard and Pamana. The HMOs need a large reserve requirement (equal to the estimate of medical benefits to be paid for services already rendered but not reported) due to the long time it takes them to receive misrouted claims.

6.3.6. Utilization

Generally, the HMOs in the tie-up experience low utilization rates. The number of inpatient and outpatient visits (2,455) averaged over the number of active members and dependents (91,947) was 2.67 percent in August 1990. Low utilization rates are typical among new members of HMOs. As time goes on, members become more aware of benefits through education programs, and utilization rates are expected to increase. Hence, it is not surprising that the utilization rate for the older HealthKard program is more than two times the rate for Pamana (PMCC, 1991).

There were 1,066 claims for inpatient services filed by August 1990. This represents an inpatient utilization rate of 1.16 percent. Almost 3/4 of inpatient claims were from tertiary hospitals. However, 60 percent of hospital admissions were for ordinary, not intensive or catastrophic care. This is a much smaller proportion than the 80 percent admitted to tertiary hospitals for ordinary care experienced by Medicare, which means a greater percentage of tie-up members go to tertiary facilities for more serious illnesses. Eighty-four percent of the cases were attended by one practitioner. Sixty-three percent of the practitioners were specialists. The average hospital stay, typically in a ward room, was five days (PMCC, 1991).

Tie-up members make greater use of outpatient services. By August 1990, there had been 1,389 outpatient visits and an outpatient utilization rate of 1.51 percent. Eighty percent of outpatient visits were for general medical consultations and minor treatment (PMCC, 1991).

6.3.7. Conclusion

The Philippine Medicare HMO tie-up is an experimental project in metro Manila linking social and private health insurances. The tie-up introduces to the Philippine health insurance market an insurance plan with a low level of outpatient benefits, thereby increasing choice for consumers and competition between standard Medicare, regular HMO, and tie-up programs. The tie-up has been unexpectedly popular among consumers, with insurance services marketed primarily to the younger, healthier population with few dependents.

Support values are low, although they are higher than Medicare's. Also, like most new HMO programs, utilization is low. Thus, the share of tie-up expenditures on benefits is low as well. Furthermore, the tie-up is characterized by extensive cost control which is reflected in the relatively high share of expenditures on administrative costs. There are administrative problems for both the Medicare system and HMO participants with claims processing and membership validation. Thus, the HMO tie-up is characterized by a relatively small share of income spent on benefits and a relatively large share spent on administration costs. This expenditure pattern needs to move in the opposite direction and educational programs targeting consumers, insurers, and providers would help. More information is needed about current tie-up education programs, their strengths and weaknesses, and strategies for improving them.

APPENDIX A

APPENDIX A

(1) Community-Based Risk Sharing/Rural Health Insurance

VARIABLE	BWAMANDA/ ZAIRE	BOKORO/ ZAIRE	THAILAND	GUINEA-BISSAU
INSTITUTIONAL				
- Type/Approach	Community-based rural hospital insurance plan	Community-based rural ambulatory insurance plan	Community-based rural ambulatory insurance plan	Community-based rural ambulatory insurance plan
- Year Founded	1986	1985	1983	1980
- Ownership	Public health service sponsored	Public health service sponsored	Community members/share-holders (start-up capital from MOPH)	Village committees and public health service sponsored
- Urban/Rural	Rural	Rural	Rural	Rural
- Gov./SS Linkage	No gov't assistance	No gov't assistance	MOPH provides start-up capital and officially recognizes health card funds in public system. No SS links.	MOH offers subsidized prices for drug purchases by the insurance plans. MOH subsidizes cost of free referrals,supervision and training. No SS links.
- Voluntary/Compulsory	Voluntary	Voluntary	Voluntary	Voluntary
ENROLLEES AND EMPLOYERS				
- Eligible Population	134,680	110,000	54.5 million (rural population)	220,000 (rural population with access to a health post)
- Number of Enrollees (primary members) - Unit of Enrollment (individual, family, village, employer, occupational group, etc.)	81,142 Individual membership	4,444 Individual membership	18-21% of rural households in 2 provinces, 2% of rural households in 2 provinces, other rates not available Unit of membership is family or individual	Unknown, but where village health post has insurance plan, enrollment is often high (e.g., 90%). Unit of enrollment varies by village (e.g., per capita, per adult, adult male, household)
- Total Coverage	same as enrollees	same as enrollees	see above	unknown
- % Eligible Pop. Coverage - % Labor Force Coverage - % Population Coverage - % Urban/Rural Coverage	60% employees not eligible same as eligible pop cov primarily rural program	4% unknown same as eligible pop cov. primarily rural program	unknown unknown unknown primarily rural program	unknown unknown unknown primarily rural program
- Characteristics of enrolled firms: size, industry type, average wage, etc.	NA	Agricultural processing, mission employees	NA	NA
- Socioeconomic, demographic, and labor force characteristics of insured population vis-a-vis uninsured population.	Insured are more often female and less educated. Little data available	Almost all insured are employed. Little data available	No information.	No information.
MANAGEMENT				
- Benefits Covered - Inpatient Services -- Outpatient Services -- Preventive/Family Planning -- Other	Inpatient services, deliveries, outpatient amb. surgery, chronic care, no preventive care.	Ambulatory curative care, incl. visits, exams, drugs, referrals. No chronic care, STD treatment or preventive care.	Fixed number of curative care episodes per year (often 6 per family). Free MCH & immunizations. Preferred treatment for referral services ("green channel").	Primary care from village health worker, incl. consultation, limited drugs, free referral to next level in health system.

(1) Community-Based Risk Sharing/Rural Health Insurance

VARIABLE	BWAMANDA/ ZAIRE	BOKORO/ ZAIRE	THAILAND	GUINEA-BISSAU
INSTITUTIONAL				
MANAGEMENT (con't) - Equality of benefits among enrollees - Equality of access to benefits (services) among enrollees	Geographic inequalities. Distant residents less likely to be insured.	Not examined directly.	Unknown. Some regions have more funds than others.	Geographic inequalities. Some villages don't have a health post or insur. plan
- Cost Control Measures -- deductibles -- copayments -- exclusions -- illness duration caps -- waiting period -- other	No deductibles. 20% coinsurance. No exclusions or caps. No waiting period, but there is mandatory referral and certificate of medical need.	Coinsurance of 25%. No other controls, but health provider has discretion to limit excess utilization.	Some funds include ceilings on allowable costs, disallow some expensive-to-treat illnesses.	One village used a copay of PG 50 ($0.04) per consultation. Villagers monitor utilization themselves.
- Use of reinsurance	None	None	None	None
- Premium Price -- individual -- family -- group	125 Zaires ($0.35 in 1989)	1,200 Zaires ($3.39 in 1989)	200 Baht ($8) per individual and 300 Baht ($12) per family in 1988.	PG 20-500 (mean: 203, or $0.18) per adult male per year (may collect at two times during year) in 1988. This translates to PG 181 ($0.16) per capita on average.
- Rate setting system (based on cost analysis, actuarial analysis, competitors' prices, etc.)	Some cost analysis and study of utilization patterns. Also compare price with ability to pay before fixing price.	Some cost analysis and study of historical utilization.	Some cost analysis has been done and prices have been adjusted based on results.	Trial and error. Village sets premium to what people are willing to pay. Then they see when drugs run out. Charge more next time so drugs will last longer.
- Verification of insurance status - Fraud control measures	Stamped card system with signatures and cross-referenced enrollment register book. Require all family members to join if one joins	Enrollment sheets. Very open to fraud. Require all family members to join if one joins	Unknown.	Village health worker knows everyone so this avoids misuse of cards.
RELATIONS WITH PROVIDERS				
- Direct/Indirect provision - Closed/Open provider network	Direct Closed	Direct Closed	Indirect Closed (includes only public facilities at this time)	Direct Closed
- No. of affiliated facilities (and location) - No. of affiliated physicians	One hospital and all zone health centers (22)	One hospital and all zone health centers/health posts	Varies by fund.	Usually one VHP in each village. Patients can be referred to any other public facility.
- Provider selection criteria	NA	NA	unknown	NA
- Provider payment system(s) -- Base of compensation (fee-for-service, salary, capitation, etc. -- Level of compensation (market, administratively decreed, negotiations between providers and third party, etc.).	Hospital and health centers bill insurance plan and are reimbursed Providers are salaried.	No billing system. Providers are salaried.	Reimbursed once per year at year end. Facilities are allowed by MOPH to keep this revenue to spend on equipment and other non-salary expenses.	Premium revenue only used for drug purchases. Providers are volunteers.
RELATIONS WITH PROVIDERS (con't) - Provider payment schedules (sample of high-volume services)	NA	NA	Unknown.	NA

(1) Community-Based Risk Sharing/Rural Health Insurance

VARIABLE	BWAMANDA/ ZAIRE	BOKORO/ ZAIRE	THAILAND	GUINEA-BISSAU
INSTITUTIONAL				
FINANCING AND EXPENDITURES				
- Revenues by source - Direct and indirect subsidies - Equality of financing mechanisms	Premiums 1989: 11,011,785 Z ($31,089) Interest: 710,596 Z ($2,006) No subsidies.	Premiums 1989: 5,332,800 ($15,056) No subsidies.	Insufficient data available.	1988 (sample of 16 VHPs): Premiums: $1,140 Subsidies: $4,632
- Expenditures -- inpatient - outpatient -- other -- administrative (loading) costs	Hospital: 9,915,491 Z ($27,994) Outpat.: 622,582 Z ($1,758) Admin.: 632,015 Z ($2,006)	unknown	In 4 funds, 40-60% of prem. rev. spent on provider reimb. 2 funds spent 15% rev. on fund management.	1988 sample: Drug Expense: $3,900 Other Expense: $1,872
- Administrative costs as % of total costs, premium	5.7%	unknown	NA	NA
- Investments	Revenues invested in bank (2.5-3% interest/mo.) or loaned to pharmacy for drugs	none	Some premium revenue used to make loans to card holders. One fund spent 3% loan profits to reward fund manager	None
- Financial Equilibria/Debt	Positive fund balance in every year	unknown	Average size (capital value) of a health card fund in 1988 was 9,631 Baht ($385).	Requires heavy government subsidy (partly due to inefficient procurement of drugs by government, making them costly)
UTILIZATION				
- by category of enrollees - by service (preventive, inpatient, outpatient, etc.) - by provider type	3.6% hospitalization rate among enrollees, compared to 0.5% among non-enrolled population and 10.5% for salaried workers	Large differences in utilization rates of insured vs. uninsured	Evidence of increased use of health services at all levels among card holders. No data on utilization by non-card holders.	Insured: 2.37 consultations per person/year on average (range 0.73-4.61). Uninsured: unknown
- utilization rates: insured vs. uninsured	see above	Plan members have 11 to 12 times higher utilization than uninsured and unemployed	see above	see above
- evidence of adverse selection and moral hazard	yes, see above	yes, see above	Some evidence of both (see text)	Anecdotal evidence of adverse selection, but very high overall enrollment mitigates these effects. Not enough info to assess moral hazard effects.

(2) Social Security Coverage Extension

VARIABLE	INTEGRATION/ PANAMA	INTEGRATION/ COSTA RICA	SSC/ ECUADOR	IMSS-COPLAMAR/ MEXICO
INSTITUTIONAL				
- Type/Approach	Social Security (CSS) - Health Ministry (MS) unification of provider networks.	Social Security (CCSS) - Ministry of Health (MS) unification of provider networks	Social Security Rural Extension	Social Security Rural Extension
- Year Founded	1973	1973	1968	1979
- Ownership	CSS/MS	CCSS and MS	IMSS	IESS
- Urban/Rural	All regions except for Metropolitan Panama City	The entire country	rural	rural
- Gov./SS Linkage	Unified service delivery system and some administration functions. Joint financing of service provision.	Unified health delivery system. CCSS finances curative services and MS preventive services.	IESS and some government financing.	Government/IMSS financed.
- Voluntary/Compulsory	Compulsory for CSS affiliates.	Compulsory for all salaried workers.	Voluntary affiliation	Voluntary affiliation
ENROLLEES AND EMPLOYERS				
- Eligible Population	All residents of integrated regions.	Universal	Rural population (w/ no access to health services)	Rural population (in dispersed areas)
- Number of Enrollees (primary members) - Unit of Enrollment (individual, family, village, employer, occupational group, etc.)	Approximately 55% of population in 1987.	- 725,758. The unit of enrollment is the employee but all employee's dependents are covered.	- community organization/firm/ collective, cooperative	- family
- Total Coverage				
- % Eligible Pop. Coverage - % Labor Force Coverage - % Population Coverage - % Urban/Rural Coverage	- In integrated regions 90% of population has access to health services - Lowest coverage in dispersed rural areas.	- 67.6% of labor force coverage. - 83.7% of population coverage .	- NA - NA - 6% (total) - 14% (rural)	- 85% (in catchment area) - NA - 19% (total) - 40% (rural)
- Characteristics of enrolled firms: size, industry type, average wage, etc.	Covers both middle-income CSS-insured and low-income uninsured groups	All firms that employ people should have all their employees enrolled.	Enrollment through community organizations.	Enrollment through communities.
- Socioeconomic, demographic, and labor force characteristics of insured population vis-a-vis uninsured population.	Uninsured, low-income, and rural residents have access to same health services as insured urbanites.	No data. Even the unemployed can have access to services if they apply for coverage through the state insurance program.	- Accessible, "nucleated rural communities"	- "Marginalized" dispersed rural communities

(2) Social Security Coverage Extension

VARIABLE	INTEGRATION/ PANAMA	INTEGRATION/ COSTA RICA	SSC/ ECUADOR	IMSS-COPLAMAR/ MEXICO
MANAGEMENT				
- Benefits Covered - Inpatient Services - Outpatient Services - Preventive/Family Planning - Other	Comprehensive	Comprehensive	Mostly primary medical care with referral to IESS hospitals	Primary care w/preventive services/ secondary-level hospitalization
- Equality of benefits among enrollees - Equality of access to benefits (services) among enrollees	Urbanites have better access to specialty care located in cities. Rural residents have access to care provided by general practitioners, nurses, and community health promoters.	Yes, everyone enjoys the same benefits.	Equal benefits: geographical access is key limiting condition.	Equal benefits: geographical access is limiting condition.
- Cost Control Measures - deductibles - copayments - exclusions - spending/illness duration caps - waiting period - other (claims analysis, util. review, prior authorization)	- Non-existent except for nominal user fees for uninsured population.	- Long waiting periods and service congestion acts as a deterrent for the use of services. Only cost-control measurement is the number of medicines that can be prescribed (ceiling of 3 per encounter, and all the medicines must be included in the CCSS directory).	- Rigorous referral process for access to IESS hospitals.	- Need referral to secondary-level care.
- Use of reinsurance	Government	Government	No	No
- Premium Price - individual - family - group	Direct service system. Financed through facility-based budgetary system.	All services are provided free but employees have to contribute 15.5% of their salary to the CCSS.	1% minimum wage/year/family (US $1 in 1992)	In-kind contributions and volunteer labor.
- Rate setting system (based on cost analysis, actuarial analysis, competitors' prices, etc.)	No rates.	No rates.	Nominal.	No
- Verification of Insurance status - Fraud control measures	Yes. CSS-insured do not pay user fees.	Not necessary for emergency services but yes for all others.	Community organization is responsible for yearly premia collection.	All members in catchment area access: services rarely denied to anyone.
RELATIONS WITH PROVIDERS				
- Direct/Indirect provision - Closed/Open provider network	Direct provision in CSS/MS facility network	Direct provision within the CCSS/MS facility network	Direct	Direct
- No. of affiliated facilities (and location) - No. of affiliated physicians	(see above)	- All facilities in the country. - Over 80% of all physicians in the country.	- 464 rural dispensaries. - 235 physicians.	- 3,054 rural clinics; 52 rural hospitals. - 2,250 physicians.

(2) Social Security Coverage Extension

VARIABLE	INTEGRATION/ PANAMA	INTEGRATION/ COSTA RICA	SSC/ ECUADOR	IMSS-COPLAMAR/ MEXICO
RELATIONS WITH PROVIDERS (con't) - Provider selection criteria	CSS and MS contract personnel. Each institution maintains separate payrolls.	None	None	None
- Provider payment system(s) - Base of compensation (fee-for-service, salary, capitation, etc.) - Level of compensation (market, administratively decreed, negotiations between providers and third party, etc.). - Institutional Setting (from patient to provider, from third party to provider, etc.).	All personnel are salaried (8-hour contracts) negotiated through a variety of professional associations and unions.	All providers are salaried. They follow the civil servant's salary scale and enjoy special benefits earned in response to unions negotiation. With the capitation system and the cooperative system, health care providers can earn extra money by increasing their workload.	Personnel: salary Hospital: budget	Personnel: salary Hospital: budget
- Provider payment schedules (sample of high-volume services)	NA			
FINANCING AND EXPENDITURES				
- Revenues by source - Direct and indirect subsidies - Equality of financing mechanisms	- CSS pays for two-thirds of recurrent costs. Capital costs of expansion shared equally.	- Premium shared by government (75%) and teachers (25%). Copayments for some services can be substantial.	IESS: 100% (government does not pay its 30% statutory contribution)	IMSS: 10% + government: the remainder.
- Expenditures - inpatient - outpatient - other - administrative (loading) costs	US $74 per capita in 1983. Over 70% of expenditures on salaries. Distribution by facility type and location: urban hospitals: 54% rural hospitals: 6% urban ambulatory: 27% rural ambulatory: 8%	NA	US $7.50 per physician contact (curative care only) NA	US $7.52 per affiliate (1987) US $73 million (1986) 45% curative 25% preventive
- Administrative costs as % of total costs, premium	Approximately 5% (excluding central-level expenses).	- NA: probably high	NA	NA
- Investments	NA	The CCSS has a surplus of 1,800 million colones.	NA	NA
- Financial Equilibria/Debt	Represents approximately 5% of large CSS deficit in Sickness and Maternity Program.	NA	- IESS: serious liquidity problem	IMSS: operational deficit

(2) Social Security Coverage Extension				
VARIABLE	INTEGRATION/ PANAMA	INTEGRATION/ COSTA RICA	SSC/ ECUADOR	IMSS-COPLAMAR/ MEXICO
UTILIZATION				
- by category of enrollees - by service (preventive, inpatient, outpatient, etc.) - by provider type	High use of CSS specialty and diagnostic services in urban polyclinics, and "subsidized" private inpatient services by insured population. Uninsured are users of rural outpatient, hospital emergency, and CSS/MS inpatient services.	There is an average of 3.34 encounters per person. Under the Company Medicine Program, the average number of encounters per year is 4.5, and in the cooperative system, 8.3. There is no evidence of adverse selection or moral hazard.	4% of consultations are referred to IMSS hospitals; utilization is alarmingly low	85% of demand: rural clinics 12% demand: secondary hospitals 3% demand: IMSS tertiary facilities
- utilization rates: insured vs. uninsured	medical visits per capita insured: 3.0 uninsured: 1.3	NA	physician visits per affiliate IMSS: 4.0 SSC: 1.3	NA
- evidence of adverse selection and moral hazard	Very high, especially for CSS-insured population. Example: annual drug prescriptions per capita: insured: 11; uninsured: 2.	Yes, for insured population.	No	No

(3) National Insurance Systems/Korea

VARIABLE TYPE/APPROACH	INDUSTRIAL EMPLOYEES MEDICAL INSURANCE	SPECIAL SCHEME	OCCUPATIONAL SELF-EMPLOYED	REGIONAL (URBAN AND RURAL) SELF-EMPLOYED	PUBLIC ASSISTANCE
INSTITUTIONAL					
- Year Founded	1963	1979	1981	1988, 89	1977
- Ownership	Private	Private	Private	Private	Government
- Urban/Rural	Mostly urban	Mostly urban	Mostly urban	Both	Both
- Gov./SS Linkage	Gov't supervised by Ministry of Health and Social Affairs. Combine to provide social security.	Gov't supervised by Ministry of Health and Social Affairs. Combine to provide social security.	Gov't supervised by Ministry of Health and Social Affairs. Combine to provide social security.	Gov't supervised by Ministry of Health and Social Affairs. Combine to provide social security.	Gov't supervised by Ministry of Health and Social Affairs. Combine to provide social security.
- Voluntary/Compulsory	In 1963, voluntary. 1977, Compulsory for firms w/ 500 or more workers. In 1983, lowered to 16 or more workers. Those w/ 5 or more may join voluntarily. Includes dependents.	Founded in 1979 for civil servants and private school teachers. Compulsory. 1980 extended to military personnel, families.	Founded in 1981 for non-agricultural self-employed, on a voluntary basis. Now mandatory. Covers member workers in similar occupational groups and their dependents.	1988: Rural regional health insurance program in farming and fishing. 1989: Urban regional health insurance program for the self-employed and unemployed. Some organized on a voluntary basis; some compulsory. Now mandatory.	NA
- Other	Implementation under control of independent Medical Insurance Societies organized at firm level for large enterprises and multi-firm level for small enterprises. Special scheme organized in one insurance society. Other insurance societies organized on regional and/or occupational basis.				
ENROLLEES AND EMPLOYERS					
- Eligible Population	Workers in manufacturing and their families	Government workers, teachers, retirees and their families	Self-employed in particular occupations and their families	Self-employed in rural and urban areas	Uninsured.

(3) National Insurance Systems/Korea

VARIABLE TYPE/APPROACH	INDUSTRIAL EMPLOYEES MEDICAL INSURANCE	SPECIAL SCHEME	OCCUPATIONAL SELF-EMPLOYED	REGIONAL (URBAN AND RURAL) SELF-EMPLOYED	PUBLIC ASSISTANCE
ENROLLEES AND EMPLOYERS (con't) - Number of Enrollees (primary members) - Unit of Enrollment (individual, family, village, employer, occupational group, etc.)	- 1986: 4,304,000 primary members; 8,985,000 dependents - Family	- 1986: 1,074,000 primary members; 3,255,000 dependents - Family	- 1986: 229,000 primary members; 725,000 dependents - Family	- 1986: 339,000 compulsory; 269,000 voluntary - Family	- Family
- Total Coverage	1986: 13.29 million	1986: 4.33 million	1986: 1.1 million	1986: 600,000	
- % Eligible Pop. Coverage - % Labor Force Coverage - % Population Coverage - % Urban/Rural Coverage	- 1986: 32% pop. coverage	- 1986: 10.4% pop. coverage	- 1986: 2.64% pop. coverage	- 1986: 1.5% pop. coverage	NA
- Characteristics of enrolled firms: size, industry type, average wage, etc.	NA				
- Socioeconomic, demographic, and labor force characteristics of insured population vis-a-vis uninsured population.	NA				
MANAGEMENT					
- Benefits Covered -- Inpatient Services -- Outpatient Services -- Preventive/Family Planning -- Other	- Determined by government. From 30-80%. - Most if high probability - Most				

(3) National Insurance Systems/Korea

VARIABLE TYPE/APPROACH	INDUSTRIAL EMPLOYEES MEDICAL INSURANCE	SPECIAL SCHEME	OCCUPATIONAL SELF-EMPLOYED	REGIONAL (URBAN AND RURAL) SELF-EMPLOYED	PUBLIC ASSISTANCE
MANAGEMENT (con't) - Equality of benefits among enrollees - Equality of access to benefits (services) among enrollees	- Due to administration decentralization, poorer, fewer health social insurance groups face systematically higher medical risks and larger financial burdens. - Maldistribution of resources between rural and urban. Nearly 90% of each practitioner type in urban area.				
- Cost Control Measures -- deductibles -- copayments -- exclusions -- spending/illness duration caps -- waiting period -- other (claims analysis, util. review, prior authorization)	- Three types of cost-sharing for each service - 1986: Flat fee for each visit (approximately US $3) to physician. - High coinsurance rates. Effective rate of coinsurance (sum of deductibles plus coinsurance) 19.2% outpatient in public health facility; 41.2% for outpatient in clinic; 65% for outpatient hospital; 62% for outpatient general hospital; 20% for inpatient regardless of provider type. - Low-probability, high-cost illnesses, also high tech service. - Benefit limit 180 hospital days/year. No monetary limit. - Patients must seek care only from providers within defined geographic boundary. A referral from a primary physician is necessary for admission to a tertiary hospital. Appropriateness of claims reviewed. Currently verify that a covered service is provided and bill is accurate. 1,300 reviews/day. Not careful. Adjustments based on professional review committee. 12.5% of 1987 cases adjusted. 1.8% expenses adjusted.				
- Use of reinsurance	UNKNOWN				
- Premium Price -- individual -- family -- group	- Monthly contribution determined by family classification based on assets and wages.				
- Rate setting system (based on cost analysis, actuarial analysis, competitors' prices, etc.)	- Based on cost plus. Allows for some profits. Fees set low.				
- Verification of Insurance status - Fraud control measures	UNKNOWN				
RELATIONS WITH PROVIDERS					
- Direct/Indirect provision - Closed/Open provider network	- Indirect. Insurance Societies do not provide medical services. - Open provider network.				

(3) National Insurance Systems/Korea

VARIABLE TYPE/APPROACH	INDUSTRIAL EMPLOYEES MEDICAL INSURANCE	SPECIAL SCHEME	OCCUPATIONAL SELF-EMPLOYED	REGIONAL (URBAN AND RURAL) SELF-EMPLOYED	PUBLIC ASSISTANCE
RELATIONS WITH PROVIDERS (con't) - No. of affiliated facilities (and location) - No. of affiliated physicians	- More than 12,000 institutions = 99% of nation's medical establishments in 1985. 190 general hospitals; 323 hospitals; 8,225 clinics; 6 dental hospitals; 3,024 dental clinics; 555 midwifery clinics; 127 pharmacies; 451 health centers; 25 oriental clinics. Most in urban areas.				
- Provider selection criteria	No reimbursement for doctor substitutes including midwives, pharmacists, Oriental doctors.				
Provider payment system(s) - Base of compensation (fee-for-service, salary, capitation, etc. - Level of compensation (market, administratively decreed, negotiations between providers and third party, etc.). - Institutional Setting (from patient to provider, from third-party to provider, etc.).	- Base of compensation: Fee-for-service for over 2,000 services, 6,700 drugs. - Level of compensation: Fees negotiated at national level by all parties. Government sets fees on a cost-plus basis at a level which allows most providers a profit. Different fees for same services given at different facilities. Fee schedules reviewed annually considering change in costs. - Institutional setting: From third party to provider. Providers must submit a claim sheet for each patient.				
- Provider payment schedules (sample of high-volume services)	NA	NA	NA	NA	NA

(3) National Insurance Systems/Korea

VARIABLE TYPE/APPROACH	INDUSTRIAL EMPLOYEES MEDICAL INSURANCE	SPECIAL SCHEME	OCCUPATIONAL SELF-EMPLOYED	REGIONAL (URBAN AND RURAL) SELF-EMPLOYED	PUBLIC ASSISTANCE
FINANCING AND EXPENDITURES					
- Revenues by source - Direct and indirect subsidies - Equality of financing mechanisms	- Contributions + Gov't Subsidy + Gains on Deposits: 3 to 8% of monthly standard wages. Shared equally between employer & employee. 1985 Industrial contributions 414,035 million won; investment income 29,030 million won.	- Contributions + Gov't Subsidy + Gains on Deposits: 3 to 8% of monthly standard wages. Shared equally between employer & employee. 1985 Industrial contributions 414,035 million won; investment income 29,030 million won.	- Contributions + Gov't Subsidy + Gains on Deposits: Monthly or quarterly contribution determined by level of income, assets, & number of dependents. Paid in full by residents. 1985 contributions 29,583 million won; Gov't subsidy 154 million won; Investment 1,536 million won.	- Contributions + Gov't Subsidy + Gains on Deposits: Monthly or quarterly contribution determined by level of income, assets, & number of dependents. Paid in full by residents. 1985 contributions 5,345 million won; Gov't subsidy 1,371 million won; Investment 101 million won.	NA
	- Direct & Indirect Subsidies: In 1988, gov't subsidized 15.3% of total insurance expenditures. For regional health insurance plans in rural areas. - Equality of financing mechanisms: Equity within societies; inequity across societies; regressive coinsurance structure.				
- Expenditures -- inpatient -- outpatient -- other -- administrative (loading) costs	- 1985 benefits: 405,664 won - 1985: 22,545 million won	NA	- 1985 benefits: 28,726 million won - 1985: 1,926 million won	- 1985 benefits: 6,778 million won - 1985: 1,371 million won	NA
- Administrative costs as % of total costs, premium	- 1985: 5% costs, 5% premiums	NA	- 1985: 6% costs, 6.5% premiums	- 1985: 16% costs, 26% premiums	NA
	The proportion of administrative costs to total revenue is over 13% on average, as high as 22% in 1988 for regional health insurance.				
- Investments	- 1985: 29,030 million won		- 1985: 1,536 million won	- 1985: 101 million won	
- Financial Equilibria/Debt	- A stable financial status. 10-11 months reserve, 1989.	- A stable financial status. 10-11 months reserve, 1989.	NA	- Deficits all years, except 1981 & 1988.	NA

(3) National Insurance Systems/Korea

VARIABLE TYPE/APPROACH	INDUSTRIAL EMPLOYEES MEDICAL INSURANCE	SPECIAL SCHEME	OCCUPATIONAL SELF-EMPLOYED	REGIONAL (URBAN AND RURAL) SELF-EMPLOYED	PUBLIC ASSISTANCE
UTILIZATION					
- by category of enrollees (cases per 100 persons per year) - by service (preventive, inpatient, outpatient, etc.) - by provider type	- Inpatient 1981, 5.1; 1985, 6.1; 1987, 6.2.* Outpatient 1981, 4.7; 1985, 7.0; 1987, 6.2.**	- inpatient 1981, 1.1; 1985, 4.0; 1987, 5.5.* Outpatient 1981, 0.5; 1985, 3.8; 1987, 3.8.**	NA	- Inpatient 1981, 4.7; 1985, 6.1; 1987, 6.5.* Outpatient 1981, 6.6; 1985, 7.4; 1987, 7.2.**	NA
	- By service: Health insurance associations spend 2% of budget on preventative. - By provider type: Favor overspecialized physicians. Underutilize other medical resources.				
- utilization rates: insured vs. uninsured	1983: Insured outpatient use 2.7 times higher than uninsured. Insured inpatient use 2.1 times higher than uninsured.				
- evidence of adverse selection and moral hazard	Avoided by mandatory participation and coverage.				

(3) National Insurance Systems/China

VARIABLE OWNERSHIP	GOVERNMENT	PRIVATE	PRIVATE	PRIVATE	PRIVATE
INSTITUTIONAL					
- Type/Approach					
- Year Founded	1951	1951	1986		1966
- Urban/Rural	All government employees, most urban	Workers & dependents in state-owned enterprises, most urban	All workers, private enterprises	For industrial & agricultural workers at county level	Rural cooperative self-insurance system targeting low class peasants
- Gov./SS Linkage	Totally funded by MOF	Ministry of Labor in charge of state-sector social security	Social security program run by local insurance boards		
- Voluntary/Compulsory	Compulsory	Compulsory	Voluntary	Voluntary	Voluntary
ENROLLEES AND EMPLOYERS					
- Eligible Population	Government workers (no dependents)	Employees of state-owned enterprises	Employees of private enterprises, individual businesses, township/village enterprises, farmers	County & township workers	Rural peasant commune members
- Number of Enrollees (primary members) - Unit of Enrollment (individual, family, village, employer, occupational group, etc.)	1986: 22.5 million Individual	1981: 66 million; 1982: 108 million Family	1986: 8 million Family	1981: 40 million Family	Family
- Total Coverage	1986: 22.5 million	1981: 127 million		1981: 90 Million	
- % Eligible Pop. Coverage - % Labor Force Coverage - % Population Coverage - % Urban/Rural Coverage	- % eligible population: 100% - % population coverage: 2% (1986)	- % eligible population: 100% - % population coverage: 12% (1981); 15% (1987)	- % population coverage: <1% (1986)	- % population coverage: 9% (1981)	- % population coverage: 40-45% (1985)
- Characteristics of enrolled firms: size, industry type, average wage, etc.	NA				

(3) National Insurance Systems/China

VARIABLE OWNERSHIP	GOVERNMENT	PRIVATE	PRIVATE	PRIVATE	PRIVATE
ENROLLEES AND EMPLOYERS - Socioeconomic, demographic, and labor force characteristics of insured population vis-a-vis uninsured population.	NA				
MANAGEMENT					
- Benefits Covered -- Inpatient Services -- Outpatient Services -- Preventive/Family Planning -- Other	Free outpatient & inpatient for life	Free outpatient & inpatient for life; 50% beneficiaries	Larger enterprises' benefits similar to Type 1 and Type 2. Smaller partial health insurance or a fixed monthly medical subsidy to workers regardless of utilization.	70-80% reimbursement for primary, partial for dependents.	Free care village health station. 50% higher level care.
- Equality of benefits among enrollees - Equality of access to benefits (services) among enrollees	NA				
- Cost Control Measures -- deductibles -- copayments -- exclusions -- spending/illness duration caps -- waiting period -- other (claims analysis, util. review, prior authorization)	None	None	NA	Copayments Spending caps	NA
- Use of reinsurance	NA	NA	NA	NA	NA
- Premium Price -- individual -- family -- group	NA	NA	NA	NA	NA
- Rate setting system (based on cost analysis, actuarial analysis, competitors' prices, etc.)	NA	NA	NA	NA	NA
- Verification of Insurance status - Fraud control measures	NA	NA	NA	NA	NA

(3) National Insurance Systems/China					
VARIABLE OWNERSHIP	GOVERNMENT	PRIVATE	PRIVATE	PRIVATE	PRIVATE
RELATIONS WITH PROVIDERS					
- Direct/Indirect provision - Closed/Open provider network	Direct	Direct	Indirect	Indirect	Direct
RELATIONS WITH PROVIDERS (con't) - No. of affiliated facilities (and location) - No. of affiliated physicians	NA	NA	NA	NA	NA
- Provider selection criteria	NA	NA	NA	NA	NA
- Provider payment system(s) - Base of compensation (fee-for-service, salary, capitation, etc. - Level of compensation (market, administratively decreed, negotiations between providers and third party, etc.). - Institutional Setting (from patient to provider, from third-party to provider, etc.).	NA	NA	NA	NA	NA
- Provider payment schedules (sample of high-volume services)	NA	NA	NA	NA	NA
FINANCING AND EXPENDITURES					
- Revenues by source - Direct and indirect subsidies - Equality of financing mechanisms	- Government-MOF - Total subsidy	- Employer Contribution - Firms allowed to deduct health benefit costs before tax = indirect public subsidy	- Employee (3% base wage) + employer contribution	- Contributions from small enterprises, businesses, and farmers	- Annual prepayments by members, annual appropriations from brigade welfare fund, sales of traditional medicines, visitation fees
- Expenditures -- inpatient -- outpatient -- other -- administrative (loading) costs	- Estimated annual per capita spending 1986: 84 yuan, 5% average annual wage bill	Estimated annual per capita spending 1987: 17.8 yuan		Estimated 1987 expenditures equal 7% total wage bill	

(3) National Insurance Systems/China

VARIABLE OWNERSHIP	GOVERNMENT	PRIVATE	PRIVATE	PRIVATE	PRIVATE
- Administrative costs as % of total costs, premium,	NA	NA	NA	NA	NA
- Investments	NA	NA	NA	NA	NA
- Financial Equilibria/Debt	NA	NA	NA	NA	NA
UTILIZATION					
- by category of enrollees - by service (preventive, inpatient, outpatient, etc.) - by provider type	NA	NA	NA	NA	NA
- utilization rates: insured vs. uninsured	NA	NA	NA	NA	NA
- evidence of adverse selection and moral hazard	NA	NA	NA	NA	NA

(3) National Insurance Systems

VARIABLE	ISAPRE/CHILE	FONASA/CHILE
INSTITUTIONAL		
- Type/Approach	Medical Care	Medical Care
- Year Founded	1981	1980
- Ownership	Private	Semi-Public
- Urban/Rural	Mainly Urban: stgo. Viña Concepción	Nationwide
- Gov./SS Linkage	None; except disability	About one-half public
- Voluntary/Compulsory	Voluntary	Voluntary
ENROLLEES AND EMPLOYERS		
- Eligible Population	Nonindigent	Nonindigent
- Number of Enrollees (primary members) - Unit of Enrollment (individual, family, village, employer, occupational group, etc.)	- 966,00 - individual (42%) and family (58%)	- Individual and family
- Total Coverage	2.3 million	
- % Eligible Pop. Coverage - % Labor Force Coverage - % Population Coverage - % Urban/Rural Coverage	16% of population: upper middle income groups	11 to 20% of population: middle income groups
- Characteristics of enrolled firms: size, industry type, average wage, etc.	Some mining and public firms; most not firm-based.	Not firm-based.
- Socioeconomic, demographic, and labor force characteristics of insured population vis-a-vis uninsured population.	Upper-income professions	Middle income
MANAGEMENT		
- Benefits Covered - Inpatient Services - Outpatient Services - Preventive/Family Planning - Other	- Inpatient: yes - Outpatient: yes - Preventive: restrictive - Family Planning: restrictive	- Inpatient: yes - Outpatient: yes - Preventive: restrictive - Family planning: restrictive

(3) National Insurance Systems

VARIABLE	ISAPRE/CHILE	FONASA/CHILE
MANAGEMENT (con't) - Equality of benefits among enrollees - Equality of access to benefits (services) among enrollees	- Benefits vary by price	- Three levels of care with decreasing public subsidy at higher levels.
- Cost Control Measures - deductibles - copayments - exclusions - spending/illness duration caps - waiting period - other (claims analysis, util. review, prior authorization)	- Yes - Yes - Yes - Various - Superintendent of ISAPRES	- Yes - Yes - Yes - Various - FONASA-review
- Use of reinsurance	NA	NA
- Premium Price - individual - family - group	- premium varies; 7% payroll tax.	-7% payroll tax; no premium.
- Rate setting system (based on cost analysis, actuarial analysis, competitors' prices, etc.)	- actuarial analysis and comp. prices	-set by govt.; methodology unknown.
- Verification of Insurance status - Fraud control measures	- easy to control, ID number & card	- ID number & card
RELATIONS WITH PROVIDERS		
- Direct/Indirect provision - Closed/Open provider network	- both open/closed	-open network
- No. of affiliated facilities (and location) - No. of affiliated physicians	-34 ISAPRES	-27 FONASA districts; no facilities, owned -11,592 (1990)
- Provider selection criteria	Private contract	State approved

(3) National Insurance Systems

VARIABLE	ISAPRE/CHILE	FONASA/CHILE
RELATIONS WITH PROVIDERS (con't) - Provider payment system(s) - Base of compensation (fee-for-service, salary, capitation, etc. - Level of compensation (market, administratively decreed, negotiations between providers and third party, etc.). - Institutional Setting (from patient to provider, from third party to provider, etc.).	- 7% of gross wages or more; monthly premia; copayment. - open and closed paneled HMOs - Treatment in private settings	- voucher plus co-payment and 7% of gross wages. - three levels of care - treatment in public or private settings.
- Provider payment schedules (sample of high-volume services)	Each ISAPRE has own fee schedule.	Fixed fee schedule according to three levels
FINANCING AND EXPENDITURES		
- Revenues by source - Direct and indirect subsidies - Equality of financing mechanisms	Salary deductions and copayments (% breakdown unknown)	Salary deductions: 42% Fiscal support: 41% Vouchers: 16% Other: 1%
- Expenditures - inpatient - outpatient - other - administrative (loading) costs	Medical care: 75% Administration/Sales: 20% Profit: 5%	Public Health Service System: 60% Private Providers: 25% Supplementary Feeding Program: 13% Cash subsidies: 2%
- Administrative costs as % of total costs, premium	Admin. + sales = 20% of revenue	Unknown
- Investments	Unknown	Unknown
- Financial Equilibria/Debt	Varies per ISAPRE	Unknown

(3) National Insurance Systems		
VARIABLE	ISAPRE/CHILE	FONASA/CHILE
UTILIZATION		
- by category of enrollees - by service (preventive, inpatient, outpatient, etc.) - by provider type	- Mostly curative	- Mostly curative
- utilization rates: insured vs. uninsured	Medical consultations twice average of public users	Unknown
- evidence of adverse selection and moral hazard	- Highly discerning of preexisting condition.	- Very little screening of pre-existing condition.

(4) Limited Catastrophic Coverage

VARIABLE	MEDICARE/PHILIPPINES	NHIF/KENYA
INSTITUTIONAL		
- Type/Approach	Medicare, government-sponsored health insurance. Social Insurance linking public financing and private provision.	Kenya National Hospital Insurance Fund (NHIF) Social Insurance providing inpatient health care to workers and their families.
- Year Founded		1966
- Ownership	Government sponsored, privately funded	Government Agency
- Urban/Rural	Both	Both
- Gov./SS Linkage	Administrative through the Philippine Social Security System, the Government Social Insurance system (GSIS) for public sector employees and the Social Security System for workers in the private sector.	Funds allocated by the Treasury. NHIF must reimburse the Treasurer at the end of the year for all its administrative expenses. Contribution and benefit changes must be approved by Parliament. Consequently, there have been no substantial changes since the Fund's inception.
- Voluntary/Compulsory	Compulsory	Voluntary
ENROLLEES AND EMPLOYERS		
- Eligible Population	Initially public and private sector employees, expanded through the years to include dependents (both in 1973), retirees (GSIS in 1974, SSS in 1990), and the self-employed on a voluntary basis (SSS 1983).	1000 Ksh per month
- Number of Enrollees (primary members) - Unit of Enrollment (individual, family, village, employer, occupational group, etc.)	- 1989: 4.6 million - Family Coverage	- 1989-90: 331,498 - Family Coverage
- Total Coverage	- 1990: 23.5 million or 38% of the total population covered: 16.8 million SSS: 1 million GSIS, average annual growth is 9%.	Rose 1/3 600,000 to 800,000
- % Eligible Pop. Coverage - % Labor Force Coverage - % Population Coverage - % Urban/Rural Coverage	- 4.6 million Medicare participants in 1990 represented about 20% of the estimated 21.8 million people employed.	
- Characteristics of enrolled firms: size, industry type, average wage, etc.	NA	NA

(4) Limited Catastrophic Coverage

VARIABLE	MEDICARE/PHILIPPINES	NHIF/KENYA
ENROLLEES & EMPLOYERS (con't) - Socioeconomic, demographic, and labor force characteristics of insured population vis-a-vis uninsured population.	Insured population versus uninsured population.	NA
MANAGEMENT		
- Benefits Covered - Inpatient Services - Outpatient Services - Preventive/Family Planning - Other	- Inpatient services: only vary by type of service and category of hospital. - Outpatient services - Preventative/Family Planning	- Inpatient: Covered at NHIF-approved facilities including private hospitals, nursing, and maternity homes. - Outpatient: Proposed to add if provided by an NHIF-approved facility. - Preventative family planning
- Equality of benefits among enrollees - Equality of access to benefits (services) among enrollees	- Equality of access to benefits among enrollees. Urban residents have more choices.	- Higher income can attend more expensive private facilities because they can afford to pay what insurance will not cover. Private facilities receive higher per diems. So higher incomes receive greater absolute benefits than do lower incomes.
- Cost Control Measures - deductibles - copayments - exclusions - spending/illness duration caps - waiting period - other (claims analysis, util. review, prior authorization)	- Copayments: Expenses incurred greater than Medicare benefits are shouldered by the patient. The amounts paid out-of pocket by beneficiaries average 72% of total charges for GSIS and 52% for SSS. - Exclusions: Cosmetic surgery and treatments, purely diagnostic services. - Spending/illness duration caps: Maximum of 45 inpatient days per year. - Maximum peso allowances depending on type of services and category of hospital.	- Copayments: Hospitals balance bill patients if costs are greater than insurance reimbursement. - 180 inpatient cumulative hospital days per family.
- Use of reinsurance	NA	NA
- Premium Price - individual - family - group	- Family: 2.5% of salary paid equally by employer and employee. The salary base upon which contributions are calculated has a ceiling beyond which the contribution remains the same. - Group: Rate setting system (based on cost analysis, actuarial analysis, competitors etc.).	- Family: 20 Ksh per month deducted from employee's wages.

(4) Limited Catastrophic Coverage

VARIABLE	MEDICARE/PHILIPPINES	NHIF/KENYA
MANAGEMENT (con't) - Rate setting system (based on cost analysis, actuarial analysis, competitors' prices, etc.)	NA	- Established over 20 years ago. Has lost any relevance to cost.
- Verification of Insurance status - Fraud control measures	NA	- Employers or self (if voluntary or self-employed member) must place stamps on the back of the contribution card indicating required monthly contribution has been paid. Must submit membership card with claim. - Some hospitals are suspected of billing NHIF for patient stays that did not occur. Suspect several patients use one card. However, 10,000 claim are reviewed manually each month and the effective degree of fraud control is questionable.
RELATIONS WITH PROVIDERS		
- Direct/Indirect provision - Closed/Open provider network	- Indirect Provision: Closed provider network.	- Indirect: Must be NHIF approved.
- No. of affiliated facilities (and location) - No. of affiliated physicians	- 82% hospital nationwide: 650 primary, 605 secondary, 251 tertiary. - 21.5% of the country's accredited physicians.	- Private 26%, usually urban - Community/mission/NGO 30%, usually rural - Government 44%
- Provider selection criteria	NA	NA
- Provider payment system(s) - Base of compensation (fee-for-service, salary, capitation, etc. - Level of compensation (market, administratively decreed, negotiations between providers and third party, etc.). - Institutional Setting (from patient to provider, from third party to provider, etc.).	- Benefits paid directly to provider - Fee for Service - N/A - After using health services, beneficiary files a Medicare claim form with the hospital which requests reimbursement from SSS or GSIS.	- Each hospital is assigned a single per diem (flat fee per day), irrespective of actual service. Have 6 classes of hospitals based on estimation of the level and quality of services. Rates vary from 60 Ksh to 150 per day. Government hospital paid a flat fee of 40 Ksh per admission. Maternity reimbursed at a flat rate per case. - Propose to increase compensation fees 80-400 Ksh per day. - Propose to empower HMO to regulate hospital charges. - General claims paid from third party to patient, after patient has paid provider.

(4) Limited Catastrophic Coverage

VARIABLE	MEDICARE/PHILIPPINES	NHIF/KENYA
RELATIONS WITH PROVIDERS (con't) - Provider payment schedules (sample of high-volume services)	NA	NA
- Other (specify)	- Claims processing, GSIS takes 5-6 months. SSS processes claims within 30 days.	- Fund officials state claims almost always paid within 2 weeks. Providers report the claims process is very slow (several months); must send a representative to NHIF to collect.
FINANCING AND EXPENDITURES		
- Revenues by source - Direct and indirect subsidies - Equality of financing mechanisms	- 1990: SSS, P777 million: GSIS, P349 million. SSS annual collections growth rate, 17%; GSIS 14%. - Ceiling on contribution is regressive. But the healthy subsidize the sick, & individuals with families subsidize retirees & dependents.	- Required monthly contribution of 20 Ksh. Problems with collecting from self-employed and unemployed. - All public employers and many private employers provide direct subsides to their employees to help cover out-of-pockets expenses. Until 1989 the Public Service Medical Benefit assisted public employees with outpatient as well as inpatient services. Eliminated outpatient. - Regressive.
- Expenditures - inpatient - outpatient - other - administrative (loading) costs	- P710 million and P442 in 1990. - Increase in benefits payments for 1990. - 1.6% in 1989 to 58.7% in 1990 - SS P60 million; GSIS P8.5 million	- Generally, benefits have not changed, amounts have risen. - Skewed toward private hospitals, nursing and maternity homes. 1987/88, private hospitals composed 26% of NHIF approved facilities and received 58% of total reimbursements. - Community & mission hospitals were 30% of NHIF facilities and received 40% of reimbursements. Government hospitals received 2% of reimbursements and made up 44% of NHIF facilities. - Uneven distribution of payments within hospital categories. 1987/88: of 55 private facilities, 16 responsible for 87% of total private claims. One institution responsible for 14.6% of total private claims. Fraud?
- Administrative costs as % of total costs, premium	- 12% limit set by Medicare Law. 1990 operation costs per capita: P2.93.	NA
- Investments	- 1990 investment income was 48% of SSS total income. GSIS was 29%.	- Contributions exceed expenditures. Propose to invest surpluses as loans to medical or health-related projects.

(4) Limited Catastrophic Coverage		
VARIABLE	**MEDICARE/PHILIPPINES**	**NHIF/KENYA**
FINANCING AND EXPENDITURES (con't) - Financial Equilibria/Debt	- 1990 Medicare system P5.2 billion reserves; SS P4.5 billion reserves; GSIS p620 million reserves.	- Fund has been running with a growing surplus of premium saver claims.
UTILIZATION		
- by category of enrollees - by service (preventive, inpatient, outpatient, etc.) - by provider type	- Number of beneficiaries has been rising. 1990 1.2 million 56% SSS, 34 GSIS. - Inpatient: 1990 rate of availment (beneficiary served/total coverage *100) averaged 6.5%. SSS average 5.36%; GSIS 10.36%.	NA
- utilization rates: insured vs. uninsured	1980: 54% of private admissions & 60% of government are Medicare.	NA
- evidence of adverse selection and moral hazard	NA	- Evidence of adverse selection and moral hazard--Mandatory enrollment minimized these problems. However, utilization may be increased through providers. There are no incentives to minimize unnecessary utilization or prolonged stays. By only covering inpatient services, incentive is created to perform outpatient procedures in the hospital.

(5) Pre-Payment Plans (Government/social security linkages to private providers)			
VARIABLE	IAMC/URUGUAY	SEMMA/ DOMINICAN REPUBLIC	MEDICARE-HMO TIE-UP PHILIPPINES
INSTITUTIONAL			
- Type/Approach	HMOs	HMOs	Philippine Medicare-HMO tie-up. Goal: To increase the health, social, and private health benefits of Medicare members without increasing premiums.
- Year Founded	Mid-1800s	1985	1987 conceptualized. 1988 formal agreement between Medicare and HealthKard.
- Ownership	Mutual aid societies; physician groups	Operated by Ministry of Education and Dominican Teachers Union	Joint effort of public sector Medicare system and private HMOs.
- Urban/Rural	Nationwide	Nationwide	Urban
- Gov./SS Linkage	Provides services to all social security insured workers; some financial linkage to health ministry and government programs.	Financial linkages: government and teachers	The two social security agencies (SSS for private sector employees & GSIS for public sector employees) collect Medicare premiums & remit contributions of eligible members to their respective HMOs.
- Voluntary/Compulsory	Compulsory for private sector workers; voluntary for others.	Voluntary	Voluntary
ENROLLEES AND EMPLOYERS			
- Eligible Population	- Social Security affiliation: private, formal sector employees, some civil servants, some informal sector groups. Individual and group affiliation also possible.	- All primary & secondary school teachers & dependents; retired teachers.	- Medicare enrollees living and/or working in the metro Manila. No rejection of members who want to enroll. Made contributions to Medicare for at least 3 of the last 9 months.

(5) Pre-Payment Plans (Government/social security linkages to private providers)			
VARIABLE	**IAMC/URUGUAY**	**SEMMA/ DOMINICAN REPUBLIC**	**MEDICARE-HMO TIE-UP PHILIPPINES**
ENROLLEES AND EMPLOYERS(con't) - Number of Enrollees (primary members) - Unit of Enrollment (individual, family, village, employer, occupational group, etc.)	- Social Security: 470,800 (workers) - Individual/collective: 941,556 (workers and dependents) - Special gov't programs, employer-based schemes, & other arrangements: 117,000 (workers & dependents)	- 103,000 enrollees (teachers and dependents).	- August 1990: 85,394; Family, 254,299.
- Total Coverage	- 1,529,000 (50% of population)	<2% of the population	- 254,299 members and dependents
- % Eligible Pop. Coverage - % Labor Force Coverage - % Population Coverage - % Urban/Rural Coverage	- % Labor force: private sector, 71%; informal sector, 34%; public sector, NA. - Pop. coverage: Montevideo, 72%; rest of country, 26%	- N. - one-third of enrollees registered in Santo Domingo.	Tie-up: 7.8% metro Manila Medicare members.
- Characteristics of enrolled firms: size, industry type, average wage, etc.	- % Labor coverage: Industry and Commerce, 89%; Rural, 55%; Domestics: 21%	- Coverage in all major and secondary cities.	- Big, labor intensive companies; government employees and public school teachers. - 47% manufacturing; 11% government; 6% retail; 36% production; 19% clerical; 13% professional; 7% sales.
- Socioeconomic, demographic, and labor force characteristics of insured population vis-a-vis uninsured population.	- 72% of HHs with highest one-third of income enrolled compared to 53% of HHs with middle third, and 11% with lowest third. - 68% of total affiliates reside in Montevideo.	- Teachers are the lowest paid salaried employees in the DR. Earn less than private sector minimum wage.	- Average age 33.2 yrs. with 2/3 under 34 years. - 1.19 dependents on average. 56% of dependents are children under 15; 16% of dependents over 60.
- Other (specify)			- There is adverse risk selection by HMO, so principle of cross between sick and healthy within the regular Medicare program is lost.

(5) Pre-Payment Plans (Government/social security linkages to private providers)			
VARIABLE	IAMC/URUGUAY	SEMMA/ DOMINICAN REPUBLIC	MEDICARE-HMO TIE-UP PHILIPPINES
MANAGEMENT			
- Benefits Covered - Inpatient Services - Outpatient Services - Preventive/Family Planning - Other	- Comprehensive except for high tech and special procedures that are covered through a national social financing plan.	- Comprehensive: Certain "expensive" treatments and procedures are excluded.	- Outpatient: some - Inpatient: yes - Preventative Family Planning
- Equality of benefits among enrollees - Equality of access to benefits (services) among enrollees	- Most facilities are located in Montevideo; more limited access in interior states.	- Higher-quality providers located in largest cities.	- Equality of access to benefits among enrollees.
- Cost Control Measures - deductibles - copayments - exclusions - spending/illness duration caps - waiting period - other (claims analysis, util. review, prior authorization)	- Copayments are common but are reduced or waived by some IAMCs as a marketing strategy. - No effective cost control & utilization management.	- Copayments: utilization ceilings, exclusions; some prior authorization.	- Copayments: some for inpatient care - Exclusions: only specified services provided, inpatient and basic outpatient.
- Other			- Claims analysis, utilization review, prior authorization.
- Use of reinsurance	- NA: Government subsidizes BSP deficit.	- Government	- Catastrophic cases are reverted to the regular Medicare program after initial servicing by HMOs.
- Premium Price - individual - family - group	NA	- US $3.50 p/p monthly - US $14 monthly for family of four.	- Individual - Family, 24.25 pesos per month.
- Rate setting system (based on cost analysis, actuarial analysis, competitors' prices, etc.)	- Rates negotiated with BSP; Individual/collective rates subject to price controls.	- Negotiated among government, teachers union, SEMMA, and providers.	NA
- Verification of Insurance status - Fraud control measures	NA	- Yes	NA

(5) Pre-Payment Plans (Government/social security linkages to private providers)			
VARIABLE	**IAMC/URUGUAY**	**SEMMA/ DOMINICAN REPUBLIC**	**MEDICARE-HMO TIE-UP PHILIPPINES**
MANAGEMENT (con't) - Other			- Weak Points: Administrative difficulties; poor patient & provider education; low first-year utilization.
RELATIONS WITH PROVIDERS			
- Direct/Indirect provision - Closed/Open provider network	- BSP-financed: indirect provision; - IAMCs: closed networks.	- SEMMA affiliates enroll with only one facility where they receive all services.	- Direct Provision - Closed Network
- No. of affiliated facilities (and location) - No. of affiliated physicians	- Varies: most IAMCs possess one outpatient facility. Contracts with private hospitals are common.	- 50 facilities nationwide	- Hospitals: 33 Manila/52 total; Clinics: 15 Manila/24 total - HealthKard: 102 Manila/103 total
- Provider selection criteria	NA	- Facilities are responsible for contracting physicians.	NA
- Provider payment system(s) - Base of compensation (fee-for-service, salary, capitation, etc. - Level of compensation (market, administratively decreed, negotiations between providers and third party, etc.). - Institutional Setting (from patient to provider, from third party to provider, etc.).	- Varies: fee-for-service, salaried employment, capitation. - NA - NA	- Capitation of facility: negotiated between facilities and SEMMA. - Physician compensation system depends on facility. - SEMMA pays capitation payment on monthly basis depending on the number of enrollees.	- Some practitioners are salaried, some are fee-for-service. - Usually below market - From HMO to provider. From patient to provider, then from HMO to patient.
- Provider payment schedules (sample of high-volume services)	NA	- Each facility maintains fee schedules for physician services.	NA
- Other (specify)	NA	NA	- Confusion with reimbursement procedures. Delays in payment for benefits range from 65 to 128 days. As of September 1990, 1066 claims filed, only 33% have been settled.

(5) Pre-Payment Plans (Government/social security linkages to private providers)			
VARIABLE	IAMC/URUGUAY	SEMMA/ DOMINICAN REPUBLIC	MEDICARE-HMO TIE-UP PHILIPPINES
FINANCING AND EXPENDITURES			
- Revenues by source - Direct and indirect subsidies - Equality of financing mechanisms	- BSP, government, individuals, and groups.	- Premium shared by government (75%) and teachers (25%). Copayments for some services can be substantial.	- 24.25 pesos per member per month. - No drawing necessary to date. -Flat rate per family, regressive.
- Expenditures - inpatient - outpatient - other - administrative (loading) costs	NA	NA	- Inpatients: Expenses largely drugs, surgery fees, x-ray, lab, room & board; biggest drugs. - High administrative costs, include sales commissions, supplies, advertising and promotions, utilities, wages and salaries.
- Administrative costs as % of total costs, premium	NA	- NA: probably high	NA
- Investments	NA	NA	NA
- Financial Equilibria/Debt	- Large number of bankruptcies during 1980s.	No deficit.	- Very successful, profitable.

(5) Pre-Payment Plans (Government/social security linkages to private providers)			
VARIABLE	IAMC/URUGUAY	SEMMA/ DOMINICAN REPUBLIC	MEDICARE-HMO TIE-UP PHILIPPINES
UTILIZATION			
- by category of enrollees - by service (preventive, inpatient, outpatient, etc.) - by provider type	- Heavy emphasis on curative care.	NA	- Inpatient: 6/1990, 1,066 hospital patients; utilization rate 1.15. Tertiary hospitals 72% of inpatient claims; 60% admissions for ordinary care. Average stay 5 days. 63% of practitioners were specialists. 84% treated by only one practitioner. Most accommodated inward rooms. - Outpatient: 8/1990, 1,389 outpatient visit, utilization rate 1.51. 80% visits for general medical consultation and minor treatment. - Utilization rates: HealthKard more than 2 time Pamara.
- utilization rates: insured vs. uninsured	- 5.4 annual medical visits per enrollee vs. 2.4 for MSP (1985).	NA	NA
- evidence of adverse selection and moral hazard	- Substantial: 1988 study of ambulatory care of largest IAMC: 7.9 medical visits, 11.5 drugs, and 3.4 diagnostic exams per enrollee.	- Probably low: Since facilities are at risk, many seek to control costs through utilization management.	NA

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