News

Underweight the main cause of ill-health; five causes account for 28% of all DALYs

Childhood and maternal underweight, unsafe sex, high blood pressure, tobacco, and alcohol are the five main causes of today's global burden of disease, in that order, of 25 health risks chosen for study by the Comparative Risk Assessment Collaborating Group, an international team whose research forms the basis for this year's World Health Report (see *WHO News*).

According to the study, these five causes account for 28% of total disability-adjusted life years (DALYs) lost to ill-heath each year. Childhood and maternal underweight causes 138 million DALYs (9.5% of total), unsafe sex 92 million (6.3%), high blood pressure 64 million (4.4%), tobacco 59 million (4.1%), and alcohol 58 million (4.0%).

However, the ranking varies according to the state of development of countries. In the poorest regions of the world the third, fourth and fifth most important risk factors are unsafe water, sanitation, and hygiene; indoor smoke from solid fuels; and micronutrient deficiencies, while underweight and unsafe sex remain the first and second. Alcohol, tobacco, high blood pressure, and high cholesterol are major causes of disease burden in both developing and developed regions, the study concludes.

This analysis of health by risks could not, however, include some important diseases, such as TB and malaria, which have multiple causes and influences varying from one group of people to another. Such diseases, say the researchers, are best suited to analysis of specific interventions tailored to specific settings, rather than to risk factor analysis.

The Comparative Risk Assessment Collaborating Group consist of a team of over 140 experts from WHO and institutions predominantly in Australia, New Zealand, the United Kingdom and the United States, but also including institutions based in Canada, Chile, Mexico, South Africa, Spain, Sweden, and Switzerland, plus UNAIDS. Their study has been published in the *Lancet* and is available on the WWW (http://image.thelancet.com/extras/02art9066web.pdf). ■

Robert Walgate*, Bulletin*

Nepal's childhood mortality falls by half as vaccinations rise tenfold

Khemraj Shrestha, JHU/CCP

Street theatre artists preparing for a family planning drama at Mainapokhar in Bardiya district, Nepal.

Nepal, one of Asia's poorest countries, has been taking hard knocks in recent years, struggling with a Maoist rebellion since 1996, and facing the appalling slaughter of many of its royal family by one of its own members in June 2001. But a delighted Sarat Singh Bhandari, Nepalese Minister for Health, recently reported significant health improvements in the country.

From 1980 to 2000 mortality in under five-year-olds fell by 55% (to 110 deaths of children 0–4 years old per 1000 births), said Bhandari; infant mortality has dropped by 33% (to 76 deaths per 1000 births) and fertility by 26% (to 4.7 children per woman).

The population still managed to more than double — from 15 million in 1980 to 37 million in 2000 — but it would have risen further if it had not been for a steady rise in the use of modern contraceptives by married women, from just 7% of such women in 1981 to 35% in 2001. The drop in child mortality is linked to the massive increase in the proportion of 12–23 month-old Nepalese children fully immunized against diphtheria, pertussis and tetanus: a rise to 80% in the year 2000, from just 8% 20 years ago.

These were some of the encouraging conclusions of Nepal's new Demographic and Health Survey, said the minister, speaking at the launching ceremony for the Survey in Kathmandhu. Rebecca Rohrer, Director of the Health and Family Planning Unit of USAID, which funded the survey, said that Nepal has led the way in South Asia in improving demographic and health indicators in the last five years.

Some professionals working in the health sector, however, are not so confident, at a time when all growth indicators in Nepal are pointing downward. "I feel the health service delivery system has worsened in the last five years," claims Badri Raj Pandey, a senior health professional who has worked as the medical superintendent of Bir Hospital, the largest hospital in Nepal, and Chairman of Family Planning Association of Nepal (FPAN).

There is certainly still a great deal to do. Pandey points out that most Nepalese women deliver their babies at home without any medical aid or birth attendant. And cultural taboos are so strongly rooted in the rural areas of far western Nepal that menstruating women and those delivering babies still have to live outside the home in a shed, and fend for themselves. The maternal mortality rate in Nepal was 539 per 100 000 live births in 1996, according to USAID figures.

However Ms Pancha Kumari Manandhar, a consultant at Health and Family Planning Unit of USAID, is confident

that the trends shown by the Demographic and Health Survey are correct, that Nepal has really achieved a lot in the health and family planning sector over the years despite all the problems that the country has been facing, and that the trends are in the right direction.

Credit is due in part, she says, to the massive public awareness of health issues created by information and communication campaigns, launched by the government and other health-related agencies, through the national radio network, regional community broadcasting and local FM stations, television as well as traditional and non-traditional channels of communication. Nepal is considered a leader in community broadcasting and FM networks in South Asia, she said.

"But there are still strong cultural taboos. The results would have been better if all those women and children who wanted to take advantage of the health services could really travel freely from their homes to the health centres," added Ms Manandhar. ■

Prakash Khanal, *Kathmandu*

Africa's largest measles vaccination campaign could reduce childhood mortality by 20%

After years of declining immunization rates, a nationwide measles vaccination campaign in Kenya, the largest ever to be undertaken in Africa, was judged "very successful" by Minister of Public Health Sam Ongeri. "From a target population of 13.6 million the number immunized was 13.3 million, a record coverage of 98%" he said. In the year 2000 coverage was just 60%.

Rudi Eggers, WHO Inter-Country Epidemiologist for Eastern Africa, told the *Bulletin* that "more than 85% coverage is needed to protect against a measles epidemic. We need to have a herd immunity effect". In other words, the few unimmunized people need to be far enough apart so that transmission cannot continue. "For measles this is quite a big task, as this is quite an infectious disease. So you actually need to reach very high coverage — 98% or so — to get that herd immunity. It seems that Kenya has reached that figure. We did a coverage survey after the campaign, to get some independent verification of that data" said Eggers.

The biggest remaining uncertainty, however, is not the number vaccinated but the census — how many people there actually are in the country. And mopping up now needs to be done in areas that did not reach the target level.

Measles in Kenya is still a severe disease. Some 10% of cases develop complications including convulsions, inner ear infections, pneumonia, diarrhoea and inflammation of the brain. "Survivors are often left with lifelong disabilities including blindness and brain damage" said Ongeri. Yet over the last three years, Kenya had seen a fall in measles immunization coverage. It was estimated that 18 000 children were dying each year from measles in Kenya. Directly and indirectly, measles was contributing 20% of the mortality rate in children under five years of age.

Wendy Stone

While Kenya decided to vaccinate all age groups simultaneously, other countries such as the United Republic of Tanzania — here illustrated — chose to spread the vaccinations over two or three years. Kilosa district, Ruaha Catholic Clinic.

Nicholas Alipui, the UNICEF country representative, said that with the success of the campaign in Kenya, doors were opening for other African countries to undertake similar campaigns. "Measles has been and continues to be a highly contagious infectious disease throughout the world" said Alipuli. "UNICEF continues to stand behind the Ministry of Health, to use resources accrued from this campaign to strengthen routine vaccination in private and public health facilities." With a concerted effort, he said, it would be possible for Kenya to have no measles deaths in a few years.

The Kenyan Minstry of Health organized the vaccinations and ran this campaign, while WHO and UNICEF gave in-country support. The main funders were the US Centers for Disease Control, the UN Foundation and the American Red Cross. Eggers added, "A group called the Measles Initiative has solidified around those three funders, and now has US$ 20 million in the kitty to do more campaigns. We are planning for all of East Africa to be doing similar campaigns in due course". ■

Catherine Wanyama, *Nairobi*

Reflectors could reduce road deaths ninefold, says Global Forum for Health Research

4500 secondary school pupils in Arusha, United Republic of Tanzania, a small tourist town in sight of Mounts Meru and Kilimanjaro, are to receive 5 cm-square plastic yellow reflectors to tie on their arms or pin on the backs of their clothes. These will help reduce accidents in which they are injured or killed by walking on the roads in the dark.

The independent Global Forum for Health Research, which works to increase research on developing country issues, bought the US 60-cent reflectors "as a gesture" from the Danish makers "C you" — to coincide with Forum's annual meeting in Arusha this November. "The children will get two reflectors each, one themselves and one for a sibling," said a Forum spokesman.

The Forum will seek investigators, and funding, to study their effect on deaths and injuries. In Denmark, studies have shown that reflectors reduce users' risk of fatal accidents ninefold, according to the Forum but their effects in developing country situations is unknown.