

Counting the dead is essential for health



WHO

Dr Kenji Shibuya

Dr Kenji Shibuya obtained his M.D. at the University of Tokyo in his native Japan in 1991 and started his career at Teikyo University, Ichihara Hospital in Chiba, Japan. From 1994 to 1999, he was a research fellow at the Harvard Center for Population and Development Studies. During that time he helped develop methods for assessing the burden and economic consequences of diseases. He also worked in the field, including in Cambodia and Rwanda, where he realized the importance of evidence and health systems for delivering essential health care. In 1999, Shibuya earned his Doctor of Public Health in International Health Economics at Harvard. He joined WHO's Global Programme on Evidence for Health Policy in 2001 and has been Coordinator of the Health Statistics and Evidence unit since 2005.

WHO is the world's leading provider of estimates on cause-specific mortality which it compiles from data supplied by its 192 Member States. Today, there is growing recognition that this type of mortality data are essential to well functioning health systems. Many countries — especially poor ones with high levels of mortality — do not have adequate data on the number of deaths and the causes, and their governments can only guess at what their health priorities should be. In this *Bulletin* interview, Dr Kenji Shibuya argues that WHO has helped many countries improve their cause-specific mortality data, but that many challenges remain.

Q: Why do we need a Bulletin theme issue on mortality?

A: This is a good opportunity to show WHO's leading role in an area that has long been the subject of discussion, to take stock of current knowledge and progress, and to facilitate the debate. Historically WHO has collected cause-of-death data from Member States where available. This is still a core function of WHO. But things are changing. WHO no longer has a monopoly in health statistics. Multiple players are out there and WHO should make an effort to work with the best available people to provide the best available evidence.

Q: WHO data, particularly mortality statistics, are some of the most used health information. Who is interested and why?

A: Developing countries are struggling with multiple demands for data to monitor progress towards the Millennium Development Goals. Countries and global initiatives need these data to receive and assess performance-based funding. New tools and methods for collecting mortality data are now available and more resources are being spent on gathering health information and on monitoring and evaluating health-care programmes. There is a great

opportunity to make substantial progress in mortality and cause-of-death estimates, as we have not seen major progress in the number of registered deaths over the decade.

Q: What is WHO aiming for in terms of increasing the proportion of deaths registered around the world? There is a huge disparity in coverage between sub-Saharan Africa with less than 10% and in 65 high-to-middle-income countries which have 90% and above?

A: We aim to derive meaningful cause-of-death information for all countries. Scaling up coverage from 10% to 90% is not easy in countries with large populations, difficult economic circumstances or political instability. It will take decades. Of course we should be ambitious but we have to be realistic.

Q: Sometimes governments just don't want to admit, for example, how many HIV/AIDS deaths they have. What do you do when you come under pressure?

A: Indeed the discrepancy between estimates and official figures from

countries has been an issue. On the one hand, we have to respect data provided by countries as they are the primary producers and users of the figures. On the other hand, we are responsible for the provision of the best available evidence for public health. That's a dilemma we face all the time. It's not easy. We do not always trust the data from routine health information systems and there are various ways to check them and correct the known bias.

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Q: How does WHO avoid duplication in mortality data, so that the tuberculosis and HIV/AIDS departments do not count the same death twice?

A: WHO's mortality reporting is based on

the ICD-10 (International statistical classification of diseases and related health problems) rules. These state that there can be only one single underlying cause of death. In the case of co-infection of HIV and TB, the underlying cause of death is HIV resulting in TB and so will be classified under HIV. WHO technical departments provide these estimates, but sometimes it is

difficult to assign a single cause of death, for example, for children and older people. WHO also makes sure that the sum of deaths from each cause does not exceed the expected number of total deaths for each age and sex group.

Q: Why are there some conflicting mortality data between diverse UN agencies?

A: Technically, the major source of discrepancy in estimates stems from either differences in data sources or estimation methods, or both. The best solution is to put everything on the table and let the best available experts peer-review the data and methods independently, which in fact we did several times last year. Harmonization is gradually happening, for example, of under-five mortality estimates among four agencies, WHO, UNICEF, the World Bank and the UN Population Division.

Q: Why doesn't WHO explain in more detail how it compiles global mortality statistics?

A: The WHO estimation process has sometimes been criticized as a “black box”, but we have made substantial progress in making this more transparent. Examples include the new guidelines on producing WHO estimates including an independent expert group such as the Child Health Epidemiology Reference Group. We are working with technical departments to facilitate the access to relevant health statistics.

Q: Why are WHO mortality data not always published with a margin of error?

A: In reality, uncertainty is not so attractive for advocacy. I agree we have to be more explicit about the quality of point estimates and the uncertainty surrounding them, as users are becoming more serious about the quality of estimates. We have already been publishing uncertainty ranges in various publications including the *World health report* (WHR), although the current practice within WHO varies

substantially. Another good example is the UNAIDS estimate for HIV/AIDS.

Q: What will the Ellison Institute do? What will its brief be once it is launched?

A: As far as we know, the institute plans to do benchmarking of health system input, output and impact to assess the performance of health systems in countries and of major global initiatives. The emphasis will be on accountability and transparency, which I really like. It looks like being a further improvement and extension of the Global Burden of Disease project and the Health System Performance Assessment framework. It is great news that more resources and interest have been given to the area of health information. There will be very good people involved and I expect an exciting new breakthrough in analytical work.

Q: Why hasn't verbal autopsy been validated in developed countries? Is it

ethical to ask developing countries to use a less accurate system of data collection?

A: Developed countries have vital registration with a death certificate system in place and do not need verbal autopsy. Verbal autopsy is not ideal, but in countries where there is no death registration, it is necessary for assigning cause of

death in broader categories, such as injuries, maternal causes, communicable diseases, etc. It may be useful for a limited set of causes with distinctive features, but not to assess detailed causes. It may not be ethical to use a sub-optimal method, but it is more unethical to “stumble around in the dark”.

Q: In Thailand, people in rural areas must report a death within seven days. In the Islamic Republic of Iran, causes of death are taken from cemetery records. How can WHO help to improve these systems?

A: WHO has a primary role in setting standards and supporting countries to enhance the quality of cause-of-

death statistics. The WHO Family of International Classification collaboration is working on such issues. The Health Metrics Network is another great opportunity to strengthen health information systems in countries.

Q: The medical profession tends to be biased against dealing with death. How can WHO help countries ensure doctors are properly trained in writing death certificates?

A: Assigning cause of death strongly depends on doctors' prior knowledge about the cause-of-death structure. Take the death of a 20-year-old male with a history of severe weight loss. If we ask doctors in the Czech Republic and in Zambia about his cause of death, the answer would be different. Even within countries, practices in assigning cause of death vary. It also depends on the knowledge on how to complete death certificates, and select the underlying cause of death. Before the introduction of ICD-10, heart failure was among the leading causes of death in Japan. I hate to admit it, but years ago when I was a doctor there, I often assigned “heart failure” as an underlying cause of death on death certificates simply because I did not know the rule well enough. Doctors need to be made more aware of the need to fill in death certificates properly.

Q: Why are death data from developed countries not always reliable?

A: In developed countries where noncommunicable disease is the biggest killer, co-morbidity is frequent and thus it is generally difficult to assign a single underlying cause of death. Diagnoses have improved with advanced medical technology. But there can still be a discrepancy. The second issue, which is more important, is inappropriate death certificates. Health professionals are not necessarily aware that the information they put on death certificates will be classified and analysed later, therefore they sometimes do not feel it necessary to provide all the details around the circumstances of the death. Now there is a training package with guidance on how to certify a death based on good practice for European countries. ■

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Tobacco Convention: countries "changed history"

Representatives from more than 110 countries gathered in Geneva to decide in detail how to implement the WHO Framework Convention on Tobacco Control (WHO FCTC), the first ever legally binding global public health treaty.

Director-General LEE Jong-wook praised countries for adopting the treaty in May 2003, saying they had "changed history".

Since then, the WHO FCTC has become one of the most widely embraced treaties in the history of the United Nations. It came into force in February 2005 after 40 countries ratified it or followed equivalent legal procedures. By November 2005, it had a further 60 parties.

"This group of countries represents 69% of the world's cigarette consumption," LEE told the 6–17 February conference, referring to more than 100 parties to the treaty. "It might seem astonishing that this group is also preparing to put into action the roadmap for countries to control tobacco".

Tobacco kills about five million people every year, and these deaths are increasing. By adopting, signing and ratifying the treaty, countries commit themselves to changing their laws to implement its provisions.

Many have started. For example, Ireland, Norway and Spain have banned smoking in indoor public places; India has imposed a comprehensive ban on tobacco advertising; and Australia, Brazil, Canada, Singapore and Thailand print highly visible graphic warnings on cigarette packets. Many other countries have implemented these and other measures.

At the conference, countries reported progress and plotted out the next steps. Some are uncertain about how to implement parts of the treaty, such as the ban on smoking in public places and the comprehensive ban on tobacco advertising, and how to track progress in this.

Countries discussed the possibility of WHO developing legally binding protocols, which would supplement the

Convention, outlining action governments could take to deal with cross-border advertising and illicit trade, as well as developing guidelines for issues such as smoking bans and tobacco product regulation.

WHO may also develop guidelines to help countries ward off attempts by the tobacco industry to interfere in their tobacco control efforts. Concerns have been raised that agreements Mexico and Uzbekistan reached with the tobacco industry threaten to dilute their tobacco control efforts, according to articles published in the *BMJ* [2006;332: 313–4, 355–8].

"WHO monitors the industry and issues publications to raise awareness about tobacco industry activities that can undermine tobacco control efforts," said Marta Seoane, spokeswoman for the Tobacco Free Initiative at WHO.

Countries that are implementing the Convention face major challenges. For example, although Spain has raised taxes on cigarettes, tobacco companies are waging a price war to weaken their effect. ■

Recent news from WHO

- At a 16–18 February meeting of public health experts, pharmaceutical industry officials, regulators and policy-makers in Rome, WHO called for urgent action to halt the **spread of counterfeit medicines**, which are a major risk to global public health.
- WHO is helping **Nigeria** after reports that the highly pathogenic H5N1 **avian influenza** was found in domestic birds in the northern state of Kaduna. A team of WHO experts, led by Dr Luis Sambo, Regional Director of WHO's Office for Africa, arrived in Nigeria on 13 February to help with epidemiology, data and laboratory work. Nigeria has launched a public information campaign, and is using the public health infrastructure of the polio eradication programme to help with surveillance and logistics.
- WHO said on 6 February it would start developing new diagnostic tests with a Geneva-based nongovernmental organization for human African **trypanosomiasis, or sleeping sickness**. The project with the Foundation for Innovative New Diagnostics (FIND) is funded by the Bill & Melinda Gates Foundation. African sleeping sickness, a major public health threat in sub-Saharan Africa, spreads among people bitten by the tsetse fly and is fatal unless treated. Early-stage infection produces few symptoms and only about 10% of patients with the disease are accurately diagnosed using current methods.
- On World Cancer Day on 4 February, WHO called for more action to curb rising levels of cancer across the world. It is estimated that over 40% of all **cancer** can be prevented. However, dramatic increases in risk factors such as **tobacco use and being overweight** are contributing to the rise in cancer rates, particularly in low- and middle-income countries, that account for more than 70% of all cancer deaths.
- The number of countries with indigenous polio has dropped to four, as **polio eradication** efforts enter a new phase involving the use of next-generation vaccines targeted at the two surviving strains of virus. The WHO announcement on 1 February followed confirmation that indigenous poliovirus has not circulated in Egypt and Niger for more than 12 months.

For more about these and other WHO news items please see: <http://www.who.int/mediacentre/events/2006/en/index.html>