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Country Health Profile
Indonesia

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DRAFT

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The Center for International Health Information, a division of ISTI, operates the USAID Health Information System under the Child Survival Action Program – Support project, #936-5951.13, contract number DPE 5951-Z-00-8004-00 with the Office of Health, Bureau of Science and Technology, U.S. Agency for International Development.

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INDONESIA
Country Health Profile

DEMOGRAPHIC INDICATORS

Total Population:	175,588,000†
Children Under Five:	20,968,300*
Crude Birth Rate:	27/1,000**
Crude Death Rate:	10/1,000**
Infant Mortality Rate:	70/1,000†
Child Mortality Rate:	46/1,000*
Life Expectancy at Birth:	56 Years†
Annual Births:	4,745,000*
Total Fertility Rate:	3.4 ChildrenΔ

HEALTH INDICATORS

Immunization Coverage:

DTP3	61%
Polio3	62%
Measles	55%
BCG	74%
Tetanus2	29%

Oral Rehydration Therapy:

ORS Access Rate	90%
ORT Use Rate	72%

Contraceptive Prevalence:	48%
Appropriate Infant Feeding:	NA
Adequate Nutritional Status:	NA

See Data Notes, page 4

All data from USAID Health Information System, CIHI
Demographic Data:
†U.S. Bureau of the Census
*United Nations, 1987, 1988
**Population Reference Bureau, 1988
ΔDemographic and Health Surveys, 1987
ORT Data:
For 1987, WHO Report, 1989
Immunization Data:
For 1988, WHO/EPI Report, February, 1989
Project Data:
FY88 Health and Child Survival Project Questionnaire

General Profile

Of Note

As national immunization levels exceed 50 percent for most vaccines, Indonesia's Department of Health is implementing a strategy to reduce the high rates of morbidity and mortality due to neonatal tetanus, including rapidly increasing the number of women fully immunized against tetanus and providing more effective prenatal, delivery and postpartum services.

Health Status

Indonesia's health status has improved dramatically in recent years, demonstrated partly by the declining infant mortality rates (IMR). The IMR, generally an excellent indicator of a country's overall health status, has been falling steadily over the past two decades. Improvements in health status are primarily the result of the government's commitment to provide basic, preventive health services in both rural and urban areas, rather than development of an exclusively urban, hospital-based curative health system. Effective outreach has been achieved in part through training of volunteer health care workers at the village level who function similarly to China's "barefoot doctors."

Despite Indonesia's impressive gains in the provision of health services, including over 60 percent immunization coverage and nearly universal access to oral rehydration salts, serious problems remain. The ratio of physicians to citizens is unusually low, and while the service delivery infrastructure is extensive in its coverage, it is often under-utilized and of inferior quality. Access to safe water is severely limited, and waterborne diseases, especially typhoid, hepatitis and bacillary dysentery, are widespread. Most tropical diseases are prevalent in Indonesia, and malaria is endemic throughout much of the country. The vast majority of child deaths, 60 percent in 1983, are caused by diarrheal diseases. The fact that more than 70 percent of diarrheal episodes in children under age five are now treated with oral rehydration therapy indicates that progress is being made in addressing this problem.

Breastfeeding

Breastfeeding rates are high throughout Indonesia. According to a recent national survey conducted by Demographic and Health Surveys, 80 percent of all infants are breastfed for twelve months. This rate remains relatively high as 40 percent of all two year old children are still being breastfed. However the survey also indicates that education and urbanization are having a negative impact on these rates. The mean number of months of breastfeeding for a mother who has completed a secondary education is 19. This is compared with a mean of 28 months for women lacking any education. Mothers in urban areas breastfeed their children about 6 months less than mothers in rural areas.

High Risk Births

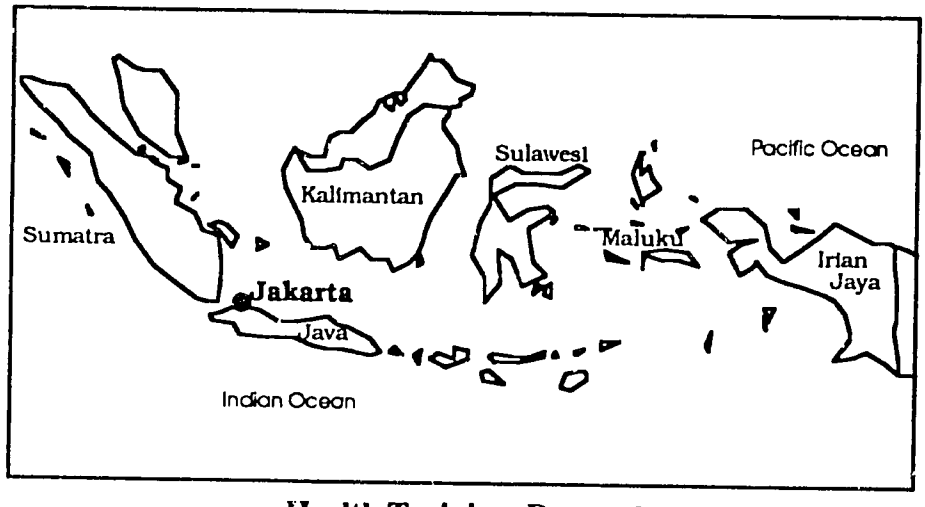
The impact of high risk births on the infant mortality rate is clearly demonstrated in the information obtained by the Demographic and Health Survey. According to the information collected, the infant mortality rate for mothers less than 20 years old is 99.2. The rate drops to 68.1 for mothers in the age group of 20 to 29 years. According to this study, infants born less than two years apart have an infant mortality rate of 109.1. The infant mortality rate drops to 50.6 for infants born more than 4 years apart. (*See Graph page 3*)

Nutrition and Diet

The staple food in Indonesia is rice, supplemented by corn, cassava, sweet potatoes and wheat flour. Most protein is provided by fish. The average per capita food intake closely approximates FAO minimum daily requirements for adequate caloric and protein intake.

USAID Health and Child Survival Project Support

•**Expanded Program on Immunization** (EPI) supports the Ministry of Health's immunization activities and investigates obstacles to greater coverage. Last year, the project helped vaccinate over 3,800,000 children and worked to include religious and community leaders in promoting tetanus immunization. A new sentinel system was developed to collect data from health centers in each of Indonesia's 301 districts.



•**Health Training, Research and Development** helps the Ministry of Health expand ORT activities in rural West Java, South Sulawesi and South Sumatra. The project promotes ORS, provides training in improved diarrhea case management to health care workers and mothers and establishes Diarrhea Training Units. Based on project experiences in West Java, a national social-marketing strategy for ORS/ORT is being developed with the Ministry of Health and consultants.

•**Comprehensive Health Improvement Program** assists health officials in Aceh, West Sumatra and Nusa Tenggara Timur to better target, manage and evaluate health and nutrition activities. The project helped establish an evaluation system for health coverage, immunization campaigns and an infant mortality survey.

•**Village Family Planning/MotherChild Welfare** operates in seven provinces providing ORT, immunization and breastfeeding promotion through integrated village health services posts called Posyandu. A monthly newsletter sharing information among program units has been established, and lessons learned from Posyandu are being extended to other provinces.

•**Community Food and Nutrition Program** is working with several Indonesian private voluntary organizations to integrate nutrition and other child survival activities with their Title II food distribution programs. To help poor rural women better understand the relationship between child growth and health, the program promotes a growth surveillance system designed for semi-literate mothers.

•**PVO Co-Financing II** provides U.S. and local private voluntary organizations with support to integrate nutrition and other child survival activities with Title II food distribution programs.

•**Family Planning Development and Services II,** works with the National Family Planning Coordinating Board promoting child spacing and contraceptive use in 14 provinces. During 1988, nearly 2,000 health workers and program administrators were trained in developing and managing high risk birth services.

•**Faculties of Public Health** supports the government's efforts to expand public health education. The project is helping the faculties of regional schools of public health develop facilities, curricula and research programs.

•**Timor Malaria Control** worked to develop a self-sustaining malaria control program for the rural population of Timor Island. Last year, 10,000 households received locally produced insecticide-impregnated bed nets. At the project's completion, malaria prevalence had dropped to below 8 percent in both East and West Timor.

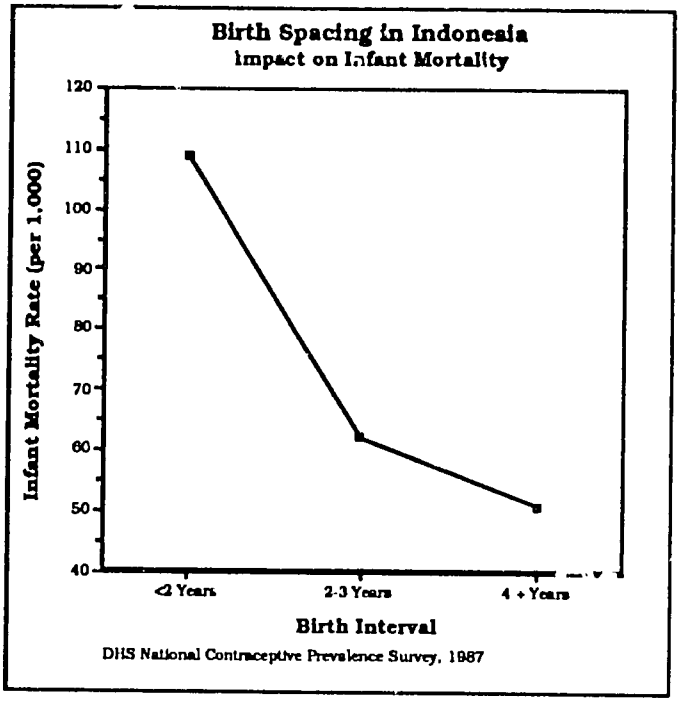
•**Health Sector Financing,** a new project, will provide technical assistance to the Ministry of Health to help ensure the financial sustainability of child survival programs. Project goals include improved cost recovery for cost-intensive services and a redirection of savings to child survival programs.

•**Applied Diarrheal Disease Research Project** is sponsoring a proposal development workshop on diarrheal disease research at the Center for Child Survival, University of Indonesia.

•**HEALTHCOM** (Communication for Child Survival) provides assistance in training of kaders and in developing a communications strategy for vitamin A promotion. Last year HEALTHCOM produced approximately 4,500 training manuals on ORT and vitamin A, as well as three 60 second radio spots on vitamin A.

•**PRITECH** (Technologies for Primary Health Care) supports the national diarrheal disease control program through technical assistance in ORT program management in West Java, South Sumatra and South Sulawesi.

•**American Medical Association** (AMA) supports a program with the Indonesian Medical Association to involve private practice physicians in child survival activities. Project activities include workshops for physicians, training of volunteers and data collection.



•**PRICOR** (Primary Health Care Operations Research) helps the University of Indonesia's Center for Child Survival with operations research in ORT, immunization and ARI.

•**UNICEF** promoted ORT and EPI activities in rural Sumatra, Java and Nusa Tenggara, and instructed over 10,000 health "motivators" and trainers in immunization.

Short-term technical assistance in FY88 was reported by the following projects:

•**AIDSTECH** in AIDS education and prevention.

•**A Child Survival Fellow** supported vitamin A activities.

•**REACH** (Resources for Child Health) in health care financing.

•**TACS** (Technical Advisors in Child Survival) assisted in implementing immunization programs.

•**VBC** (Vector Biology and Control) in malaria control and management.

•**Improvement of Maternal/Infant Diet** in lactation management education programs for health professionals.

U.S. Private Voluntary Organizations Assistance

•**Adventist Development Relief Agency** staff nurses are stationed in 14 local health centers and work in support of the government's efforts to provide immunization, family planning and ORT and nutrition education to 350,000 persons. Last year, the project trained vaccinators and nurses in EPI techniques and village health workers in follow-up of high risk families.

•**CARE** works with the Government of Indonesia in East and West Java and West Nusa Tenggara to help manage village level primary health care services. Training of village health workers is provided by an integrated team from the health department, family planning board, health education center, and the departments of religious affairs, women's affairs, agriculture and education. They provide training in diarrhea prevention, ORT, immunization, breastfeeding and appropriate weaning practices to village health workers who in turn instruct mothers in these interventions.

•**Helen Keller International** (HKI) developed vitamin A marketing messages and trained nearly 2,500 health workers in vitamin A distribution. Last year, HKI trained over 5,000 health workers and community leaders in diarrhea case management, and 500 retailers in the preparation and sale of ORS.

•**Project Concern International** (PCI) sponsors monthly integrated health clinics in rural areas of Kolaka and Southeast Sulawesi where villagers receive immunizations, ORT, nutrition education and child spacing and growth monitoring programs.

•**Save the Children Federation** (SCF) provides immunizations, ORT and child spacing and growth monitoring programs in the Duri Utara area of Jakarta, through monthly clinics managed by community health workers. In 1988, SCF helped combat an outbreak of mosquito-borne dengue fever through sales and distribution of larvicide.

Sources

USAID Health Information System, Center for International Health Information/ISTI.

Indonesia: A Country Profile. Office of Foreign Disaster Assistance, Agency for International Development, 1983.

National Indonesia Contraceptive Prevalence Survey. Demographic and Health Surveys, Institute for Resource Development, 1987.

DATA NOTES

• Population

Estimates are taken from *World Population Prospects: 1988*, prepared by the Estimates and Projections Section of the Population Division of the Department of International Economic and Social Affairs, United Nations. That office prepares three different estimates, one based on a set of assumptions leading to a "low" projection; one to a "medium" projection; and one to a "high" projection. The figures presented in the graph are those of the "medium" projection.

The breakdown of the population by sex is calculated using the percentages of males and females as reported in the U.S. Bureau of the Census, International Data Base.

• Mortality Rates

The Infant Mortality Rate is the estimated number of deaths in infants (children under age 1) in a given year per 1,000 live births in that same year. Estimates and projections of infant mortality rates are taken from *World Population Prospects: 1988*, prepared by the Estimates and Projections Section of the Population Division of the Department of International Economic and Social Affairs, United Nations.

Although acknowledged as one of the best indicators of "development," the infant mortality rate is one of the more difficult to calculate. One problem inherent in the definition of the indicator is the fact that some portion of the deaths in the given year are occurring among children born in the previous year; that is the numerator of the indicator is determined in a different cohort of children than is the denominator. Estimates are generally made for a three or five year period to minimize the effects of this inherent weakness. For this reason, efforts to observe annual trends in this indicator should be avoided.

A term lacking a generally accepted definition, the Child Mortality Rate is the probability of a child who has survived to age 1 dying between the ages one and five (demographically expressed as 4q1). In the accompanying chart, rather than expressing the rate as a probability, it is expressed as the number of children per 1,000 who survive to age one and ultimately die before reaching age five. Estimates of the Child Mortality Rate are taken from *Mortality of children under age five: World Estimates and Projections, 19502025*, Population Studies No. 105, Department of International Economic and Social Affairs, ST/ESA/SER.A/105.

• Vaccination Coverage Rates

Vaccination coverage is defined as the proportion of living children between 12 and 23 months of age who have been vaccinated three times in the cases of polio and DPT and once in the cases of measles and BCG. The primary source of national vaccination coverage rates is the World Health Organization Expanded Programme on Immunization Report EPI/MISC/89.2. The results of the Demographic and Health Surveys (DHS), published by the Institute for Resource Development are reported where available.

Most frequently, WHO derives its estimates by first calculating the denominator of the above proportion by estimating the population in a country which survives the first year of live. The numerator, or number of children vaccinated, is determined from routine reports within the country. These are called estimates from routine reporting systems. Where cluster surveys of children are carried out, WHO reports the coverage as determined by those surveys. Confusions exists regarding the precise meaning of the expression "proportion of children 12 to 23 months of age." In some countries, a distinction is made between children in that age category vaccinated before the age of one and children vaccinated at any time. Countries are not consistent in applying this definition. CIHI/ISTI is not informed as to which definition was applied in either the computations done from routine reporting systems or from surveys.

The DHS estimates of vaccination coverage are predicated on only those children whose mothers have a vaccination card. One can only guess at the coverage among those children without cards; therefore, both a maximum possible and a minimum possible figure is available.

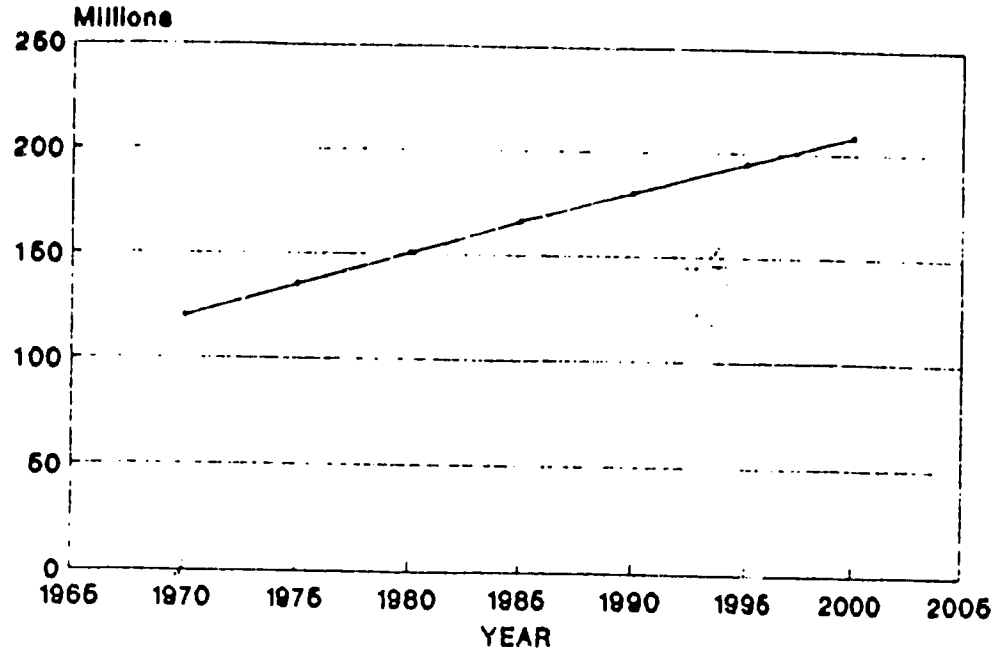
• ORS Access and ORT Use Rates

The ORS Access Rate is the estimated proportion of the population under age five with reasonable access to a trained provider of ORS who receives adequate supplies. The ORT Use Rate is the proportion of all cases of diarrhea in children under age five treated with ORS and/or a recommended home fluid. The primary source of information regarding these indicators is the World Health Organization Programme for the Control of Diarrheal Disease.

ORS Access is an extremely difficult indicator to measure consistently, either over time or across countries. In a recent informal communication with WHO, it was noted that the widely fluctuating rates in some countries, particularly those where access is reported to be declining, reflects the improving capacity to measure this indicator rather than any "real" underlying trend.

The ORT Use Rate is rarely estimated directly. Estimates derived from routing reporting systems begin with an estimate of the number of cases of diarrhea afflicting the under five population derived from population estimates and assumed diarrhea incidence rates in children. Combined with knowledge of the quantity of ORS available, estimates of ORT Use can be derived. An alternative method of determining a value for this indicator is through surveys. Generally, surveys determine the proportion of cases occurring during the two weeks preceding the survey that were treated with ORT. As more surveys are completed worldwide, greater knowledge regarding the use of home solutions should become available.

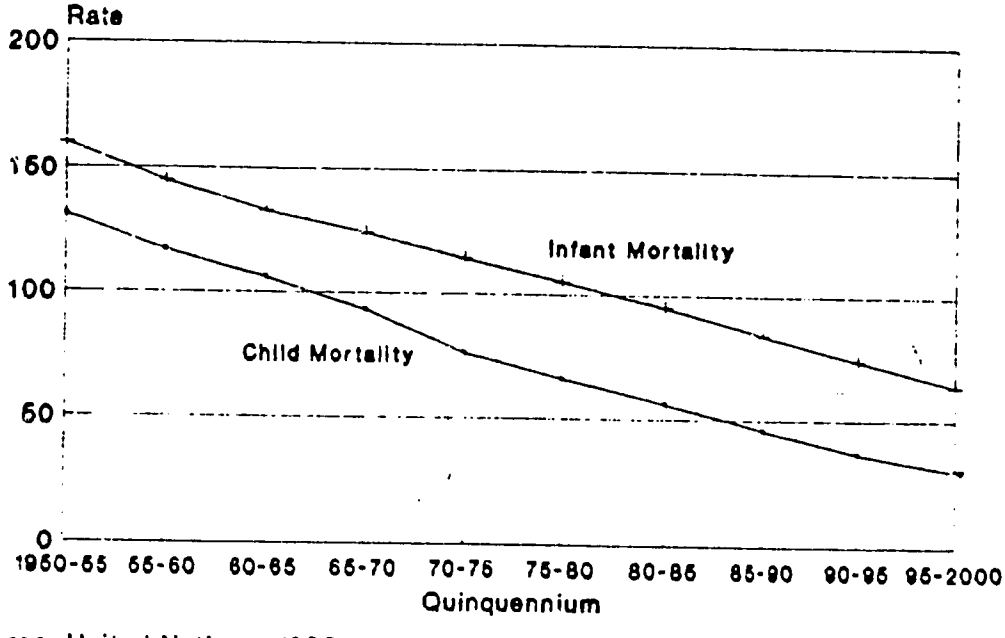
POPULATION ESTIMATES IN INDONESIA



Source: United Nations,
World Population Prospects, 1988

CIHI/ISTI, 7/1/89

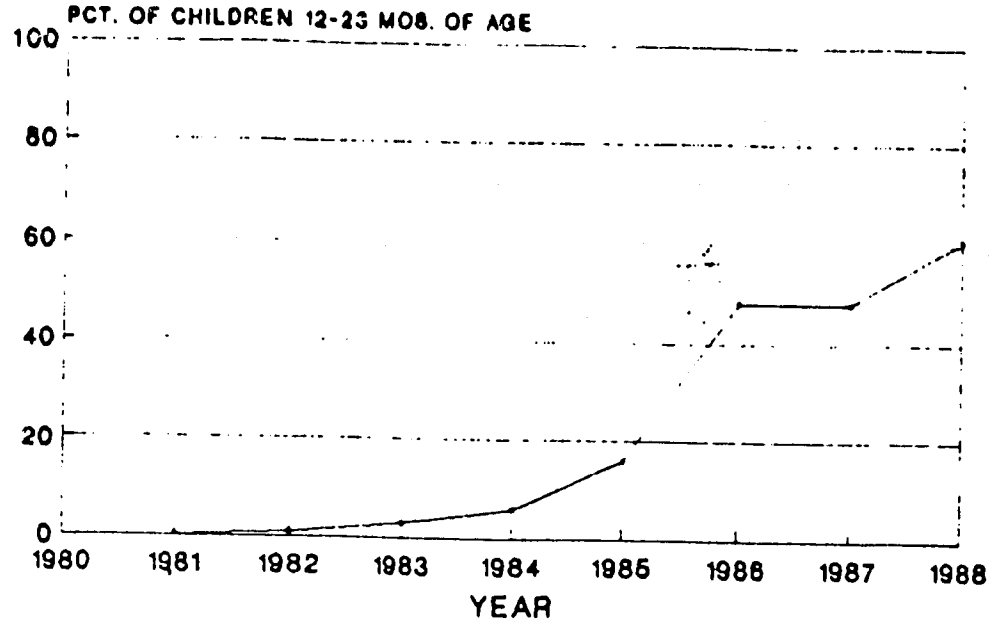
ESTIMATES OF INFANT AND CHILD MORTALITY RATES IN INDONESIA



Source: United Nations, 1988
1) World Population Prospects, and
2) Mortality of Children Under Age 5

CIHI/ISTI, 5/24/89

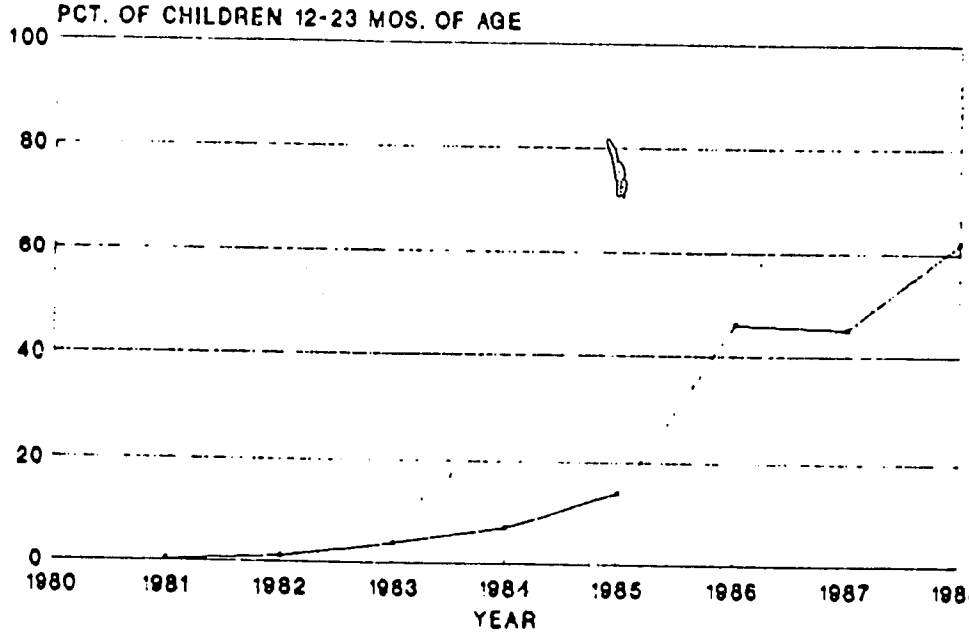
DPT III VACCINATION COVERAGE RATES IN INDONESIA



Source:
World Health Oganization
Report EPI/MISC/89.2

Center For International Health Information/ISTI, 5/16/89

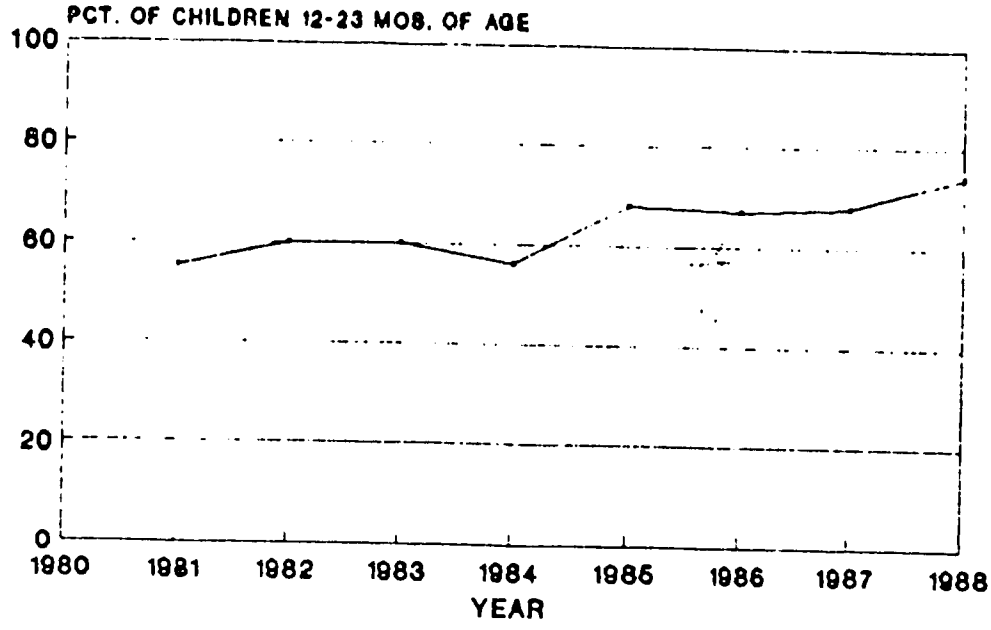
POLIO III VACCINATION COVERAGE RATES IN INDONESIA



Source:
WORLD HEALTH ORGANIZATION
EPI/MISC/89.2

Center For International Health Information/ISTI, 5/16/89

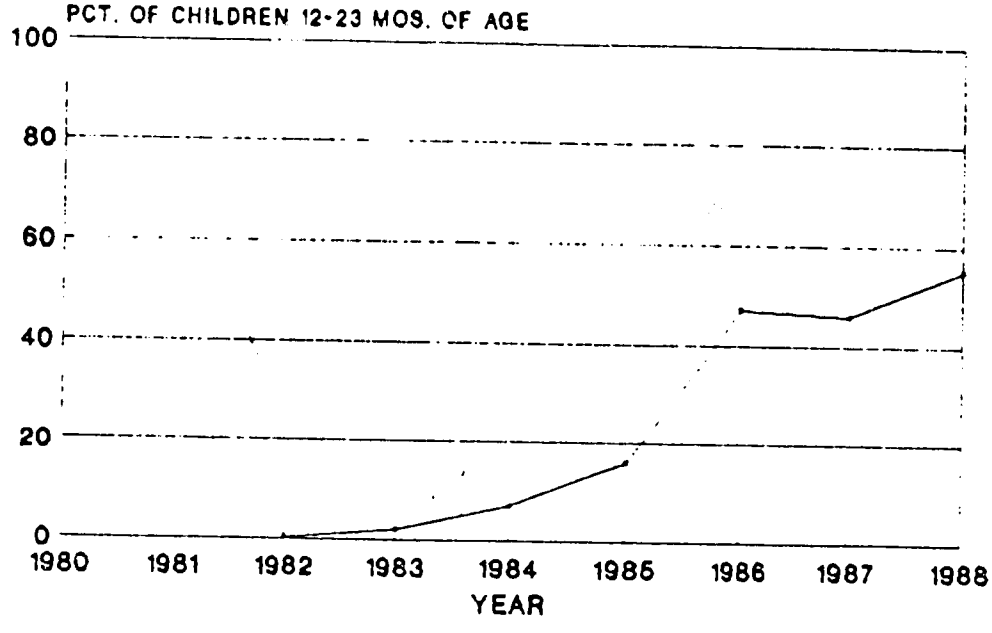
BCG VACCINATION COVERAGE RATES IN INDONESIA



Source:
World Health Organization
Report EPI/MISC/89.2

Center For International Health Information/ISTI, 5/16/89

MEASLES VACCINATION COVERAGE RATES IN INDONESIA



Source:
World Health Organization
Report EPI/MISC/89.2

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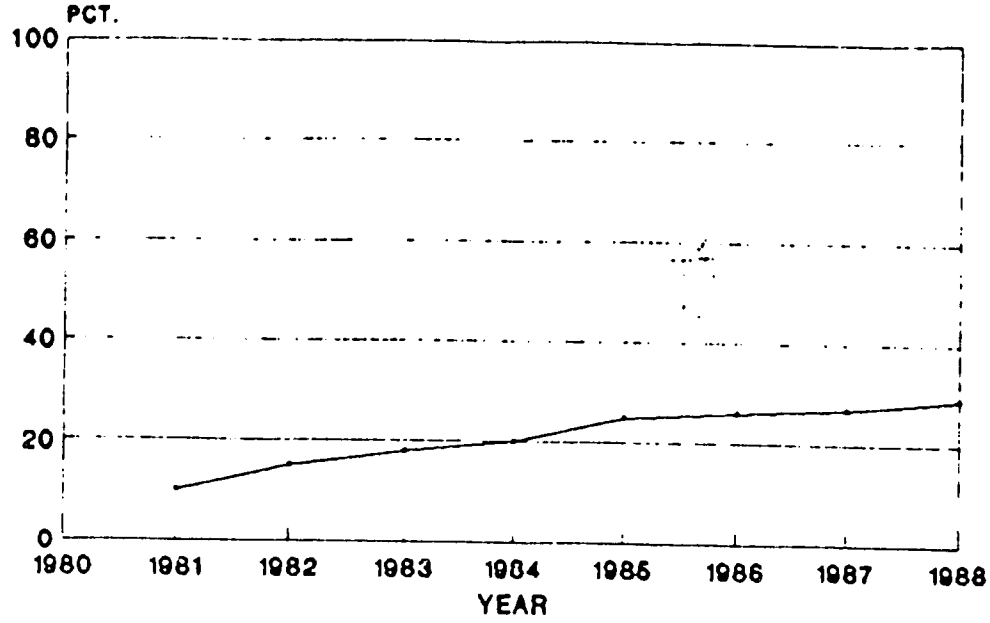
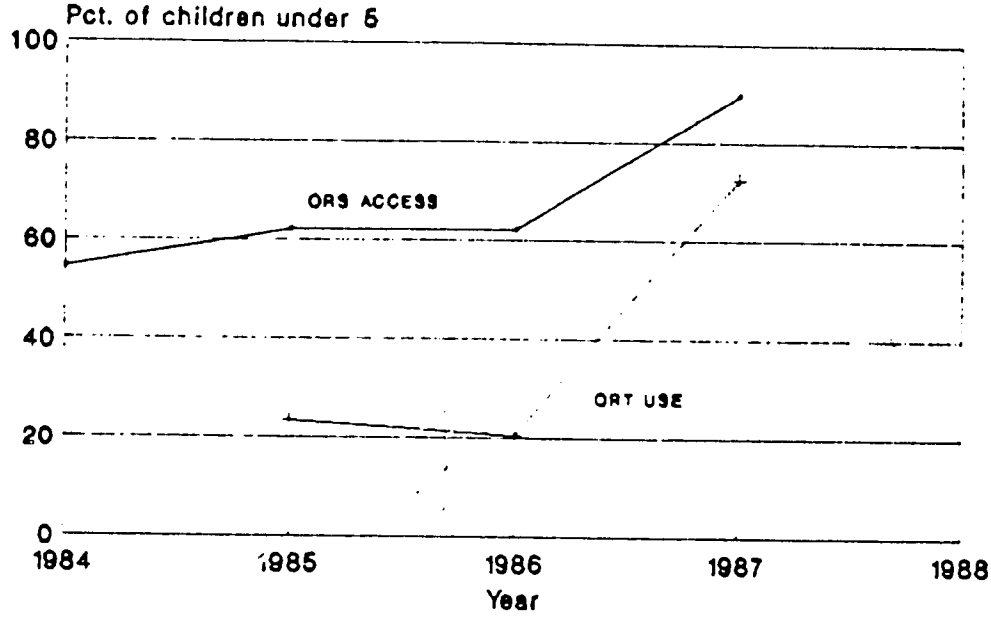
TETANUS II VACCINATION COVERAGE RATES IN PREGNANT WOMEN IN INDONESIA



Source:
World Health Organization
Report EPI/MISC/89.2

Center For International Health Information/ISTI, 5/16/89

ORS ACCESS AND ORT USE RATES IN INDONESIA



SOURCE: World Health Organization,
Annual Reports of the Program for
Control of Diarrhoeal Diseases

CIHI/ISTI, 5/1/89

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Summary of
Demographic and Child Survival Data for Indonesia
Center for International Health Information/ISTI, 7/25/89

Population Size (000)*	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000
Total POP/UN/1988	79,538	86,552	96,194	107,041	120,280	135,666	150,958	166,464	180,514	194,811	208,329
Total POP/BUCEN	83,414	#n/a	#n/a	#n/a	122,671	#n/a	154,936	173,065	191,266	209,108	226,619
<5 /POP/UN/1988								22,223	20,968	21,340	20,736
<5 POP/BUCEN							23,644	24,190	24,273	23,968	23,761

Infant Mortality Rate	1950-55	1955-60	1960-65	1965-70	1970-75	1975-80	1980-85	1985-90	1990-95	1995-2000
IMR/UN/1988	160	145	133	124	114	105	95	84	74	64
IMR/UN/#105	160	145	133	120	105	95	84	74	64	55

Child Mortality Rate										
CMR/UN/#105	131	117	106	93	76	66	56	46	37	30

Total Fertility Rate										
TFR/UN 1988	5.5	5.7	5.4	5.6	5.1	4.7	4.1	3.3	2.9	2.5

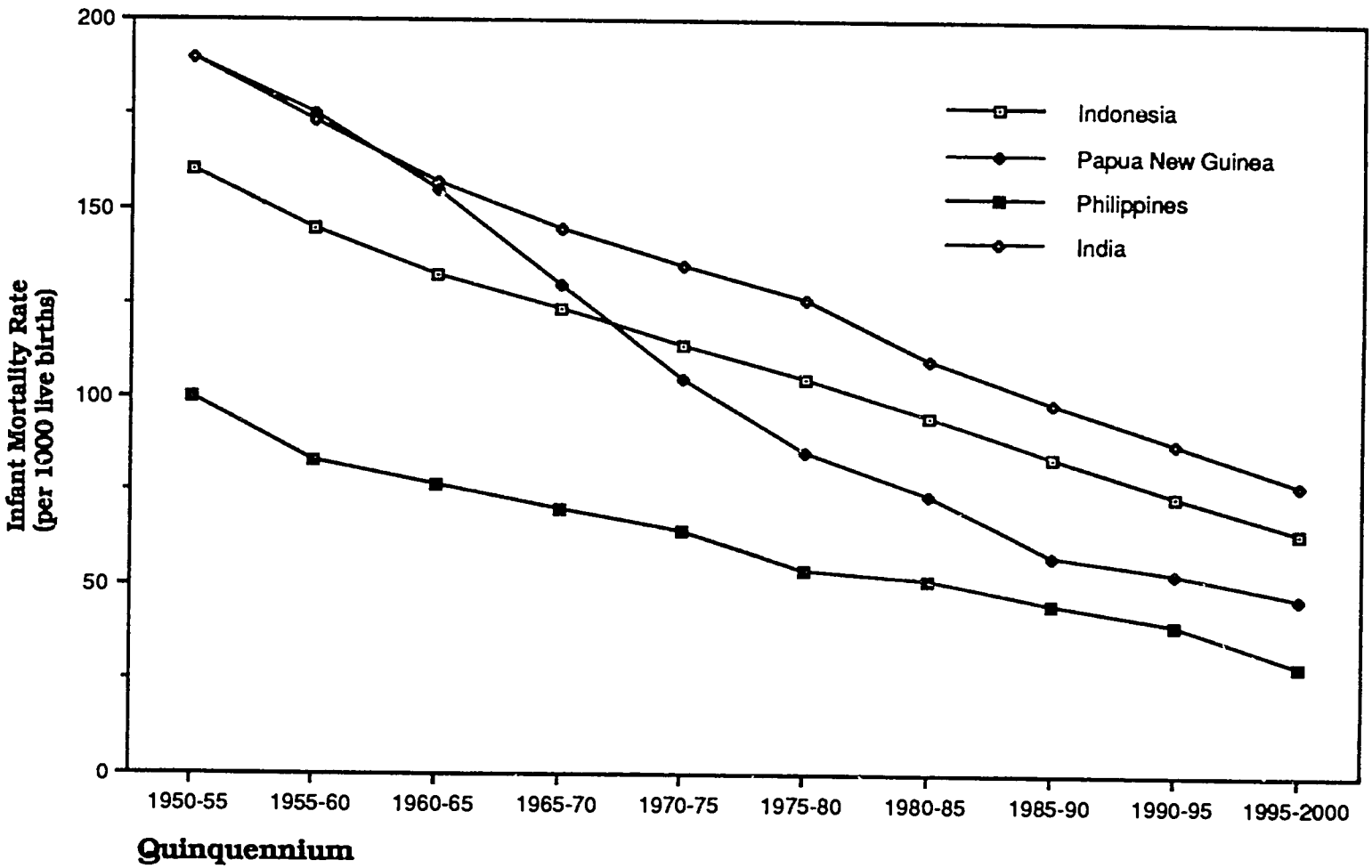
ORS Access and ORT use WHO/CDD/1989	1982	1983	1984	1985	1986	1987
ORS Access	#n/a	33	54	62	62	90**
ORT Usage Rate	#n/a	#n/a	#n/a	24	20	72**

Vaccination Coverage WHO/EPI/1989	1981	1982	1983	1984	1985	1986	1987	1988
BCG	55	60	60	56	68	67	68	74
DPT3	0.2	1	3	6	16	48	48	61
Polio3	0.2	1	4	7	14	46	45	62
Measles	#n/a	0.1	2	7	16	47	46	55
Tetanus2	10	15	18	20	25	26	27	29

* Data for population size illustrates the degree of agreement between different data sources for the same variables.
** Data specifically for children less than 5 years of age.
UN 1988: United Nations. WORLD POPULATION PROSPECTS: 1988. New York: United Nations. 1988.
BUCEN/1987: U.S. Department of Commerce, Bureau of the Census. WORLD POPULATION PROFILE: 1987. Washington, D.C.: U.S. Government Printing Office. 1987.
UN #105: United Nations. MORTALITY OF CHILDREN UNDER AGE FIVE: WORLD ESTIMATES AND PROJECTIONS, 1950-2025. ST/ESA/SER.A/105. Population Studies No. 105. New York.

ESTIMATES OF INFANT MORTALITY RATES - INDONESIA AND SELECTED COUNTRIES

Source: United Nations, World Population Prospects, 1988

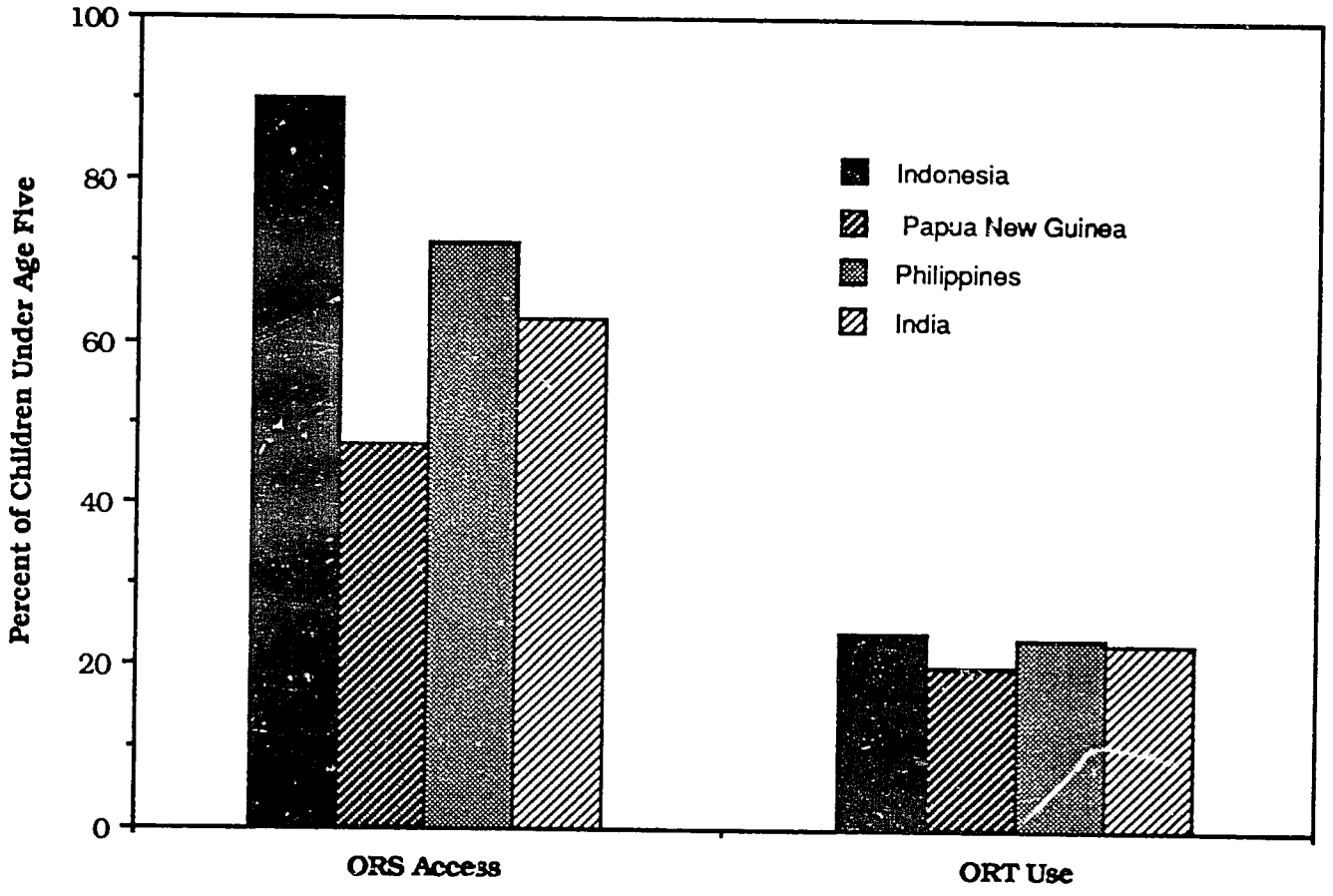


Center for International Health Information/ISTI, July 26, 1989

1987 ORS ACCESS AND ORT USE RATES

INDONESIA AND SELECTED COUNTRIES

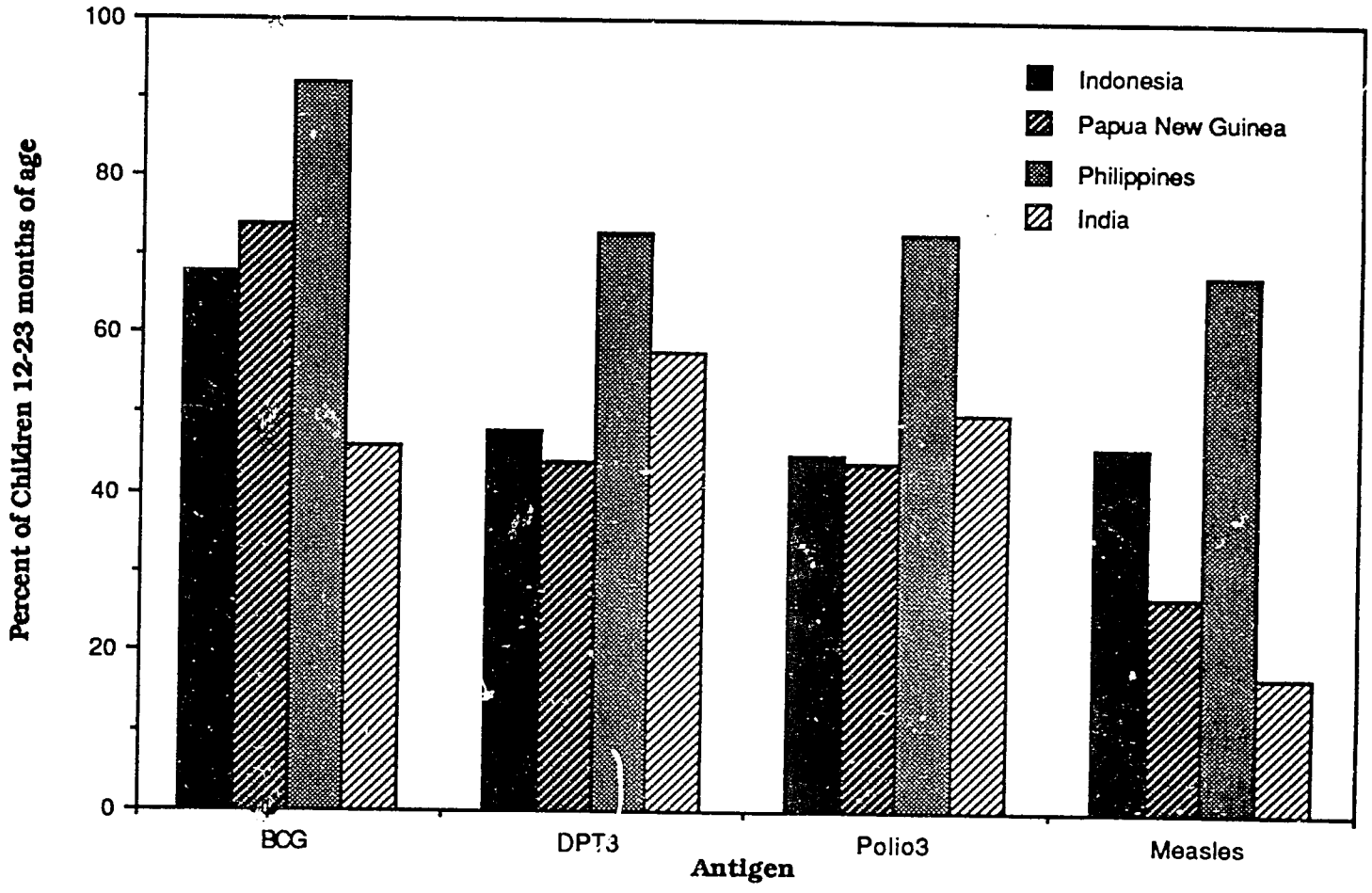
Source: World Health Organization/CDD/89



Center for International Health Information/ISTI, July 26, 1989

1987 VACCINATION COVERAGE DATA - INDONESIA AND SELECTED COUNTRIES

Source: World Health Organization EPI Report/MISC/88.7



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