

Appendix 1: Bank Loans to the Health Sector

Year of Appv'l.	Loan No.	Loan Title	DMC	OCR	ADF	Bank Total
1978	354	Sha Tin Hospital-Polyclinic	Hong Kong	19.500	0.000	19.500
1978	386	Kent Ridge Hospital Polyclinic	Singapore	19.000	0.000	19.000
1980	504	Public Health Program	Bangladesh	0.000	15.600	15.600
1981	511	Health and Population	Malaysia	25.800	0.000	25.800
1981	553	Upgrading of Hospitals	Myanmar	0.000	18.500	18.500
1981	562	Health and Population	Pakistan	0.000	15.000	15.000
1982	576	Health and Population	Sri Lanka	0.000	9.300	9.300
1982	586	Rural Health Services	Papua New Guinea	12.000	0.000	12.000
1983	665	Rangoon General Hospital	Myanmar	0.000	44.600	44.600
1983	672	Health & Family Planning Services	Bangladesh	0.000	27.500	27.500
1984	710	Second Health and Population	Pakistan	0.000	16.000	16.000
1985	743	Health and Population	Indonesia	41.600	0.000	41.600
1985	746	Second Rural Health Services	Papua New Guinea	0.000	8.500	8.500
1985	747	Second Rural Health Services	Papua New Guinea	5.400	0.000	5.400
1986	815	Health Services Development	Malaysia	50.730	0.000	50.730
1987	850	Third Health	Pakistan	0.000	30.400	30.400
1988	926	Second Health and Population	Indonesia	39.300	0.000	39.300
1987	980	Third Health (Sector)	Malaysia	105.000	0.000	105.000
1991	1074	Second Health and Family Planning Services	Bangladesh	0.000	51.000	51.000
1991	1097	Third Rural Health Services	Papua New Guinea	0.000	21.000	21.000
1992	1189	Second Health and Population	Sri Lanka	0.000	26.100	26.100
1992	1200	Health Care Development	Pakistan	0.000	60.000	60.000
1993	1277	Population	Pakistan	0.000	25.000	25.000
1994	1299	Rural Health and Population	Indonesia	40.000	0.000	40.000
1994	1316	Health and Population	Marshall Islands	0.000	5.700	5.700
1994	1331	Women's Health and Safe Motherhood	Philippines	0.000	54.000	54.000
1995	1348	Primary Health Care	Lao PDR	0.000	5.000	5.000
1995	1396	Integrated Community Health Services	Philippines	0.000	25.910	25.910
1996	1447	Basic Health Services	Cambodia	0.000	20.000	20.000
1996	1460	Population and Family Health	Viet Nam	0.000	43.000	43.000
1996	1471	Family Health and Nutrition	Indonesia	45.000	0.000	45.000
1997	1516	Health Sector Development Program	Papua New Guinea	45.000	0.000	45.000
1997	1517	Health Sector Development Program	Papua New Guinea	0.000	5.000	5.000
1997	1518	Health Sector Development Project	Papua New Guinea	0.000	10.000	10.000
1997	1523	Intensified Communicable Diseases Control	Indonesia	87.400	0.000	87.400
1997	1538	Urban Primary Health Care	Bangladesh	0.000	40.000	40.000
1997	1568	Health Sector Development Program	Mongolia	0.000	4.000	4.000
1997	1569	Health Sector Development Project	Mongolia	0.000	11.922	11.922
1998	1606	Early Childhood Development	Philippines	15.700	0.000	15.700
1998	1607	Early Childhood Development	Philippines	0.000	8.800	8.800
Total				551.430	601.832	1,153.262

Appendix 2: A review of the Bank's health sector loans and technical assistance

The performance of health sector lending in the Bank has been comparable to other sectors. Based on formal evaluations carried out by the Operations Evaluation Office, there have been no unsuccessful health sector projects while the average for the Bank is 11 percent (*Table A2.1*). The amount of delay has been slightly higher than other sectors, and there have been fewer "generally successful" projects. Comparisons with the Bank-wide performance are complicated by the small number of health sector loans and the lack of quantitative indicators in the original designs. Possible reasons for the lower proportion of generally successful projects include (i) 50 percent of the health projects that have been postevaluated were the first Bank-sponsored health sector projects in the country, while the comparable figure for all postevaluated Bank loans was 32 percent; and (ii) all the postevaluated health projects were approved more than 13 years ago. They tended to focus on district and tertiary hospitals; this does not reflect the newer approaches, focusing on primary health care (PHC), which the Bank has been utilizing since the beginning of the 1990s. An in-depth review was carried out by staff of all health sector loans approved from the time of the Bank's first health sector loan in 1978 to the end of October 1997. Project documents for 35 health sector loans approved during the period were analyzed in detail using a standard questionnaire.

Table A2.1: Performance of Postevaluated Loans by Sector

Rating	Sector			
	Health (n=12)	Social Infrastructure (n=85)	ARD ^a (n=172)	Bank-wide ^b (n=517)
% projects >50% delayed	66.7	61.2	51.7	55.7
% Unsuccessful	0.0	5.9	19.2	11.2
% Partly Successful	66.7	40.0	41.9	31.3
% Generally Successful	33.3	54.1	38.4	57.1
% of projects that were first project in the sector in the particular country	50.0	33.3	31.4	32.1

a Agriculture and rural development.

b Excluding finance sector projects.

Source: Postevaluation Information System.

Appendix 2 (cont.)

A previous review of health sector loans, conducted in early 1994, indicated that there was a lack of attention to benefit monitoring and evaluation (M&E) and the identification of clear indicators of success. Since 1994 there appears to have been a significant improvement in M&E, perhaps as a result of increased awareness of staff and the introduction of the project framework (Table A2.2).

Table A2.2: Benefit Monitoring and Evaluation in the Design of Health Sector Loans

Characteristic	Percent of Loans with Desirable Characteristics	
	Loans Approved from 1978 to 1993 (23 loans) (Percent)	Loans Approved since 1994 (12 loans) (Percent)
Chose any objective indicator by which to judge success of loan	52	92
Chose indicator for all components of the loan	0	58
Budget allocated for M&E	13	33
Had a clear plan for collecting M&E data	4	83
Planned for the collection of baseline data	24	54

Source: Staff review of all 35 health sector projects

Appendix 2 (cont.)

There has also been a substantial change in the design of projects since the 1991 publication of the Bank's health sector strategy, *Health, Population and Development in Asia and the Pacific* (Table A2.3). Generally, it appears that health sector loans are now more carefully designed and address broader concerns, although some aspects of loan design require further attention.

Table A2.3: Selected Design Characteristics of Health Sector Loans

Characteristic	Percent of Loans with Selected Characteristics	
	Loans Approved from 1978 to 1991 (19 loans) (Percent)	Loans Approved since 1992 (16 loans) (Percent)
Evidence of consultation with beneficiaries	0	50
Planned explicit test or pilot of some form of innovation	42	88
Proportion of pilot tests with evaluation design including comparison group	0	50
Response to lack of capacity involving local training	74	94
Proportion of training activities with any indicators	14	27
Had a component or subcomponent dealing with women's health	0	25
Included measurable indicators related to women's health	16	56
Had a component or subcomponent dealing with family planning	42	50
Included measurable indicators related to family planning other than the total fertility rate, crude birth rate, and population growth	37	63
Supported any activities related to health care research (broadly defined).	21	37
Had a component or subcomponent dealing	21	81

Source: Staff review of all 35 health sector loans.

Appendix 2 (cont.)

Implementation of the Bank's health sector loans compares favorably with projects in other sectors. Of health sector loans that have been declared effective, 95.2 percent have a triple A rating compared to 94.8 percent Bank-wide. Health sector loans are experiencing slightly slower disbursements than other sectors, possibly because projects supporting PHC tend to have many small contracts, often in remote areas. This highlights the need for close supervision of such projects. The average health project has had 1.37 review missions per year, which is similar to the Bank average. The last five years have witnessed a 31 percent increase in the frequency of review missions compared with the period 1978 to 1991. Supervision of health sector loans likely requires greater attention, given the decentralized nature of health services and the importance of helping to strengthen the capacity of executing agencies.

Up until December 1997, the Bank had financed 77 project preparatory and advisory technical assistance (TA) grants in the health sector. Half of TAs had gone to Group A countries and half of all TAs were advisory in nature. The advisory and regional TA, tended to focus on policy issues, particularly health care financing. Six TA completion reports have been circulated covering one regional and five advisory TAs, all of which were rated as generally successful. Lessons learned from these TAs include (i) the importance of focusing such TAs on a few, well-defined issues rather than trying to cover unrelated issues at the same time; (ii) the interest of government officials in new approaches in the health sector such as partnerships with the private sector; (iii) the need to coordinate TA activities with the World Health Organization (WHO) and other aid agencies both to diminish duplication but also to help increase utilization of study results; and (iv) the complexity of social health insurance and health care financing makes it imperative to take a long-term approach and ensure follow-up of study findings.

Appendix 3: Priority health interventions for the developing member countries

Table A3.1: Priority Public Health Interventions Required in All DMCs

Intervention	Efficacy	Quality of Evidence ^a	Burden of Disease in Asia
Immunization: measles, diphtheria-pertussis-tetanus (DPT), polio, hepatitis B, tuberculosis (BCG), tetanus toxoid (TT)	Prevents 72-98% of cases, 50% of tuberculosis (TB)	Class II, many studies Class I for Hepatitis B	Fifth leading cause of DALYs lost
Vitamin A supplements	Reduces overall mortality by 23% in children ages 6-72 months and maternal mortality by 38%	Class I	23% of mortality is in children 6-72 months. Prevalence of subclinical vitamin A deficiency is widespread.
Family planning: modern methods for birth spacing	80-95% effective in preventing pregnancy. Decreases maternal morbidity and mortality by reducing high risk pregnancies	Class I Class II	Unmet demand among married women in Asia (excluding People's Republic of China) is >62 million or 19% of married women of reproductive age
Iodine: supplementation; iodination of salt or water supply	Prevents goiter and cretinism 100%	Class II	130 million with goiter, 5 million cases overt cretinism, 680 million people at risk
Treatment of TB, short-course chemotherapy	Full treatment 95-98% effective in treating disease and in stopping transmission	Class I	1.4 million deaths, 6th leading cause of DALYs lost, 1990

a Evidence: Class I = randomized controlled studies; Class II = prospective studies with non-random assignment to comparison group and case-control studies; Class III = cross-sectional studies or studies with historical data and regression analysis to isolate potential causal factors; Class IV = case series, case studies, and anecdotes.

Interventions are listed in approximately decreasing order of priority. Issues are highlighted in bold and italics.

<u>Ease of Implementation</u>		Cost/ DALY Saved	Burden on the Disadvantaged (Equity)
Demand Issues	Supply Issues		
Demand is high. Parents appreciate immunizations	Most immunization is provided by public sector. Governments are able to implement programs covering 80% of children ages < 1 year	\$25	Poor are disproportionately affected due to crowded conditions.
Demand by parents is high.	Capsules require no refrigeration, can be administered by lay people. There is difficulty reaching older children. Supplements must be sustained until food fortification is in place	\$1	Poor children and women are more susceptible to deficiency
There is a high demand by couples, although education and marketing are still needed to reach high use rate.	Serious issues of supply, wide variety in technical quality of services. Subsidies reach the poor, who disproportionately use public services.	\$25-75	Cost of raising children is disproportionately burdensome for poor families. Poor women are at higher risk of maternal mortality
Demand is unknown.	Salt fortification is making progress but is complicated by large numbers of small procedures. Regulation is required.	\$8-19	Prevalence is highest in marginal areas, where soils are iodine deficient and where disproportionate number of poor live.
Demand, as reflected in adherence to therapy, is a major issue.	Increasing therapy completion requires very careful implementation, including logistics and supervision. Much of treatment occurs in the private sector. Quality of care in the public and private sectors is a major issue.	\$3-5	TB affects the poor disproportionately due to crowding, poor ventilation, poor light, and inadequate nutrition. The poor have less access to care.

DALY=Disability-Adjusted Life Year; DMC=Developing Member Country.

Appendix 3 (Cont.)

Table A3.1: Priority Public Health Interventions Required in All DMCs

Intervention	Efficacy	Quality of Evidence	Burden of Disease in Asia
Treatment of sexually transmitted diseases (STDs) in high-risk groups	Cures and prevents transmission of STDs. May reduce human immunodeficiency virus (HIV) incidence by 40%	Class I: clinical drug efficacy in most cases certain; treatment reduces HIV transmission	Increasing STD cases; increasing multidrug resistance, increasing HIV
Acute respiratory tract infection (ARI) case management	Treatment 80% effective; ARI case management reduces infant mortality by 20%	Class I, II	First leading cause of death among children; second leading cause of DALYs lost, 1990
Management of diarrhea with oral rehydration therapy (ORT); oral rehydration salts (ORS) in community	ORT reduces deaths from dehydrating diarrhea by 40%	Class II	Fourth leading cause of lost DALYs; 1.4 million deaths, 1990.
Malaria prevention: bednets impregnated with insecticide	Reduces malaria incidence by 50%	Class I: 7 studies Class II: 3 studies	Low overall burden, but there are pockets of high prevalence
Programs to reduce use of tobacco: taxes, health promotion	Taxation induces consumption by estimated 0.5% for every 1% increase in price. Health promotion effects vary.	Class III- taxes Class II- education	1990: 5% of deaths and 2% of DALYs lost 2020 estimate—13% of deaths and 11% of DALYs lost
Hygiene education: hand washing	23-26% reduction in diarrhea	Class I (2 studies)	1990: Diarrhea is the fourth leading cause of lost DALYs; 1.4 million deaths, 1990

Ease of Implementation		Cost/ DALY Saved	Burden on the Disadvantaged (Equity)
Demand Issues	Supply Issues		
Demand is high when symptomatic but adherence to treatment is weak. Demand is low in asymptomatic cases.	Lab tests and medication are expensive. Drug supply is often inadequate. Syndromic treatment approaches need to be validated. Much of treatment occurs in the private sector. Quality of care in the public and private sectors is a major issue.	\$1-55	Women are biologically more vulnerable to STD and HIV infection and more likely to be asymptomatic. The poor are more likely to be involved in commercial sex.
Demand for treatment is high, but parents may bring children in at late stages of disease.	Much of treatment occurs in the private sector. Quality of care in public and private sectors is a major issue. Misuse of antibiotic is widespread.	\$25	Crowding and poor nutrition are risk factors for ARI.
ORS does not stop diarrhea. Cultural views of diarrhea may interfere with early treatment; parents bring children late.	Most treatment occurs in the private sector. Quality of care in the public and private sectors is a major issue, with high reliance on antibiotics.	\$25-75	Poor are disproportionately affected due to poor nutrition and contaminated water.
Demand high; people willing to pay for bednets; issues of comfort	Maintaining logistics for yearly insecticidal treatment can be problematic.	\$15-20 where endemic	Poor living in marginal and remote areas are disproportionately affected.
Reducing demand is difficult and time-consuming, requires considerable health promotion efforts and tax increases.	Taxes are a source of government revenue. Tobacco control efforts are opposed by commercial interests. Smuggling may occur if taxes are too high. Limited experience with education and cessation efforts on a broad scale	\$25	Price elasticity is most pronounced among the poor and youth. Youth are targeted by industry advertising.
Demand is constrained when water supply is diarrhea limited.	Existing strategies too costly for widespread implementation	High	The poor are disproportionately affected by

Appendix 3 (Cont.)

Table A3.2: Priority Public Health Interventions with Potentially Serious Drawbacks

Intervention	Efficacy	Quality of Evidence ^a	Burden of Disease in Asia
Promotion of breastfeeding and appropriate weaning	Breastfeeding promotion reduces diarrhea by 8-20%. Weaning education reduces the proportion of malnourished children by 50%.	Class III and IV	Unknown but likely very large due to widespread diarrhea and malnutrition
Iron supplementation or fortification	Reduces iron-deficiency anemia. Improves child mental development by 22%, motor development by 27%	Class I	> 50% women and children in South Asia and > 18% in East Asia are iron deficient.
Removal of lead from environment: -leaded fuels -batteries, etc.	Reducing ambient lead by 1 microgram per cubic meter (ug/m3) avoids child's loss of 0.975 intelligence quotient (IQ) points	Estimate based on Class II data	Children in countries and cities with leaded fuels, battery manufacture and disposal, and leaded paints.
HIV/AIDS and STD prevention through education	Increases knowledge and perception of risk; efficacy in behavior change unknown	Class II	0.5% of deaths and 1% of DALYs lost, 1990 2020 estimate: 2% of deaths and 3% of DALYs lost
Regulation of air quality: particulates	Reduces overall adult mortality rate by 25% (developed countries)	Class II	Estimated 0.5% of DALYs; increasing in cities; pollutants cause widespread lung problems
Improvements in indoor air quality: fuel-efficient or ventilated stoves	Reduces pollution by 10-50%. <i>Ongoing studies of health effects</i>	Class III	Inefficient stoves and fuels are associated with ARI increases (ORs 2-6), adverse pregnancy outcomes, chronic lung and heart disease, and cancer.

a Evidence: Class I = randomized controlled studies; Class II = prospective studies with non random assignment to comparison group and case-control studies; Class III = cross-sectional studies or studies with historical data and regression analysis to isolate potential causal factors; Class IV = case series, case studies, and anecdotes.

(e.g. uncertain effectiveness, higher cost, difficulties in implementation)

Ease of Implementation		Cost/ DALY Saved	Burden on the Disadvantaged (Equity)
Demand Issues	Supply Issues		
<i>Demand constrained by commercial pressure to use breast-milk substitutes. Increasing appropriate weaning needs considerable education</i>	<i>Breastfeeding efforts are opposed by commercial interests. Governments can regulate promotion and supply in hospitals.</i>	\$25-75	Poorest children are fed substitutes overdiluted with contaminated water
Demand is not required if fortification is mandated.	<i>Need for frequent contact to dispense tablets and assure adherence</i>	\$4-13	The poor eat fewer iron-rich foods.
Limited demand	<i>Requires extensive regulation of and compliance by the commercial sector</i>	Un- known	The urban poor are disproportionately exposed to lead.
<i>Demand is constrained by lack of information, inconvenient access to prophylactics, and need to negotiate safer behaviors.</i>	<i>Difficult to reach high-risk populations; sensitivity of issues in many societies.</i>	\$25	Burden of HIV is shifting to the poor, who cannot afford new treatments. The poor have less access to information and fewer resources to act upon it.
Population demand is high.	<i>Implementation is difficult due to the number and variety of industries.</i>	Un- known	The urban poor is disproportionately exposed to air pollutants.
<i>Unknown</i>	<i>Unknown</i>	Un- known	The poor rely on inefficient stoves and fuels in poorly ventilated homes. Women and children are disproportionately affected.

Appendix 4: Scientific evidence for the impact of health interventions

Paying attention to the quality of the scientific evidence is a critically important aspect of the health policy process. Where solid evidence exists for an intervention, efforts at its implementation will lead to tangible results on the ground. Thus assessing the quality of evidence is intimately related to increasing the probability of developmental impact and reducing the risk of investment. While there is widespread support for the concept of evidence-based decision making, little attention has been paid as to how this should be operationalized. Phrases such as “it has been demonstrated,” “research has shown,” or “best practice suggests” provide little information about the quality of the evidence. Not considering the type of evidence available for an intervention has sometimes resulted in either missed opportunities or the promotion of activities that are not efficacious or cost effective. Fortunately, there are a reasonably large number of interventions in the health sector that are supported by compelling scientific evidence.

Scientific evidence in the health sector can be broken down into four broad categories (these categories were employed in Appendix 7 to examine the evidence supporting specific health interventions): Class I evidence represents randomized controlled trials (RCTs), a type of study in which individual subjects or communities are randomly assigned to receive some intervention or not and that provides the most scientifically persuasive evidence of effectiveness. Class II evidence represents controlled studies in which interventions are judged by a comparison between subjects or communities with and without the activity. While compelling, Class II studies are less persuasive than Class I trials because it is more likely that the two groups being compared are systematically different from each other. Class III evidence comprises cross-sectional studies where data are collected at a single point in time or studies that employ historical data and use correlation or regression techniques to attempt to isolate causal factors. This class of evidence also includes uncontrolled, “before and after” studies. Class IV evidence is the least persuasive and includes anecdotes, case studies, and case series. While this type of information can be very useful for generating new ideas and approaches it provides little conclusive evidence.

A. Class I Evidence: Randomized Controlled Trials

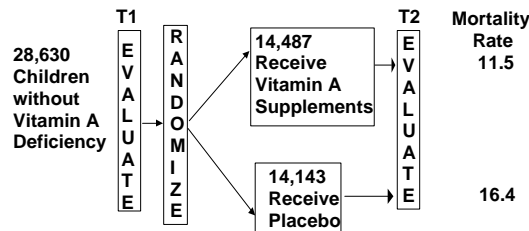
One of the major technological breakthroughs in clinical medicine and public health in the last 50 years, has been the introduction and increasingly widespread use of RCTs. In its simplest form, a randomized trial involves subjects with the same condition or status being randomly assigned, in a manner analogous to flipping a coin, to receive active treatment or a placebo. The subjects are then followed up to determine the effectiveness of treatment. For example, 28,630 children in Nepal, aged six months to six years were randomly assigned to receive either vitamin A supplements or an inert placebo every four months.¹ After one year it was found that the children receiving the Vitamin A had a 30 percent lower overall mortality rate than the placebo group (Figure A9.1). Eight such studies have been done in developing countries and when the results are combined they demonstrate that vitamin A reduces overall child mortality rates by 23 percent.² From this overwhelming weight of evidence it is almost certain that successful implementation of vitamin A programs will have a large beneficial impact on the health of children.

1 West K.P. et al. 1991. Efficacy of vitamin A in reducing preschool mortality in Nepal. *Lancet*, vol. 338, pp. 67-71.

2 Beaton G.H., et al. 1993. Effectiveness of Vitamin A supplementation in the control of young child morbidity and mortality in developing countries. ACC/SCN State of the Art Series Nutrition Policy Discussion Paper No. 13, December 1993.

Appendix 4 (cont.)

Figure A4.1: Randomized Controlled Trial of Vitamin A Supplements



Source: West et al, 1991.

RCTs provide the most compelling scientific evidence that a particular intervention actually does more good than harm. The major advantage of randomization is that it ensures that, on average, the experimental and control groups are similar in those characteristics that are known to effect outcome and the myriad of characteristics that might influence the result but are unknown to the researchers. Not using randomization and not having a control group tend to greatly exaggerate the perceived effectiveness of interventions. An investigation of 145 different research studies of the treatment of heart attacks showed that RCTs demonstrated positive results 15.7 percent of the time, while positive results were obtained in 58.1 percent of nonrandomized trials.³ In a summary of published studies in which there were no control groups (so called case series), the authors claimed positive results for the intervention under investigation 79 percent of the time.⁴ Thus, the less carefully controlled the studies, the more likely it is that ineffectual activities will be promoted as cost effective.

Some of the disadvantages of RCTs are their expense, technical complexity, and the length of time it takes to obtain results. However, a large number of RCTs have already been conducted in developing countries; this indicates that such problems can be overcome. More importantly, the cost of carrying out RCTs is small compared with the resources that will be wasted on ineffective interventions if such studies are not conducted. A common criticism of RCTs is that they represent a purely medical approach not appropriate to broader questions. However, RCTs have been carried out in developing countries on issues as diverse as organization of health services, the effects of user charges, and effectiveness of health education. Another common criticism is that RCTs are simplistic because they assume that only one factor is important when causation is usually multifactorial. In fact, an RCT is the best way of dealing with a complex world. It is the foremost method for ensuring that, on average, the experimental and control groups are similar on all factors, both known and unknown. In addition, criticisms of RCTs as simplistic, would suggest the need for more, not less, scientific rigor.

3 Chalmers T.C., et al. 1983. *Bias in treatment assignment in controlled clinical trials*. New England Journal of Medicine, 309: 1358-61.
 4 Sacks H., et al. 1982. *Randomized versus historical controls for clinical trials*. American Journal of Medicine, vol. 72, pp. 233-240.

Appendix 4 (cont.)

B. Class II Evidence: Controlled Studies

There are two broad types of controlled research studies, prospective and retrospective investigations. The prospective controlled study involves two groups of people or communities that receive an intervention or are exposed to some hazard. Typically baseline and follow-up data are collected in the experimental and control group, and the treatment effect is calculated. The major difference with an RCT is that allocation of the subjects to either group is not under the control of the researchers. Hence, there is always the possibility that the experimental and control groups are different in systematic ways that may account for any observed change from baseline to follow-up.

The second type of controlled study is the retrospective or case-control design. This somewhat counterintuitive design involves finding cases or people with bad outcomes and a similar group, controls, that did not experience the bad outcome. The exposure of the two groups to the putative cause is then ascertained, looking back in time, and the increased risk attributable to the cause is calculated. For example, young children in a village who have died are compared with a similar group of children who are still alive, for whether they received measles vaccination or not. It turns out that the children who are still alive are more likely to have been vaccinated. While case-control studies are generally inexpensive, they are technically difficult to carry out and subject to many biases. Nonetheless, where well-conducted studies generate consistent results, as they do in the case of measles vaccine, they can provide convincing evidence of causation.

C. Class III Evidence: Cross-Sectional and Correlational Studies

Cross-sectional studies collect data at one point in time to examine whether there is a correlation between a putative cause and an important outcome. For example, household surveys in a number of countries have shown a significant correlation between maternal literacy and infant mortality rates (IMRs). As literacy rises, IMRs tend to fall. It is intuitively appealing to conclude that increasing maternal literacy will decrease the IMR, but it is not necessarily true. Correlation is not equivalent to causation, and it is possible that maternal literacy, because it is related to increased wealth and proximity to health services, is not causally related to a reduced IMR. Disentangling the causal relationships between multiple factors can be very difficult and even sophisticated regression techniques cannot provide definitive evidence. Nonetheless, these studies can often identify possible links that may be examined using more rigorous designs. In addition, there are some circumstances where correlational analysis and before and after studies represent the only kind of data available.

Appendix 4 (cont.)

D. Class IV Evidence: Case Studies and Case Series

Case studies and case series describe what happens after an intervention is implemented among a defined group. For example, a supervisory system is introduced in three provinces and an assessment is made after the system has been in place for six months. The obvious problem with this type of study is that there is no comparison made with provinces that did not implement the supervisory system, and there is no baseline data to judge whether there has been a significant change in health worker performance. While obviously not providing very compelling evidence of effectiveness, these kinds of studies can often provide useful insights that can be incorporated in more rigorous studies. If carefully done, and if participatory approaches are employed, a great deal can be learned. For example, in the Philippines, the introduction of injectable contraceptives in a few areas gave the Department of Health the chance to discuss issues with women who availed of the service and learn more about why they chose that method, how they felt about the service they received, and side-effects they encountered.

Appendix 5: Health sector policy matrix

Strategic objectives (• issues addressed)	Operational objectives	
Improve the health of vulnerable groups <ul style="list-style-type: none"> • poor health status among the poor • lack of progress in improving women's health status • services not reaching vulnerable groups 	Maintain emphasis on PHC.	
	Focus on vulnerable groups and measure benefits obtained by the poor, women, children, and indigenous peoples.	
Focus on achieving tangible, measurable results <ul style="list-style-type: none"> • inadequate attention to monitoring and evaluation (M&E) • little consideration given to quality of evidence supporting interventions • weaknesses in project design may have interfered with impact 	Further strengthen M & E	
	Focus on interventions with strong evidence of effectiveness.	
	Improve the quality of health sector loans at entry.	
	Improve implementation of health sector loans.	
Support testing of innovations and deployment of effective new technologies <ul style="list-style-type: none"> • epidemiological and demographic transitions and emerging threats are impetus for continuing innovation • slow deployment of technological advances 	Support rigorous testing of new approaches to health care financing and health system management and organization.	
	Help finance deployment of new and emerging technologies, such as newly developed vaccines.	

DMC= Developing Member Country; HIV/AIDS=Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome; PHC=Primary Health Care; UNFPA=United Nations Populations Fund; UNICEF=United Nations Children's Fund; WHO=World Health Organization.

Specific recommendations	
	The Bank will work with the DMCs to ensure universal access to essential health services of proven benefit, cost effectiveness, and affordability (Appendix 7). The Bank will continue to emphasize lending for PHC.
	The Bank will encourage the DMCs to emphasize PHC and to shift away from financing activities with low benefit-cost ratios such as tertiary hospitals and specialist training.
	Bank health projects and programs will employ methods to measure access to basic services by the poor, women, and indigenous peoples.
	The Bank will pay particular attention to the needs of women in the design and implementation of projects. Where appropriate, loans targeted at women's health, including reproductive health, will be developed.
	Bank health loans will list objective indicators, set aside budgets for data collection and analysis, have clear plans for measuring results, including use of comparison areas and collection of baseline data, and develop a plan for building the capacity of DMCs to conduct M&E.
	The Bank will prioritize technical interventions that have strong scientific evidence of effectiveness. Where such evidence does not exist, the Bank will be cautious and support the rigorous testing of such technical and programmatic interventions.
	The Bank will implement a technical peer review process for health sector loans.
	Health sector loans will employ and explicitly describe participatory approaches in design and implementation.
	Flexibility in project design through the use of process, rather than blueprint approaches will be encouraged to reduce risks. The Bank will adopt a realistic approach to local cost financing.
	Supervision of health sector loans will be strengthened. Procurement and disbursement procedures will take into account the special needs of the health sector.
	The Bank will encourage pilot testing of innovations and ensure that they are implemented on a reasonable scale, utilize a replicable level of investment per beneficiary, and employ rigorous evaluation methods.
	The Bank will assist the widespread use of new vaccines throughout the Region.

Appendix 5: Health sector policy matrix

Strategic objectives (• issues addressed)	Operational objectives	
Encourage DMC governments to take an appropriate and activist role in the health sector. <ul style="list-style-type: none"> • low level of public investment in health sector • governments have been ignoring private sector • little attention paid to public goods in the health sector • emerging threats such as tobacco, pollution, HIV/AIDS 	Encourage the DMCs to increase their budgetary allocations for health services, particularly PHC.	
	Assist DMC governments to diversify their health care financing.	
	Facilitate government collaboration with private sector partners, including NGOs	
	Increase support for public goods such as research, health education, and regulation.	
Increase the efficiency of investments in the health sector <ul style="list-style-type: none"> • low public sector management capacity • inadequate sector work 	Invest in strengthening technical and managerial capacity.	
	Strengthen economic and sector work, and strengthen the linkages with other sectors.	

	Specific recommendations
	In the context of commitments made at the World Summit for Social Development, the Bank will encourage the DMCs to increase their budgetary allocations for PHC.
	Bank activities aimed at reforming public finances, decreasing subsidies, and privatizing state-owned enterprises will attempt to divert some of the resultant savings to the financing of PHC.
	The Bank will promote carefully designed social health insurance schemes among the DMCs with the long-term goal of achieving universal coverage.
	The Bank will be cautious in promoting cost-recovery for PHC services, but will encourage it more widely for hospital care.
	The Bank will facilitate public-private partnerships in the provision of health care with special emphasis placed on the role of NGOs.
	The Bank will increase the loan and technical assistance (TA) resources used to support applied, noncommercial research in the health sector, especially for health problems of the poor.
	The Bank will support research and pilot testing of activities against emerging threats that are cost effective and that can be implemented through PHC approaches.
	Through policy dialogue, the Bank will encourage DMC governments to adopt a regulatory environment that is conducive to good health, and aims at decreasing tobacco use, fortifying food, and improving traffic safety.
	The Bank will help to improve management of health care systems. Capacity-building activities will be based on careful institutional analyses. Success will be defined in terms of improving coverage and quality of care, where data is derived from strengthened management information systems including household, health facility, client satisfaction surveys, and disease surveillance activities.
	Project and program departments staff will ensure that the critical linkages between the health sector and the Bank's medium-term strategic objectives, including economic growth, poverty and improving the status of women are properly reflected in the Country Operational Strategy Study and the Country Assistance Plan.
	The Bank will strengthen the linkages between the health sector and other sectors that affect health such as environment and education.
	The Bank will further strengthen its collaboration with partner institutions operating in the health sector, including multilateral and bilateral agencies. The Bank will maintain close cooperation with and utilize the technical expertise of the United Nations agencies including UNFPA, UNICEF, and WHO.