Part 1

TEN STATISTICAL HIGHLIGHTS IN GLOBAL PUBLIC HEALTH
1. Child mortality: the gap within countries is not closing

While some countries are making progress and achieve greater equality in child survival chances within the country, the general picture is that little progress has been made during the last decade.

The Millennium Development Goals (MDGs) not only aim to reduce inequality between countries but also within countries. Population-based surveys provide insights into the existence of differences by demographic and socio-economic characteristics and World Health Statistics 2006 includes a special section on equity.

Twenty-nine countries which have published the results of a national Demographic and Health Survey (DHS) conducted since 2000, also carried out a DHS about 10 years earlier (16 countries in sub-Saharan Africa, 5 in Asia, 5 in Latin America and the Caribbean, and 3 in the WHO Eastern Mediterranean Region).

Comparison of child mortality ratios by residence, mother’s level of education and wealth quintiles with DHS surveys conducted in the same countries earlier shows that there is little progress towards reducing the gaps within countries. Rural children, children of uneducated mothers and children in the poorest households continue to have higher mortality risks than better-off children – as they did 10 years previously – even though overall mortality levels have declined.

(Source: Demographic and Health Surveys)

2. Risk factor transition: high prevalence of tobacco use among youth worldwide

The risk factor transition refers to a change from a high prevalence of risk factors for communicable diseases (such as underweight, poor water and sanitation) to a high prevalence of risk factors for chronic diseases (such as tobacco use, high blood pressure and obesity). According to current estimates, the annual number of tobacco-related deaths worldwide is projected to rise from 4.9 million in 2000 to more than 10 million by 2020, unless effective interventions take hold. The increase will be greatest in developing countries.

Findings of the Global Youth Tobacco Survey (GYTS) show that the tobacco epidemic is growing. Students aged 13–15 years were surveyed about their use of tobacco in more than 140 countries during the period 1999–2005. The results for boys and girls suggest that current patterns of tobacco use among adults – where women are only about one-fourth as likely as men to smoke cigarettes – will change. No gender difference was found in over half of the GYTS sites surveyed for current cigarette smoking. In total, one out of 10 GYTS respondents was a current smoker, and about as many were current users of other tobacco products. The influence of tobacco advertising and promotion is reflected in the fact that 80% of GYTS respondents worldwide have seen tobacco advertisements, and 12% have been offered free cigarettes.

A combination of evidence-based tobacco control measures in line with the WHO Framework Convention on Tobacco Control is essential to curb the tobacco epidemic among youth as well as adults.

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3. Infant immunization coverage: where are we now?

Efforts to increase global immunization need to focus on countries where most of the world’s unvaccinated children live. WHO and UNICEF estimate that, in 2004, 78% of children under one year of age received three doses of diphtheria, tetanus toxoid and pertussis vaccine (DTP3). While 102 or 53% of all countries achieved coverage of more than 90%, 50 countries still have coverage levels below 80% and 10 have coverage less than 50%.

The 10 countries with DTP3 coverage levels below 50% (Nigeria, Somalia, Liberia, Equatorial Guinea, Gabon, Central African Republic, Haiti, Lao People’s Democratic Republic, Papua New Guinea, and Vanuatu) have a total of 4.3 million, or 16%, of the 27 million unvaccinated children. More than half of these countries are in Africa, three are in Asia and one in the Americas.

There are five large-population countries (India, Nigeria, Pakistan, China, and Indonesia) each with more than one million unvaccinated children, accounting for 16.3 million (more than 60%) of the world’s estimated 27 million unvaccinated children. Nigeria’s coverage is less than 50%; other countries have higher coverage rates: India, 64%; Pakistan, 65%; Indonesia, 70% and China, 91%.

4. Health workforce, health expenditure and disease burden: higher burden, fewer resources

The World Health Report 2006 identified major inequalities in the distribution of health workers among countries. Countries with the lowest relative need have the highest numbers of health workers, while those with the greatest burden of disease must make do with a much smaller health workforce. This pattern is summarized in the figure above by plotting the share of the global burden of disease of each region on the vertical axis and the percentage of the global health workforce in each region on the horizontal axis. The size of the dots represents total health expenditure.

The Region of the Americas, which includes Canada and the United States, contains 10% of the global burden of disease; yet almost 37% of the world’s health workers live there and more than 50% of the world’s financial resources for health are spent there. Europe has a similar disproportionate share of the world’s human and financial resources for health.

In contrast, the African Region suffers more than 24% of the global burden of disease but has access to only 3% of health workers and less than 1% of the world’s financial resources, even when loans and grants from abroad are included. The Eastern Mediterranean Region, which has 9% of the disease burden, has only 3.5% of the health workers and 1% of the world’s financial resources. South-East Asia has the largest share of the world’s burden (29%), but only 12% of the health workforce and just over 1% of the financial resources. The Western Pacific Region has a more balanced distribution, with 18% of the global burden and 17% of the world’s human resources for health, although there are major differences between countries in the region.

5. Cause of death and burden of disease: global epidemic of chronic noncommunicable diseases

Among the 58 million deaths in the world in 2005, noncommunicable diseases were estimated to account for 35 million, which is double the number of deaths from all communicable diseases (including HIV/AIDS, tuberculosis and malaria), maternal and perinatal conditions, and nutritional deficiencies combined. Sixteen million of the 35 million deaths occur in people aged under 70 years. The majority of deaths (80%) from noncommunicable diseases occur in low and middle income countries, where most of the world’s population lives, and the rates are higher than in high income countries. Deaths from noncommunicable diseases occur at earlier ages in low and middle income countries than in high income countries.

Among the noncommunicable diseases, cardiovascular diseases are the leading cause of death, responsible for 30% of all deaths – or about 17.5 million people – in 2005, followed by cancer (7.6 million deaths in 2005), and chronic respiratory diseases (4.1 million deaths in 2005).

In addition to the high death toll, noncommunicable diseases cause disability. The most widely used summary measure of the burden of disease is disability-adjusted life years (DALYs), which combines years of healthy life lost to premature death with time spent in less than full health. Almost half of the global burden of disease is caused by noncommunicable diseases, compared with 13% by injuries and 39% by communicable diseases, maternal and perinatal conditions, and nutritional deficiencies combined. While the share of cardiovascular diseases, chronic respiratory diseases and cancer decreases, other noncommunicable diseases increase from 9% to 28%, primarily due to a larger share for mental disorders, and to a lesser extent due to impairments of the sense organs (sense and hearing) and musculoskeletal system (mainly arthritis).

DOTS status in 2004
26 countries had reached both targets and a further 56 countries were close to reaching targets

DOTS is the core of the Stop TB Strategy, the internationally recommended approach to tuberculosis (TB) control. Two of the targets for TB control set out in the strategy are to have reached 70% detection of new smear-positive cases and successful treatment of 85% of these cases, globally and in all countries, by the end of 2005.

Data on both treatment success and case detection rates were provided by 172 DOTS countries for 2004. Of those, 82 countries reported treatment success rates of at least 70% and DOTS detection rates of at least 50%. In 2004, 26 countries reached both targets, including 19 countries shown in the upper right quadrant of the figure below, and an additional seven countries not shown in the figure (out of range of the graph): Barbados, Costa Rica, Kiribati, Marshall Islands, Micronesia, Oman, Solomon Islands. This is up from 22 countries a year earlier, but together they accounted for only 6% of estimated smear-positive cases in 2004.

WHO has identified 22 high-burden countries which account for approximately 80% of the estimated TB cases that occur across the world every year. Among the high-burden countries, Viet Nam has exceeded both targets since 1997. The Philippines is the second high-burden country to have reached both targets, while it is likely that Cambodia, China, India, Indonesia and Myanmar reached the targets in 2005. Three WHO regions are expected to have met both 2005 targets: the Region of the Americas and the South-East Asia and Western Pacific regions.

Source: WHO, 2006

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7. Government spending on health care: monitoring the Abuja declaration target

The proportion of government budget allocations to health varies from less than 5% in several countries in Africa, Asia and the WHO Eastern Mediterranean Region, to well over 20% in some countries in the Americas. One third of low income countries allocated over 10% of their national budget to health in 2003. This relatively high share of the budget reflects large influxes of external resources earmarked for health through global health partnerships such as the Global Fund to fight AIDS, Tuberculosis and Malaria and the Global Alliance for Vaccine and Immunization, and from bilateral donors. Such influxes frequently reach over 20% of the total health expenditure.

In 2000, 53 African heads of state pledged to allocate 15% of their national budget to health. This pledge was reaffirmed in the Gaborone Declaration during the October 2005 session of the Conference of African Ministers of Health in Botswana. According to the latest available figures for 2003, only one country (Liberia) has reached this level of expenditure, while 19 countries reached between 10% and 14%. In Liberia, post-war reconstruction aid included a significant component of provision of basic health services. Where external resources continue to fund a large part of the health sector and with no assurances of aid predictability over the long term, sustainability is a major concern.

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8. Nutrition transition: high levels of child undernutrition and adult obesity co-exist

The nutrition transition includes an increase in obesity and a decrease in the prevalence of undernutrition. This transition is occurring in many low and middle income countries, often at a different pace and in different ways.

Eighty countries conducted anthropometric surveys in 2000 and later, compiled in the WHO Global Database on Child Growth and Malnutrition, from Demographic and Health Surveys and other sources. The prevalence of undernutrition, measured by stunting (short-for-age) among children under five years of age, declines sharply as the level of economic development (approximated by GDP per capita in international dollars) increases.

On the other hand, the relationship between levels of adult obesity (in this case the percentage of obese females aged 15 years and older compiled in the WHO Global Database on Body Mass Index) and level of economic development is weaker, but there is still a statistically significant relationship. Most striking is the wide variety of patterns of levels of undernutrition in children and obesity in adults at the same level of economic development. In particular, in middle income countries a high prevalence of undernutrition and obesity can coexist.

(Source: WHO, 2006[10,11])

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9. HIV/AIDS and “3 by 5”: people receiving antiretroviral treatment tripled in two years

Global efforts to expand access to antiretroviral treatment (ART) increased significantly as a result of the “3 by 5” initiative, with substantial gains in the numbers of people receiving life-saving ART in every region of the world. From a baseline of approximately 400,000 people on ART in low- and middle-income income countries when WHO and UNAIDS launched the “3 by 5” strategy in December 2003, WHO estimates that 1.3 million people were on treatment at the end of December 2005. This represents a more than threefold increase in the number of people receiving treatment globally over the two-year reporting period.

The most significant increase has occurred in the African Region, where the number of people on treatment more than doubled to about 800,000 within one year. Over the two-year reporting period, the number of people on treatment in this region increased more than eightfold.

The need for ART in low- and middle-income income countries was estimated in 2005 to be 6.5 million, including 660,000 children. Therefore, coverage of ART among people with advanced HIV infection is still low. Overall, ART coverage in low- and middle-income income countries increased from 7% at the end of 2003 to 12% at the end of 2004 and 20% at the end of 2005. About 1 in 6 of the 4.7 million people who need treatment in the African Region are now receiving it.

10. Health forecast: projecting causes of death to 2030

The world will experience a dramatic shift in the distribution of deaths from younger to older ages and from communicable diseases to noncommunicable diseases during the next 25 years. In 2005, 19% of all deaths were among children, 29% were among adults aged 15–59 years and 53% were among people aged 60 years and older. By 2030, the respective proportions will have changed to 9%, 29% and 62%.

The proportion of all deaths due to communicable, maternal, perinatal and nutritional causes is expected to decrease from 30% in 2005 to 22% in 2030, while the share of noncommunicable disease is likely to increase from 61% to 68%. Injuries are estimated to account for 9% in 2005 and in 2030. These are the results of WHO’s updated mortality projections, based on projections of economic and social development, and using the historically-observed relationships of these with cause-specific mortality rates, including separate projections for HIV/AIDS, tuberculosis, lung cancer and diabetes.

Years of life lost (YLL) take into account the age at which deaths occur by giving greater weight to deaths at younger age and lower weight to deaths at older ages.

Results for broad cause projections are shown as cause-specific YLL rate for 2005, 2015 and 2030 in the world. While the total deaths and crude death rates for cancers and cardiovascular diseases are projected to increase, YLL rates are projected to increase only slightly for cancers, and to decline for cardiovascular diseases. This is because more deaths occur at older ages, leading to fewer lost years of life.