

DDWAG 200

MHS INTERNSHIP FINAL REPORT

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I. School of Hygiene as preparation for the internship

I came to Johns Hopkins with a generalist orientation to public health and international development. My biology background and five summers of experience with the field programs of Amigos de las Americas had stimulated my interest in nutrition, disease control, program administration, Latin America and the provision of essential services in rural areas with limited resources and infrastructure (at Hygiene, I learned to think of the latter as "primary health care"). When one enters the School of Hygiene with a wide range of interests, as most students do, the first and continual challenge is to define one's coursework priorities and educational objectives. This is good training, since defining priorities seems to be the cornerstone of public health.

My learning objectives in the MHS program came to be articulated in terms of the planning, management and evaluation of primary health care services. These incorporated basic public health knowledge (through the MPH core courses), technical orientation (through coursework on PHC components and the epidemiology of specific diseases), and analytical and management skills (through the MHS area of concentration). I feel that my educational objectives were well served by the training offered by the School of Hygiene and that the coursework gave me a strong and well-rounded foundation in public health. This belief has been substantiated by my internship experience, as I will describe in this report.

Did the achievement of these objectives prepare me for what was expected of a PRICOR intern? My answer is yes, both because School of Hygiene training prepared me to do a variety of activities and because PRICOR's expectations were very flexible. I was very fortunate in finding an internship which offered diversity in its activities and which could be adapted to the intern's background and interests. Perhaps because the PRICOR staff has an interdisciplinary outlook,

I found that the particular skills and knowledge I brought to the internship were well utilized in the tasks that I have been assigned.

While I will discuss in subsequent sections the relation of specific internship activities and MHS coursework, I would like to summarize here what I consider the most important general attitudes which were developed or reinforced during my residency at the School of Hygiene and Public Health. First and foremost, the ability to think analytically, to be able to apply epidemiologic methods to a variety of complex problems in order to break them down into meaningful parts and relationships from which solutions can be generated (I think of this as an epidemiologic orientation). Second, the ability to define objectives and then purposefully plan activities so as to meet these objectives (a planning orientation). Third, I think that I was indoctrinated (in a positive sense) in the idea that public health is the science of setting priorities, of making choices about the most effective use of scarce resources (if you will, an economic orientation). These three perspectives sum up much of my formal public health training and have prepared me well for work as an intern at PRICOR.

II. PRICOR internship as educational experience

The objectives of the PRICOR internship have been described previously in my initial MHS internship status report (December 1, 1983) and are attached for reference as Appendix A. I would like to comment briefly here on the extent to which the most significant of these objectives were achieved and in many cases exceeded.

1. Primary Health Care in developing countries: Although most of these objectives had already been met through courses taken at the School of Hygiene, reading the many concept papers and proposals received at PRICOR and being involved in the preparation of the methodological papers in the four PRICOR priority research areas have enhanced my understanding of the operational problems impeding the

expansion of PHC and of approaches to solving these problems. The exposure to what research problems are identified in the many different countries where PRICOR projects are being carried out has been very broadening for me.

2. Operations Research: I have become very familiar with the steps in the OR approach as promoted by PRICOR for developing solutions to problems in PHC delivery, in large part through efforts to communicate this approach simply and clearly to researchers in developing countries. I have learned how to apply simple OR techniques (such as those in Delp, et al.) to problem analysis and solution development, but have not been exposed as much as I expected to complicated research design and advanced statistical methods. The modest level of complexity of the research approaches which I have become acquainted with is related to the fact that many of the studies funded by PRICOR are conducted by individuals with limited research training. On the whole, the use of simple, "common sense" approaches to operations research in PHC seems highly appropriate and consistent with the philosophy of primary health care.

3. International Health: Working in Washington for an AID contractor has given me very useful insight into the regulations and operating procedures of the Agency for International Development. Through interactions with AID as well as with consultants, investigators, members of PRICOR's Advisory Committee and other organizations working in PHC, I have gained a clearer understanding of the character of development assistance work, in both its positive and negative aspects.

4. Proposal Development: This is perhaps the area in which I had the most to learn at PRICOR. As an intern, I have been involved in all stages of concept paper and proposal review, including preparing feedback to applicants. This inside exposure to the review process has taught me a great deal about how to prepare an acceptable proposal as well as about the dynamics of the proposal

review process (how subjective and objective criteria interact in proposal evaluation).

5. Research Grant Management: This is another area in which PRICOR has given me very practical experience, particularly in the negotiation of contracts and budgets that comply with AID regulations and in the technical and financial monitoring of research studies. My activities in developing and monitoring PRICOR studies have been especially valuable in terms of my interest in working in Latin America, as I have had many opportunities to communicate in Spanish or Portuguese with Latin American investigators. Also, the experience of dealing with so many studies in different countries and witnessing the problems which commonly arise with both financial and technical aspects of the research will be very useful for future work in international health.

The other educational objectives listed in Appendix A (relating to micro-computers in management, conference planning, literature repository and dissemination of research results) have been met or will have been met by the conclusion of the internship.

In analyzing the internship as an educational experience, I conclude that working at PRICOR has certainly developed and amplified skills I acquired at the School of Hygiene. I think the key determinants of this successful experience have been the following:

(i) Most importantly, the attitudes and supportiveness of the PRICOR staff. They have been conscious of making the internship as educationally and professionally stimulating as possible. As an intern, I was from the start treated as a full member of the staff, given responsibility and encouraged to assume new tasks. This relationship has been mutually beneficial and has motivated me to perform up to expectations.

(ii) The broad scope of work of PRICOR. My activities as an intern have encompassed a variety of very different tasks which have evolved as the PRICOR project itself has developed.

(iii) The well-organized nature of the PRICOR project and the good relations among the staff, making for a very pleasant working environment.

(iv) Finally, the strategy of having two interns simultaneously (and the fact that the other intern and I work well together). Just as in courses at the School of Hygiene, I have found that the quality of the internship experience has been improved by discussions with and reinforcement from the other intern. This has been an important lesson for me about the way I learn new tasks.

In conclusion, then, my own experience is that the internship has made a significant contribution to my public health education.

III. Internship as international health practice

As I noted in the initial status report, my interests in international health are in working in PHC program implementation at the regional and community levels, and not primarily in research. At PRICOR, I have been mainly involved in developing and monitoring operations research studies in PHC from the viewpoint of the external funding agency. Since my immediate career objective is still to work in the management of PHC services delivery in developing countries, in this section I would like to describe how the internship at PRICOR has been a relevant work experience that has built on areas of training at Hygiene and that will be useful in subsequent field work.

In my MHS program concentration and in the internship, I have sought to develop expertise in the areas of planning, program and project development, management/administration, quantitative methods and analytical techniques for evaluation, and primary health care (see Appendix B for list of courses taken). For each of these areas, comments are made with respect to the appropriateness

of the coursework preparation, the specific skills practiced in the internship and their relevance to field applications in developing countries.

A. Planning. The operations research approach which PRICOR endeavors to promote has been described as a "future-oriented planning technology" because of its emphasis on analytical procedures for decision-making about alternative courses of action. This three-phased OR approach of problem analysis, solution development and solution validation is really an application of the planning process taught in Comprehensive Health Planning or the evaluation process taught in Introduction to Community Health Services Research Methods. The functionality of the same approach in health services planning, problem-solving and evaluation underscores the interdependence of these processes and the fact that the same analytical tools are used in each. Many of the procedures taught in Basic Techniques for Health Planning, for example, are advocated by PRICOR as OR techniques. I thus came to the internship with more of an OR background than I had realized.

The relevance of this general planning approach for national policy-making (macro-planning) as well as for regional and local PHC program management (micro-planning, management evaluation) had been strongly advocated in my coursework. At PRICOR I have learned how generally useful this approach is to problem-solving by seeing its repeated application in a spectrum of operations research studies. I think I am more skilled now at applying this planning/problem-solving approach and will be more likely to really use it in my own field work.

B. Program and project development. Though I did not take specific courses in program/project development (I audited Practical Approaches to Family Planning), the one course in research design (Introduction to Community Health Services Research Methods) which I took proved to be a very useful background for a

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significant part of my internship activities, that is, in the development and review of research proposals. As described earlier, through the PRICOR internship I have become familiar with the technical requirements of an operations research study as well as with the preparation of budgets and subordinate agreements that meet AID regulations. These skills are equally relevant to project or program development, particularly in view of the pervasive influence of AID in the financing of international health activities. Again, the same approaches seem to apply to developing a PHC program in Bolivia as in designing an OR study in Sierra Leone, such that my internship experience would be an appropriate background for subsequent work of either type. An advantage of working at the central level as at PRICOR is that one can learn from the experience of many projects, rather than just one (although not with the same depth that day-to-day association with one project provides). At PRICOR I have gained such experience in the mechanics and logistics of starting up and then running a project by working as the intermediary between PRICOR researchers and AID Contracts.

C. Management/administration. Having come to the MHS program with some administrative experience, I was convinced that management skills were really only acquired through practical experience (or from innate common sense), rather than by reading theories in textbooks. The two management courses I took at Hygiene seemed to approach the subject from these two opposite perspectives: the practical vs. the theoretical. On the one hand, Management of PHC in Developing Countries was very experientially oriented and relied heavily on group discussion of personal field experiences. On the other, Theory and Practice of Management of Health Services adopted a textbook management approach, concentrating on traditional management science and behavioral theories. At the time, I found the former considerably more meaningful and relevant.

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The internship at PRICOR and the Center for Human Services (the contracting firm) has caused me, interestingly enough, to draw on background from both courses, as well as exposing me to "real world" management problems and approaches. First of all, PRICOR itself has been an excellent example of effective management practices through the use of work plans and other control tools (including micro-computers) and good staff communications. Communications and control break down in some areas occasionally, but learning to cope with crises is part of the process, too. Second, the Center for Human Services is a moderately large research/consulting firm that is managed by "management types". Consequently, activities and relationships within the company are often articulated in the language of management science. The company's size and its compartmentalization into various autonomous projects (such as PRICOR) has been an enlightening demonstration of the problems in and different approaches to intra-organizational communications, lines of authority, leadership, strategic planning, employee motivation, etc. This experience has made the material covered in the summer management class seem more relevant than I had assumed, mainly by giving me a background to which I can relate when I encounter these theories and management models being applied.

I still believe that the effective management of primary health care relies in large part on experience acquired in the field, but as a result of working at PRICOR I feel I have learned several useful management/administrative practices that are applicable to any staff situation. Among these, working to maintain good staff communications seems to be the most important.

D. Quantitative methods and analytical techniques for evaluation. A great deal of emphasis is placed at the School of Hygiene on the use of quantitative methods, particularly for evaluation purposes. I feel I came to the PRICOR internship

with strong quantitative and analytical skills, appropriate to the orientation of operations research. I have been somewhat surprised to realize during the course of the internship that in many of the PRICOR-funded studies, the application of the OR approach does not rely extensively on quantitative methods or advanced statistical techniques. The use of descriptive statistics and chi-squared in quasi-experimental designs is most common, with only a few studies employing forms of linear programming or regression analysis.

Despite the fact that many PRICOR investigators seem to shy away from quantitative methods, the internship experience at PRICOR has reinforced the idea that simple quantitative approaches exist (such as utility weights and cost-effectiveness ratios) that can be very effectively applied to problems in primary health care delivery and that program managers and researchers in developing countries do not need extensive training in statistics or operations research to do so. Such techniques were emphasized in a number of Hygiene courses, including Epidemiology 1, Basic Techniques, Analytical Models and Quantitative Decision Procedures, and continue to seem very appropriate for use in PHC planning and research. It has been quite informative to see how PRICOR has tried to encourage use of non-sophisticated quantitative and analytical methods in the studies it funds.

One final comment with respect to a theme in data analysis which was repeatedly emphasized in Hygiene courses as well as by PRICOR staff: the judicious use of data. The tendency in a few of the PRICOR-funded studies has been toward collection of a great deal of data, with limited meaningful analysis carried out on the voluminous information obtained. The impulse to collect lots of data in large surveys seems to be very strong among researchers. The inefficiency of not carefully considering what information will really make

a difference to decision-making and limiting data collection accordingly has certainly been supported by my experience at PRICOR.

E. Primary health care. The strong foundation in primary health care provided by the Department of International Health and my own biology/health background have seemed to me to be very important assets for effectively reviewing proposals and monitoring PRICOR research studies. That is, while many operational problems studied have primarily logistical or management components, it has nevertheless been important to understand the substantive nature of primary health care interventions in order to determine if a particular study or proposal is really on target. While I think the experience at PRICOR has taught me to analyze operational problems in PHC delivery more effectively, in terms of decision variables and constraints, I also believe that knowledge of and actual experience with PHC at the community level is an equally important ingredient for thorough problem analysis. Although in the internship I have only indirectly dealt with operational problems in primary health care, I feel that I am better equipped to resolve such problems because of what I have learned from the experiences of PRICOR-funded studies.

IV. Outcomes of the PRICOR experience

A. Internship purpose fulfilled. The internship has served as useful purpose for me, perhaps more than for any other reason because it has given me confidence in applying what I knew and what I learned at the School of Hygiene to the real world of international health and development assistance. It will certainly be helpful in looking for another job to have both the degree and relevant work experience. I also have a more realistic understanding of the different job opportunities that are compatible with my skills and so am better prepared to make choices about what my career objectives are in international public health.

B. What the internship experience has reinforced. In addition to the skills and attitudes already discussed, the PRICOR internship has reinforced several beliefs I hold about international health. These are summarized as follows:

(i) Public health practitioners need a wide variety of skills from the natural and social sciences to be effective. Public health problems require an interdisciplinary approach.

(ii) Development assistance is a two-way responsibility. Just as recipients have an obligation to use funds and resources prudently to achieve planned objectives, donor agencies have a responsibility to insure that the assistance provided is adequate and can in fact be absorbed or properly utilized by the recipients. PRICOR has impressed me with its concern that studies indeed have research teams with adequate backgrounds for carrying out the research and also with its attitude that it is the responsibility of the funding agency to provide within its possibilities the appropriate resources to carry out the study.

(iii) Technical assistance requires continuity to be effective. Quick fixes of consultants, with rare exceptions, do not seem to have an impact unless a working relationship has already been established between the consultant and the recipients.

(iv) The difficulty of communications across languages and cultures is usually underestimated. A great many of the problems which arise between donors and recipients relate to differing expectations and assumptions that do not get translated in letters and telex messages. Face-to-face dialogue and working relationships developed over time seem to be essential for effective communications.

C. What the internship experience has challenged. While on the whole, the internship has mostly reinforced attitudes I already held, working at PRICOR has challenged my impression that one needs a Ph.D. in statistics or a brigade

of consultants who do in order to carry out health services research in PHC. PRICOR experience has proven to me that operations research or health services research can be fairly simple and used by people with only minimal research orientation. The less complicated analytical techniques are probably the most useful and have greater potential impact in resolving problems in the delivery of primary health care because they are more widely transferable. I am now much more aware of the usefulness of incorporating research activities into ongoing program management and how this can be accomplished with limited resources.

D. Effects on career objectives and educational plans. As I indicated earlier, my immediate career objective is still to work in a management or advisory position in a PHC field setting. The experience of having worked at a central level funding agency will be useful for future field work, I am convinced, since in all probability I will be working in a program funded by external donors. The PRICOR internship has understandably stimulated my interest in applied research and has given me some ideas about possible directions for later doctoral study, which I am likely to pursue. Above all the internship has reinforced my judgment that where I should go from here is to work in a developing country setting to gain more field experience and to apply the skills I have newly acquired.

Appendix A

D R A F T

Educational Objectives of Intern Program

1. Primary Health Care (PHC) in developing countries
 - a) know the significant health problems and population groups affected in the various regions of the developing world
 - b) know the interventions that can effectively be applied against these problems and the groups to be targeted
 - c) know the common operational problems impeding the expansion of PHC
 - d) know the programs that have been developed in various parts of the world to expand PHC.
 - e) understand the current "state of the art" of PHC, especially in the PRICOR research priority areas (CF, CHW, CO, CD)
2. Operations Research
 - a) be able to design and carry out an analysis of operational problems
 - b) know the methods available to develop solutions to operational problems and be able to apply several
 - c) know the kinds of field tests appropriate for testing solutions and be able to design a valid field test
 - d) know the various methods for the collection and analysis of data and be able to design appropriate survey instruments and identify appropriate statistical methods for data analysis of the survey results
3. International Health - know the organizations involved in supporting PHC efforts in the developing world
4. Proposal Development
 - a) know the steps involved in developing a research proposal
 - b) be able to prepare a formal research proposal, including research problem, review of literature, methodology, management plan, staffing and budget
 - c) be able to prepare a proposal as a member of a team involving host country nationals.
5. Budgeting - be able to prepare a research study budget according to U.S. government regulations

6. Research Grant Management

- a) know the essential steps in grant (contract) management, including developing a research agenda, developing policies and procedures, publicizing research opportunities, liaison and coordination with other agencies, proposal review, study approval, contracts, proposal monitoring, dissemination of results
- b) be able to carry out some tasks in these processes

7. Microcomputers in Management

- a) know the ways in which microcomputers can aid in carrying out management functions
- b) develop computer literacy and be able to utilize the microcomputer to aid in carrying out certain management tasks

8. Conference Management

- a) know the essential tasks in planning and implementing an international workshop or conference
- b) be able to carry out some or all of these tasks

9. Literature Repository

- a) understand the essential components of a repository system and the essential tasks in implementing one
- b) be able to carry out all or some of these tasks

10. Dissemination of Research results

- a) know the essential tasks in planning and implementing a dissemination strategy
- b) be able to carry out all or some of these tasks.

Appendix B

List of courses taken at the School of Hygiene and Public Health

Introduction to Biostatistics
Introduction to International Health
Biological Basis of Public Health
Introduction to Population Dynamics
Intermediate Biostatistics
Environmental Health
Economic Analysis for Health Program Evaluation
Health Systems Analysis
Principles of Epidemiology
Quantitative Decision Procedures
Tropical Environmental Health
Economics of Health
Analytical Models for Health Practice Research and Planning
Community Nutrition in Developing Countries
Introduction to Community Health Services Research Methods
Management of Primary Health Care in Developing Countries
National, Regional and Urban Health Policy and Planning
Epidemiologic Basis for Tuberculosis Control
Comprehensive Health Planning
Basic Techniques for Health Planning
Introduction to Computing
Social, Economic and Political Context of Public Health
Theory and Practice of Management of Health Services
History of Public Health