

# HEALTH

## COMMENTARY



# Fighting AIDS together

Peter Piot

***The world's children are benefiting from several decades of unprecedented health progress. Child-killing diseases are succumbing to vaccination campaigns and low-cost remedies, reducing death rates and improving the quality of young lives. But in about 30 developing countries, HIV/AIDS is threatening and even reversing these strides. Meanwhile, in the industrialized countries, AIDS is starting to be called a 'manageable' disease, as costly miracle drugs seemingly pull its victims back from the brink of death. Now the fight against AIDS faces new dangers: complacency in the industrialized countries and divisiveness between them and the developing nations.***

**I**n the early days of my involvement in the global effort against AIDS, I visited the women's medical unit of the giant Mama Yemo Hospital in Kinshasa. There, women in their late teens and early twenties, many of whom had supported themselves as sex workers, were wasting away from AIDS-related infections. As I passed bed after bed of young women resigned to death, I realized that similar scenes were playing out in clinics all over sub-

Saharan Africa. I wondered how we could ever hope to gain any ground against AIDS in developing countries with primitive medical tools and scattershot, underfunded prevention programmes. And I wondered what the explosion of AIDS cases would do to all the hard-won gains in child survival and development.

That was 14 years ago, and the world community has since woken up to the crisis and begun to mount a credible response. But I still hold onto that mental image

from Mama Yemo Hospital and I still hold many of the same concerns: Despite expenditures of about \$18 billion a year (as of 1993), despite emerging miracle drugs, despite the talk of AIDS as a 'manageable' disease, not enough has changed in those countries that are home to 90 per cent of the epidemic, and there are growing indications of division between those countries and the wealthier ones where people with AIDS are far fewer and resources far greater.

Every day, 1,000 children around the world die from AIDS. In 1996 alone, the disease took the lives of 1.5 million people. About 90 per cent of the 23 million people currently infected with HIV live in developing countries. Experts estimate that 30 million to 40 million people will be HIV-positive by the year 2000, about the same number as the entire population of Argentina or Spain.

In about 30 countries, mostly in sub-Saharan Africa, AIDS is stalling and even reversing the best efforts to improve the health of children and adults, women and men, the poor and the rich. And only 8 per cent (approximately \$1.5 billion) of the \$18 billion a year is being spent on prevention, care and research in the developing countries.

Even more ominous is the fact that the majority of newly infected adults are under 25 years old, with all too obvious implications for the future. Women, mostly in their childbearing

years, now account for nearly half of new infections.

And the worst may be yet to come. According to some forecasts, rates of infection will not peak until the year 2010 in 19 of the hardest-hit countries, most of which are in sub-Saharan Africa. While the deaths attributable to AIDS represent a small percentage of total deaths, they are enough to reverse some improvements in life expectancy. Fifteen sub-Saharan African countries may experience a decline of up to 11 years of life expectancy by the year 2000 compared to projections of deaths without AIDS.

Still to face the brunt of the epidemic is Asia, home to over half the world's population. Despite the fact that AIDS has only recently begun to take hold in the region, the number of new infections each day is already comparable to the number in sub-Saharan Africa. Unless major advances are made in preventing and treating the disease, projections are grim for high-population countries like India, where clinic data show that HIV is beginning to work its way into the middle class.

And it is not just those who become infected who suffer. AIDS is a disease with strong ripple effects, primarily because it strikes so relentlessly at people in the prime of life. When a mother becomes debilitated by AIDS-related illness, often the first thing to happen is that her children's care suffers. Those children may miss vaccinations, eat

Dr. Peter Piot, Executive Director of the Joint United Nations Programme on HIV/AIDS (UNAIDS), has been working on the international fight against HIV/AIDS for 14 years. Before UNAIDS was formed in 1996, he was responsible for AIDS research and development activities at WHO. Formerly, at the Institute of Tropical Medicine in Antwerp (Belgium), Dr. Piot established a group devoted to research, training and technical cooperation on the disease and on reproductive health. He was among the first to document a number of important aspects of the epidemic in developing countries and co-launched *Projet SIDA* in Kinshasa (Democratic Republic of Congo), the first international HIV/AIDS project in the developing world. He was also a co-discoverer of the Ebola virus in 1976.

fewer and less nutritious meals, suffer more bouts of illness. Then a child (or more than one) is likely to be pulled out of school to work in the market, cultivate the family plot or care for the baby.

When the mother dies, she may follow several other extended family members to the grave, so the likelihood of an aunt or uncle being able to take in her newly orphaned children is slim. In regions that formerly were noted for the unbreakable links of extended family networks, we now have the shocking reality of households headed by aged grandparents or children—12-year-olds responsible for providing food and shelter for a family of even younger siblings.

### The AIDS 'tilt'

With this devastation so overwhelmingly affecting the developing world, the effort to fight AIDS is tilted just as overwhelmingly in the other direction, to the industrialized world. The most obvious example of this tilt is the new combination therapies,

widely available in industrialized countries. The cost of these drugs—up to \$15,000 a year per patient—is inconceivable to most people in the hard-hit nations. For the lucky few who could afford them, these therapies can be found only in middle-income countries like Brazil and Thailand; they are virtually unavailable in Africa.

But other examples of the tilt abound. Of the \$2.6 billion spent on HIV prevention efforts worldwide each year, only 14 per cent is spent in developing countries. These countries account for an even smaller proportion—6 per cent—of the \$11.6 billion spent for care. Research on development of a vaccine, especially crucial in the hard-hit countries, gets less than 5 per cent of the \$4.2 billion spent annually on HIV/AIDS research worldwide, according to most recent estimates.

The historical lack of funding for vaccine development is scandalous and irrational, given what is at stake. However, there is encouraging news from the

AIDS Research Evaluation Task Force of the US National Institutes of Health (NIH).

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*AIDS is a development challenge, intermingling issues of poverty, inequality, culture and sexuality in complex ways.*

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The Task Force, overseen and prodded by distinguished independent scientists, has called for a revitalization of the vaccine quest. NIH is now considerably increasing its vaccine efforts. In addition, a consortium of organizations has founded the International AIDS Vaccine Initiative to stimulate vaccine research. In particular, the initiative will support research targeted at HIV subtypes found in areas of the

world where the disease is spreading most rapidly. Governments must also develop incentives to encourage serious investment on the part of drug companies in reaching this goal.

Funding aside, the concentration of research in the industrialized world has other worrying implications. For instance, research on preventing mother-to-child transmission of HIV and on treating HIV-related conditions in children has been very limited, undoubtedly because these are largely problems of the developing world. Developing countries also need to be supported in building their own capacity to make AIDS medications available to their citizens who need them. It is imperative that the resources, the knowledge and the effort in fighting AIDS be spread more evenly around the globe.

At the same time, more must be done to bring comfort to the lives of people sick from HIV-related illnesses. Painkillers, antidiarrhoeals, medicines to treat fungal infections—even these basic medicines are not affordable to people in the poorest countries.

### Achievements at risk

Hanging in the balance are achievements made by the world community over several decades in reducing infant mortality and improving child health and nutrition. Mortality rates for those under age 5 have been cut in half over the past 30 years. About 8 of every 10 children worldwide are now immunized against six major childhood diseases: measles, polio, diphtheria, pertussis, tetanus and tuberculosis. Polio is on the verge of eradication, and measles and neonatal tetanus are on the same path. Deaths of children from diarrhoea—which, along with pneumonia, is the number one killer of children in poor countries—are also in retreat because of cost-effective treatments like oral rehydration therapy (ORT).



*Not only those who are infected with HIV suffer from the disease. As a mother sickens, care for her children often suffers. Her daughter clinging to her, a young mother speaks with an AIDS counsellor in a poor neighbourhood of São Paulo (Brazil).*

UNICEF/HQ92-1229/Sprague

Since 1985, 2.5 million young lives have been saved each year through low-cost health programmes.

Numbers are faceless, though, and I am fortunate to have spent enough time in developing countries to have seen the faces behind the numbers. In 20 years of working in these countries, I have watched the achievements evolve and met the people whose lives have been changed as a result. Today when I travel to Latin America, I see old people crippled by polio, but not children, because polio has been eliminated from the western hemisphere. When I travel to countries like Bangladesh and Kenya, I see packets of oral rehydration salts for sale in corner kiosks, and I know that many fewer children are dying from diarrhoea. In Africa, in Asia, in many places that I travel, I see volunteers going door to door to make sure that every child turns up for the next vaccination day, or to support new mothers in breastfeeding, or to explain how to use ORT.

These achievements are real, and the groundwork is in place for them to continue. But whenever we start to celebrate them, they are quickly overshadowed by the bad news about AIDS. The explanation for its relentless sweep through communities and countries is rooted in its fundamental nature. AIDS has succeeded so far in defeating efforts to stop it because it is not just another disease. Rather, it is fundamentally a development challenge, intermingling issues of poverty, inequality, culture and sexuality in complex ways.

Worldwide, HIV infection most often results from heterosexual intercourse. Beyond that biological reality, some people are especially vulnerable to HIV infection because of their social, cultural or economic situation. One such cause of vulnerability is the social inequality between women and men. Women, especially young women, have little power to dic-



*The impact of AIDS crosses generations. As parents succumb to the illness, other relatives must fill crucial child-care roles. This grandmother in Thailand is raising her grandchildren, whose parents died of AIDS.*

tate the terms of sexual relationships and are therefore much more vulnerable to infection. The 'sugar daddy' phenomenon is not new, but in the age of AIDS, older men are pursuing ever younger women and girls in the belief that they are less likely to be infected. Thus, a key to stopping the epidemic is action that enhances the ability of women and young people to control their lives, including their sexual relationships.

### Dangers of division

As real strides are made in the industrialized countries, people are beginning to talk about AIDS as a 'manageable' disease. A magazine article in the US last December even wondered if we are in 'the twilight of AIDS'. This sort of talk brings the potential of dangerous complacency and of even greater division between the 'have' and the 'have-not' nations.

That is a profound mistake on two counts. On an ethical plane, it is immoral to describe as 'manageable' a disease that is only 'manageable' for a fraction of the wealthiest 10 per cent of its victims. On a practical plane, it would be foolhardy for one simple reason: Like all infectious diseases, AIDS will not be defeated anywhere until it is defeated

everywhere—miracle drugs or no.

This is why it is so important that we avoid the temptation to view AIDS as two different diseases, one that is manageable in the wealthier countries and one that is a death sentence in the poorer countries. We are all in this boat together, and if we slip into an 'us vs. them' view of the world, we are sunk.

As former Zambian President Kenneth Kaunda said in a recent speech invoking the memory of his son, dead from AIDS in 1986, "Every one of us ignores AIDS in the house of their neighbour at their own peril." If we can stick together, if governments and NGOs and committed individuals in every community in every country are willing to learn from the painfully earned wisdom of their neighbours around the world, we can slow down and even reverse this epidemic. We do not have to watch these grim numbers continue their march across the world map.

To stop that march, we need accessible, affordable ways to prevent transmission between sexual partners and from mothers to children. This includes access to affordable and high-quality condoms, and increasingly to the recently developed condom for

women. In 1994, US trials of a new drug, zidovudine (ZDV), to help HIV-positive mothers give birth to healthy babies had striking results: a two-thirds decrease in HIV transmission. But it is beyond the reach of poor women. UNAIDS, the US Centers for Disease Control and Prevention, and other organizations are now collaborating with researchers in Africa and Asia to find economical ways to make ZDV available where it is most needed. Other low-cost drugs to prevent mother-to-baby transmission during pregnancy and childbirth are under development and look promising.

One of the problems facing families and health workers in developing countries is the potential for HIV infection through breastfeeding. While the factors determining transmission of the virus from mother to baby are not yet fully understood, studies suggest that breastfeeding confers a 1-in-7 risk of infecting the baby with HIV.

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*The lack of funding for an AIDS vaccine is scandalous and irrational.*

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An HIV-positive mother now faces a quandary. If she is affluent, she probably lives in a setting that makes the use of breastmilk substitutes a reasonable option. In all likelihood, she has easy access to safe water (or fuel to boil the water) for mixing the formula and cleaning the cups or bottles. She can afford as much formula as her baby needs. Attentive health services are available to treat the additional infant illnesses that may accompany use of breastmilk substitutes. Although in a perfect world breastfeeding is always the

best option, for a well-to-do woman infected with HIV, using formula might be a good choice.

But mothers at the bottom of the economic ladder face a cruel dilemma: They can either breast-feed, with the risk of passing along HIV, or they can use breast-milk substitutes, with the risk of exposing their babies to potentially lethal diseases and to malnutrition from formula that is overdiluted.

If we know that some babies are becoming infected through breast-milk, we have a moral obligation to do everything we can to prevent those infections. First, we must make sure that every woman has access to affordable, confidential HIV testing. If she takes the test and it turns out positive, she must be supported in making the agonizing infant-feeding decision. She needs to be informed in a respectful way about the relative risks so that she can make a choice based on accurate facts.

Where safe water is accessible close by, and where breastmilk substitutes are available at reasonable cost, an HIV-infected mother might choose to feed formula to her child. However, she herself is powerless to ensure a reliable water supply or quality health services, nor can she influence the price of formula. These are matters of public health, and that is the responsibility of governments.

### When leaders lead

A few heroic leaders understand AIDS for the profound development challenge it is, and they have approached it with an unprecedented call to action. When that becomes part of the national consciousness, the worst effects of the epidemic can be avoided.

Ugandan President Yoweri Museveni, for example, rarely delivers a speech in which he does not mention AIDS, and the trickling down of that rhetoric is at least partly responsible for the levelling off of infection rates in

urban areas of Uganda. Some surveys in antenatal clinics there have found that between 1990-1993 and 1994-1995, HIV prevalence among women aged 15-24 declined by 35 per cent.

In South Africa, President Nelson Mandela has called for a national struggle to vanquish AIDS on a scale similar to that mobilized to bring down apartheid. Zimbabwe responded to high HIV prevalence rates with a mandatory weekly lesson in life skills for all students aged 9 to 19. The course, begun in 1993, addresses HIV/AIDS in the context of coping with emotions and expectations, gender roles and plans for the future, and students role-play to

develop strategies for responding to peer pressure.

Similar bright spots of leadership are occurring in Asia. Only a few years ago, Thailand was viewed by complacent neighbours as the only country in the region likely to have a significant problem with AIDS. The virus had gained a foothold in 1988, and the availability of commercial sex in the country of 59 million people allowed it to flourish. As a result, about 45,000 Thais died from HIV infection in 1995.

But Anand Panyarachun, who was Prime Minister in 1991 and 1992, instituted a far-reaching AIDS education programme that has put Thailand in much better

shape than some of its neighbours. Mr. Anand required every government minister to include a budget line for AIDS. The centrepiece of a public education programme was a series of explicit AIDS prevention messages aired on radio stations at least once every hour. Condoms were widely distributed to brothels. Sex businesses that refused to require condom use were shut down. Calls for abstinence from casual sex were partnered with the condom campaign, promoted tirelessly by the Prime Minister's dynamic AIDS adviser, Mechai Viravaidya.

As a result, there was an 80 per cent decrease in sexually transmitted diseases in Thailand from 1989 to 1994. The number of new HIV infections in Thailand each year has more than halved since 1990. Success stories like these should be the most powerful argument against complacency.

These successes demonstrate that if we focus our efforts on those most vulnerable, if we expand use of the communication tools that work and commit ourselves to developing a vaccine and affordable drugs, we can stop this plague. We already proved we can muster global will and resources with the campaign that raised vaccination rates worldwide from 40 per cent to 80 per cent in just five years.

The worst that can happen for our prospects of wiping this virus from the earth is to allow complacency and divisiveness between the haves and have-nots to prevent us from developing responses that work in the countries where they are most needed. We can defeat HIV/AIDS—if we all acknowledge our ownership of it.

President Mandela said it best: "As the freedom of each nation is interdependent with that of others, so too is the health and well-being of their peoples. Nowhere is this more true than in the case of AIDS. The challenge of AIDS can be overcome if we work together as a global community." ■



*Educating people about how AIDS is transmitted is essential in combating the disease. A girl participating in an AIDS awareness workshop in Bujumbura (Burundi) holds a T-shirt that says, "We are taught and we teach AIDS awareness" in the Kirundi language.*

UNICEF/95-0521/Davies

## Gauging AIDS' terrible toll

How many infants will die of AIDS in the year 2010? Anywhere between 83,000 and 357,000 in just 19 of the high-risk countries. The more conservative estimates come from the UN Population Division, which believes that, with 75,000 infants (under 1 year of age) dying of AIDS in 1995, the pandemic essentially levelled off. But the estimates by the United States Bureau of the Census are more pessimistic: AIDS took 105,000 infant lives in 1995 in the 19 countries, and the toll will surge to more than 3 times that number in 2010—more than 10 times the number of infant deaths from all causes in Europe (except Eastern Europe).

The main reason for the difference between the two estimates is their assumptions as to the timing of the peak of the epidemic in these countries: The Census Bureau believes that the peak will come in 2010, while the UN believes it peaked in 1995. In the 19 coun-

tries, the Census Bureau attributes 26% of infant mortality to AIDS in 2010, whereas the UN estimate is 8%.

As to the impact on individual countries, the Census Bureau projects that in Kenya, AIDS will claim 51,000 infants in 2010, 41% of all infant deaths in the country. The comparable UN estimate is 12% or 12,200 infants. In Zimbabwe, according to the Census Bureau's calculations, 36,300 infants will die of AIDS in 2010, 58% of the total; the UN estimate is 11,500 deaths or 27% of all babies dying in the country. But Botswana is projected to be the biggest casualty of the scourge in 2010—61% or 4,500 total infant deaths (according to the Census Bureau) and 35% or 1,600 of 4,500 infant deaths (according to UN figures).

The projections cover 19 of the 32 hardest hit countries where HIV/AIDS now rages. But the epidemic is only beginning to grow in Asia, for exam-

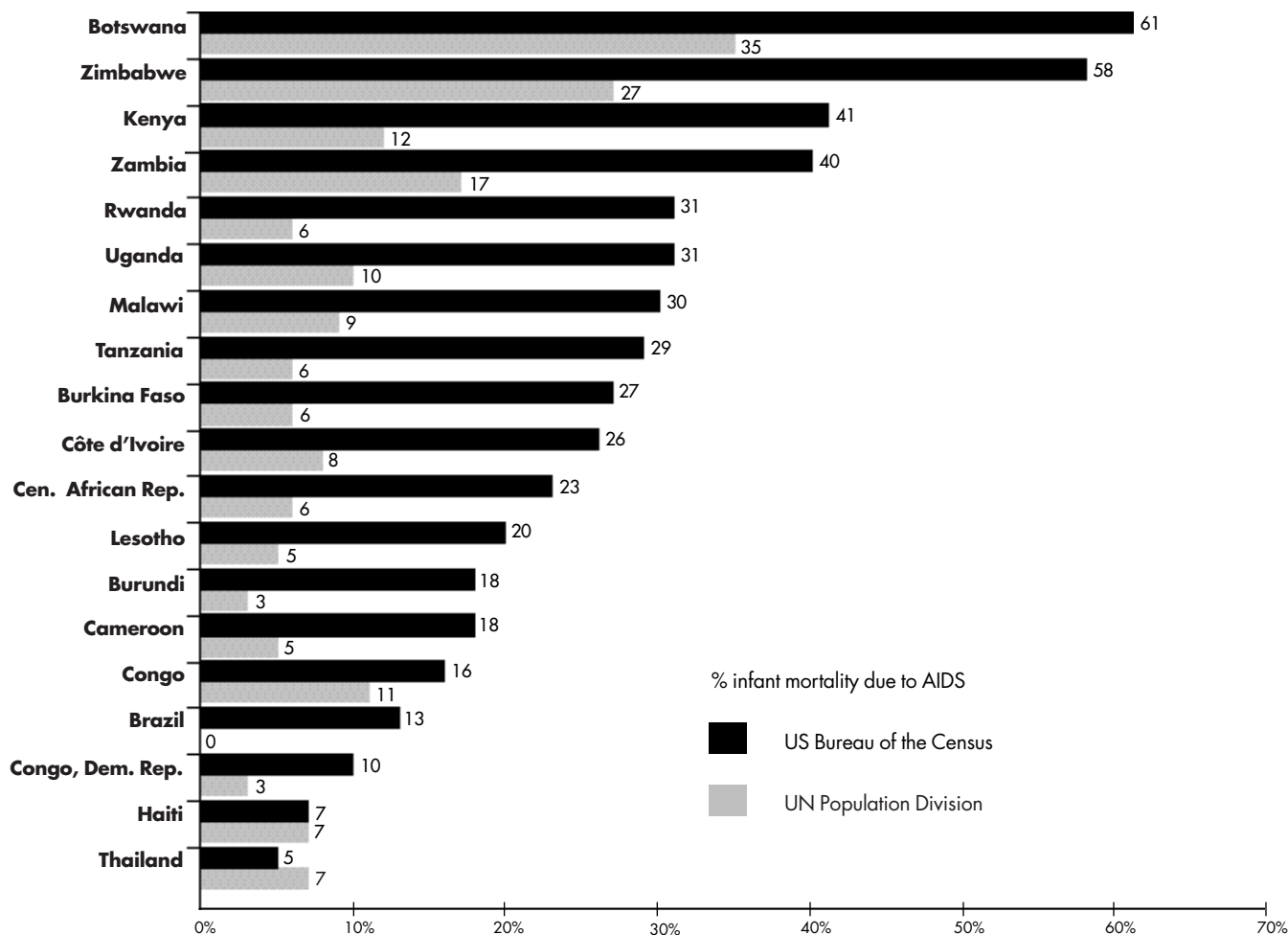
ple, and new countries could appear on this chart if prevention and control efforts do not take hold.

Worldwide, the percentage of infant deaths attributable to HIV/AIDS is still small. That is because at this time AIDS is not a significant cause of infant or child death in the countries with the biggest percentage of the world's children, especially China and India.

It is important to remember that the impact of HIV/AIDS on children is not only measured in statistics on their health but also in the health of their parents and communities. A young child whose parents are sick or dead is at heightened risk of death from preventable diseases and malnutrition, while older children (girls especially) must often leave school to care for sick parents, mind younger siblings or go to work. In all of these ways, the effect of HIV/AIDS on development is potentially enormous—and as yet unmeasured.

### Per cent of infant deaths due to AIDS

Projections for the year 2010



Sources: US Bureau of the Census, *The Demographic Impacts of HIV/AIDS: Perspectives from the World Population Profile*, 1996; UN Population Division, *World Population Prospects: The 1996 Revision*, 1997.

# HEALTH LEAGUE TABLE

## CHILD DEATH RATES

**T**he proportion of children who reach their fifth birthday is one of the most fundamental indicators of a country's concern for its people. Child survival statistics are a poignant indicator of the priority given to the services that help a child to flourish: adequate supplies of nutritious food, the availability of high-quality health care and easy access to safe water and sanitation facilities, as well as the family's overall economic condition and the health and status of women in the community.

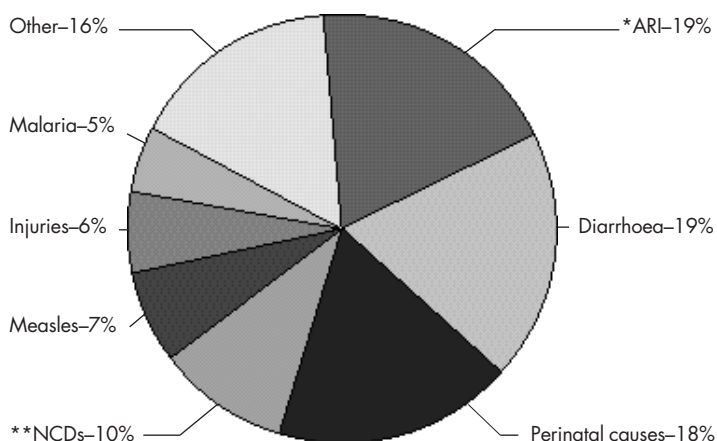


SUB-SAHARAN AFRICA



MIDDLE EAST AND NORTH AFRICA

### Re-slicing the cause-of-death pie



Determining the cause of death for children under 5 has always been a more difficult task than estimating the number of child deaths. Better estimates of the cause of child death have resulted from a new global study by WHO, the World Bank and Harvard University, reflected in the pie chart.

The chart revises earlier estimates of the proportion of deaths attributable to each cause. It also provides information on two categories—injuries and non-communicable diseases—not previously included in cause-of-death estimates.

Although the new pie chart attributes a smaller percentage of deaths to diarrhoea and acute respiratory infections, it confirms them as the leading causes of child death. Malnutrition alone accounts for just 3% of under-5 deaths, but it plays a contributing role in more than half of all child deaths in developing countries.

\* Acute respiratory infections.  
\*\* Non-communicable diseases.

Sources: Adapted from *Global Burden of Disease*, WHO, World Bank and Harvard University, 1996.

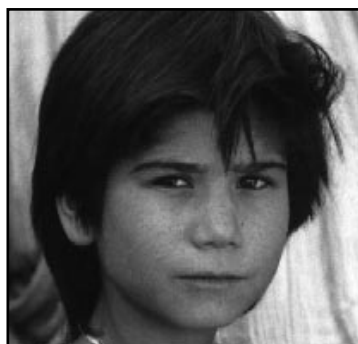
		%			%
1	Gambia (110)	56	1	Oman (25)	74
2	Botswana (52)	45	2	Egypt (51)	72
2	Mauritius (23)	45	3	Algeria (40)	71
4	Zimbabwe (74)	41	4	U. Arab Emirates (19)	70
5	Senegal (130)	40	5	Iran (40)	68
6	Cameroon (106)	39	6	Turkey (50)	65
7	Rwanda (139)	37	7	Tunisia (37)	64
8	Burkina Faso (164)	33	8	Jordan (25)	62
9	Namibia (78)	32	8	Saudi Arabia (34)	62
10	Togo (128)	27	10	Kuwait (14)	60
11	Chad (152)	26	▶ Regional average (57)	59	
11	South Africa (67)	26	11	Israel (9)	53
13	Eritrea (195)	25	12	Morocco (75)	51
13	Ethiopia (195)	25	12	Syria (36)	51
13	Mali (225)	25	14	Yemen (110)	48
16	Gabon (148)	24	15	Libya (63)	47
16	Madagascar (164)	24	16	Sudan (115)	43
16	Malawi (219)	24	17	Iraq (71)	14
19	Guinea-Bissau (227)	22	18	Lebanon (40)	0
19	Mauritania (195)	22			
21	Guinea (219)	21			
21	Mozambique (220)	21			
23	Kenya (90)	20			
24	Benin (142)	19			
24	Uganda (145)	19			
26	Lesotho (140)	17			
27	Ghana (130)	16			
▶ Regional average (174)	14				
28	Congo (108)	14			
28	Somalia (211)	14			
30	Côte d'Ivoire (150)	12			
31	Tanzania (160)	11			
32	Burundi (176)	9			
33	Central African Rep. (165)	8			
33	Liberia (216)	8			
35	Sierra Leone (284)	6			
36	Nigeria (191)	3			
37	Congo, Dem. Rep. (207)	1			
38	Niger (320)	0			
39	Angola (292)	-12			
40	Zambia (203)	-27			

WORLD AVERAGE

89

Under-5 deaths per 1,000 births, 1995

Since 1985, 2.5 million young lives have been saved each year through low-cost health programmes.



CENTRAL ASIA



EAST/SOUTH ASIA AND PACIFIC



AMERICAS



EUROPE

		%
1	Kyrgyzstan (54)	40
2	Tajikistan (79)	37
2	Uzbekistan (62)	37
4	Georgia (26)	35
5	Kazakstan (47)	34
6	Turkmenistan (85)	33
7	Azerbaijan (50)	15
▶	Regional average (132)	12
8	Armenia (31)	9
9	Afghanistan (257)	8

		%
1	Malaysia (13)	69
2	Sri Lanka (19)	63
3	Viet Nam (45)	57
4	Singapore (6)	54
5	Korea, Rep. (9)	50
6	Thailand (32)	48
7	Cambodia (174)	47
8	Bangladesh (115)	45
8	Japan (6)	45
10	New Zealand (9)	44
11	Indonesia (75)	41
12	Australia (8)	38
13	Nepal (114)	37
14	India (115)	35
15	Mongolia (74)	34
▶	Regional average (85)	31
16	Korea, Dem. (30)	30
17	Lao Rep. (134)	29
18	China (47)	28
19	Bhutan (189)	24
19	Philippines (53)	24
21	Pakistan (137)	9
22	Papua New Guinea (95)	0
23	Myanmar (150)	-3

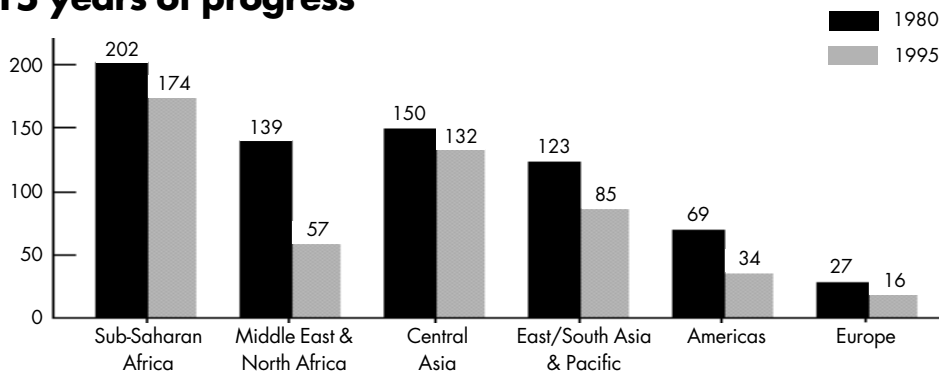
		%
1	El Salvador (40)	67
1	Jamaica (13)	67
3	Mexico (32)	63
4	Cuba (10)	62
4	Honduras (38)	62
6	Ecuador (40)	60
7	Nicaragua (60)	58
7	Peru (55)	58
9	Chile (15)	57
9	Guatemala (60)	57
11	Trinidad/Tobago (18)	55
12	Dominican Rep. (44)	53
▶	Regional average (34)	51
13	Uruguay (21)	50
14	Colombia (32)	45
14	Costa Rica (16)	45
16	Paraguay (34)	44
17	Venezuela (24)	43
18	Brazil (53)	42
19	Bolivia (105)	38
19	Canada (8)	38
21	Haiti (124)	36
22	Panama (20)	35
23	Argentina (27)	34
24	United States (10)	33

		%
1	Portugal (11)	65
2	Austria (7)	59
3	Greece (10)	57
4	Germany (7)	56
4	Slovenia (8)	56
6	Bosnia/Herzegovina (17)	55
6	TFYR Macedonia (31)	55
8	Italy (8)	53
9	Czech Rep. (10)	50
9	Ireland (7)	50
9	United Kingdom (7)	50
12	Yugoslavia, Fed. Rep. (23)	48
13	Hungary (14)	46
14	Finland (5)	44
14	Spain (9)	44
14	Sweden (5)	44
▶	Regional average (16)	41
17	Croatia (14)	39
18	Belarus (20)	38
19	Switzerland (7)	36
20	Slovakia (15)	35
21	Belgium (10)	33
21	Poland (16)	33
23	Lithuania (19)	32
24	France (9)	31
24	Moldova, Rep. of (34)	31
26	Albania (40)	30
26	Denmark (7)	30
26	Russian Fed. (30)	30
29	Latvia (26)	28
30	Estonia (22)	27
30	Netherlands (8)	27
30	Norway (8)	27
33	Bulgaria (19)	24
34	Ukraine (24)	23
35	Romania (29)	19

**WHAT THE TABLE RANKS**

Percentage reduction in under-5 mortality rates from 1980 to 1995. The 1995 rate per 1,000 births is in parentheses.

**15 years of progress**



Source: UNICEF.

Under-5 mortality rate (deaths per 1,000 live births)

Source: UNICEF.

### Pneumonia: Little progress on a big killer

Acute respiratory infections (ARI), mainly pneumonia, kill more than 2 million children each year. Yet many countries are only beginning to take steps to reduce the devastating but largely preventable toll. Many ARI deaths could be averted if families knew pneumonia's danger signs, if health workers were trained to diagnose and treat pneumonia, and if clinics stocked life-saving antibiotics. Since 1992, however, only 16 countries have undertaken surveys of clinics to determine health workers' training and the availability of basic antibiotics. And only 23 countries have completed household surveys to gauge families' awareness of danger signs.

In 10 of the countries that surveyed clinics, fewer than half of health workers are trained in pneumonia case management. In several countries, such as Colombia, the Dominican Republic, Indonesia, Malaysia, Thailand and Zimbabwe, a high percentage

of clinics stocked antibiotics, but a much lower percentage of health workers were trained to treat pneumonia. Pakistan and Papua New Guinea had low rates for both antibiotics and training. Among countries with household surveys, only in Egypt do more than half of caretakers know when to seek treatment.

But there is good news from the world's two most populous countries: China has trained 88% of health workers in standard case management of ARI, and India is a close second at 87%. Nearly all clinics surveyed in both countries stock necessary antibiotics.

At the beginning of this decade, few countries had programmes to reduce mortality from pneumonia. Of 88 countries where pneumonia is thought to be common, 59 have now started control programmes, and household surveys are being carried out in 60 countries.

#### First steps in taming a killer

Countries with clinic surveys of ARI\* management

	% health workers trained in case management	% clinics with basic antibiotics
China	88	99
India	87	94
Philippines	83	52
Bangladesh	66	94
Viet Nam	65	-
Sudan	64	68
Morocco	47	79
Paraguay	46	60
Thailand	44	87
Colombia	36	67
Papua New Guinea	33	27
Pakistan	29	38
Dominican Rep.	26	82
Zimbabwe	25	97
Malaysia	23	100
Indonesia	18	63

Countries with household surveys of ARI home management

	% caretakers knowing when to seek care
Egypt	57
Sudan	48
Swaziland	48
Philippines	44
Uganda	41
Viet Nam	40
Mongolia	36
Côte d'Ivoire	35
India	35
Somalia	35
Sri Lanka	35
Tanzania	33
Nigeria	32
Myanmar	26
Turkmenistan	26
Kyrgyzstan	25
Ghana	24
Congo, Dem. Rep.	22
Pakistan	20
Ethiopia	19
Lao Rep.	18
Papua New Guinea	15
Yemen	7

\* Acute respiratory infections.

Sources: WHO, Division of Diarrhoeal and Acute Respiratory Disease Control, 1994-1995 Report; UNICEF, unpublished data, 1992-1995.

### 52 countries falling short on immunization goal for DPT

Reaching the year 2000 goal of 90% immunization levels is a major challenge for many countries. At least 52 countries with populations of more than 1 million are unlikely to meet the goal of immunizing all children under the age of 1 against DPT (diphtheria, pertussis and tetanus). From 1980 to 1990, developing countries accomplished extraordinary gains for child health by raising immunization rates for DPT, as well as measles, polio and tuberculosis, from about 30% to an average of 80%.

Sub-Saharan Africa faces the greatest difficulties, with 31 countries projected to fall short of the DPT immunization goal. Angola, Central African Republic and Chad could have DPT immunization rates of less than 20% in the year 2000 unless they are able to reverse current trends. Countries in other regions with low projected rates include Haiti, Nepal, Pakistan, Papua New Guinea and Yemen. Immunization data are a basic child health indicator,



Rwanda: Projected to achieve 39% immunization rate by the year 2000.

but seven industrialized countries have inadequate data: Australia, Austria, France, Ireland, Japan, New Zealand and Switzerland. Most of the other industrialized countries are projected to attain DPT (or DT only) immunization levels of at least 85%.

Despite concern that commitment to immunization might waver after the 1990 achievement, 90 countries are on track towards the year 2000 goal, based on their 1990 to 1995 performance. Current levels of DPT immunization save the lives of more than 1 million children each year.

#### Immunizing for the year 2000

Countries unlikely to meet the goal of 90% coverage of DPT by the year 2000

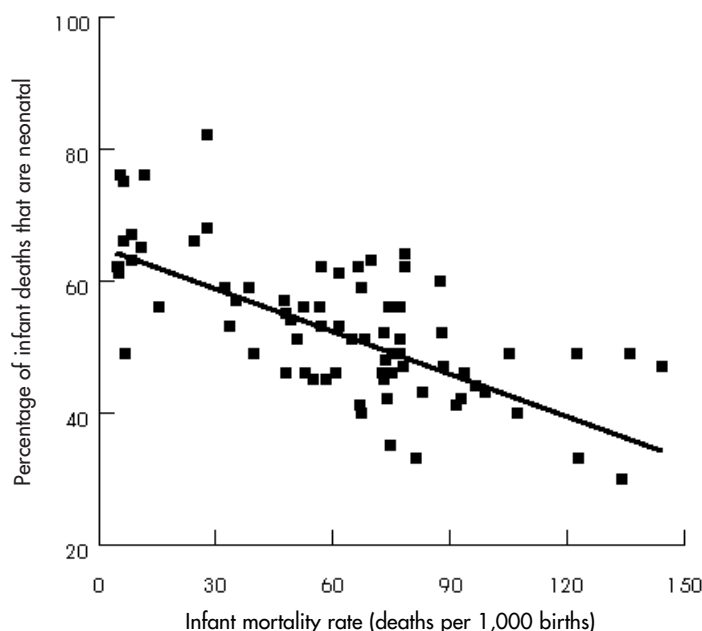
Projected immunization rate by the year 2000

Sub-Saharan Africa				Central Asia	
Zimbabwe	82	Lesotho	44	Turkmenistan	81
South Africa	80	Gabon	40	Kyrgyzstan	68
Kenya	79	Rwanda	39	Afghanistan	67
Botswana	71	Uganda	39	Georgia	49
Zambia	66	Cameroon	38	East/South Asia and Pacific	
Malawi	65	Somalia	38	Philippines	81
Liberia	64	Congo	32	Myanmar	75
Senegal	62	Nigeria	31	Bangladesh	62
Ethiopia	59	Niger	28	Pakistan	13
Côte d'Ivoire	56	Burkina Faso	27	Americas	
Ghana	53	Sierra Leone	22	Uruguay	84
Togo	50	Congo, D. Rep.	21	Brazil	81
Mali	48	Angola	19	Paraguay	80
Burundi	46	C. African Rep.	18	Costa Rica	76
Eritrea	46	Chad	14	Venezuela	72
Mozambique	46			Haiti	28
Middle East and North Africa				Europe	
Sudan	81	Yemen	15	TFYR Macedonia	82
				Bosnia/Herzegovina	78
				Latvia	50

\* Papua New Guinea.

Sources: WHO and UNICEF, unpublished data for 1990 and 1995.

### Proportion of infant mortality that is neonatal



As a country's rate of infant mortality (deaths in the first year of life) declines, the percentage of neonatal deaths (those in the first 28 days) grows.

Source: DHS and government reports, 1986-96.

## Neonatal deaths: 5 million each year

Of the annual 8 million infant deaths worldwide occurring during the first year of life, 5 million are neonatal deaths—those taking place during a baby's first four weeks. A total of 98% of all neonatal deaths are in developing countries.

The graph demonstrates a global trend: As a country's infant mortality rate falls, the proportion of neonatal deaths tends to rise. This is true both in developing countries (most are in the middle of the graph) and in the industrialized countries (clustered on the left).

A baby is at greater risk during delivery and the first month of life than at any other point during childhood. And 85% of all neonatal deaths are due to birth asphyxia and trauma, tetanus, premature birth and infections. But there is an erroneous belief that these most common causes of death in developing countries are not responsive to public health measures.

Cost-effective interventions can, in fact, significantly reduce neonatal (as well as maternal) mortality. These include vaccinating women of child-bearing age against tetanus; promoting good maternal nutrition; ensuring prenatal care and deliveries by skilled birth attendants; and upgrading health facilities with equipment, drugs and staff training needed to treat obstetric and neonatal emergencies. Newborns need immediate breastfeeding, warmth, cleanliness, hygienic care and resuscitation when necessary. Some will also need special attention for the early detection and treatment of illnesses.

In the industrialized countries, where infant deaths are much more rare, neonatal deaths constitute an even higher proportion of the infant mortality rate. Most neonatal deaths in these countries result from congenital abnormalities and premature birth.

## Malaria's death toll: A child every 30 seconds

Alone or in conjunction with other illnesses, malaria kills over 1 million children under age 5 every year—a child every 30 seconds. Children experience over half of all malaria episodes.

Four species of the malaria parasite, transmitted by the *Anopheles* mosquito, affect humans, but the most dangerous species, causing nearly all malaria-related deaths, is *Plasmodium falciparum*, which predominates in sub-Saharan Africa and parts of South-East Asia, Oceania and South America. Over 40% of the world's population lives in malaria-endemic areas, but 90% of the estimated annual 300 million to 500 million malaria cases afflict people in sub-Saharan Africa.

Prevention efforts against malaria have had mixed results. Although water-drainage and insecticide-spray programmes have been effective in some parts of the world, they have not proven to be practical or sustainable in the more severely affected regions. Additionally, no vaccine against malaria is likely to be available for routine use in the near future. However,

another preventive measure, insecticide-impregnated bednets or curtains, has proven to reduce deaths among children in Africa. Initiatives are under way to promote the widespread use of these materials, though the initial cost of buying them and the added expense of subsequent treatments with insecticide are beyond the reach of many poor families.

As prevention is so difficult, the ability to provide effective treatment for malaria is of great importance. But treatment has also been made more difficult because nearly everywhere that *falciparum* is prevalent, it is at least partially resistant to chloroquine, the cheapest and most widely available medication. The problem of *falciparum* drug resistance is most acute and severe in parts of South-East Asia and Brazil where malaria may also be resistant to the readily available second-line medications.

The challenge of drug resistance demands that health workers be trained to recognize and provide proper treatment for the problem and that health systems have appropriate drugs available.

### Where *P. falciparum* is chloroquine-resistant

Sub-Saharan Africa		Middle East and North Africa	
Angola	Liberia	Iran	Sudan
Benin	Madagascar	Oman	Yemen
Botswana	Malawi	Central Asia	
Burkina Faso	Mali	Afghanistan	
Burundi	Mauritania	East/South Asia and Pacific	
Cameroon	Mozambique	Bangladesh	Nepal
C. African Rep.	Namibia	Cambodia*	Pakistan
Chad	Niger	China	Papua New Guinea
Congo	Nigeria	India	Philippines
Congo, Dem. Rep.	Rwanda	Indonesia	Sri Lanka
Côte d'Ivoire	Senegal	Malaysia	Thailand*
Eritrea	Sierra Leone	Myanmar*	Viet Nam
Ethiopia	Somalia	Americas	
Gabon	South Africa	Bolivia	Panama
Gambia	Tanzania	Brazil*	Paraguay
Ghana	Togo	Colombia	Peru
Guinea	Uganda	Ecuador	Venezuela
Guinea-Bissau	Zambia		
Kenya	Zimbabwe		

\* *P. falciparum* has widespread resistance to more than one drug.

Source: WHO, *International Travel and Health, Vaccination Requirements and Health Advice*, 1997.