

make recommendations about any changes that might be needed in the trade agreements".¹⁰

The Working Group on the Environment reports directly to the general council and works across all of the agreements triaging concerns to other environmental agencies, or responding to them as appropriate. Opinions on its success are varied, but structurally it has the capacity to work across agreements.

If such a committee were founded for health, health concerns about the global trading regime would be uncovered in the ongoing implementation of the General Agreement on Tariffs and Trade, rather than bursting forth haphazardly as crises over the past decade. Without a working committee on health within the WTO itself, health concerns cannot be analysed and fed back into discussions and working group sessions by the secretariat. It is time to integrate health concerns into the operational fabric of the WTO itself.

Some within other UN organisations, such as WHO, the Food and Agriculture Organization, or the Organisation International Epizootique (Animal Health) may fear their mandate will be threatened if such a group were put into place. In fact the breadth and the scope of issues raised by global trade have only been superficially defined. Their complexity and depth makes such an embedded group mandatory. The health of populations is intimately linked to safety issues of global trade.¹¹ This linkage will become increasingly important as globalisation of production,

transportation, and marketing proceed. The WTO has an opportunity to make an important contribution to this effort.

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I declare that I have no conflict of interest.

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Better health statistics are possible

After decades of debate about the need to improve the quality of basic health statistics in developing countries, there is at last substantial progress on the horizon. The recently created Health Metrics Network and the Ellison Institute for World Health offer the potential for strengthened health information systems to inform better policy development.^{1–3} Both initiatives are backed by new funding. Both will lead to new secretariats and partnerships between academics, governments, and intergovernmental agencies.

That is the promise. The magnitude of the need has been well documented. Many countries are still unable to count their dead, let alone produce accurate statistics for

cause of death or disease. Most countries do not have the capacity to regularly assess the performance of their health systems and few use reliable information for decision-making. In recent years, some progress has been made in addressing the need for improved global and regional health data. For specific diseases, such as HIV, a solid empirical database has been established. However, most summary statistics of general mortality have relied heavily on complex modelling approaches to fill gaps in basic country-specific data. The new initiatives should focus on strengthening empirical knowledge at country level, thus enhancing the quality of global and regional estimates.

Panel: Recommendations of WHO High-Level Advisory Panel on Health Statistics

1 Strengthen WHO process for production of estimates

- Four-step process (accessible database, transparent methods, independent advisory group, and overall consistency through clearance procedures) needs to be applied for production of regional and global estimates to ensure accuracy and transparency.
- WHO can release estimates of country health statistics if following are in place: clearance through the four-step process and accompanying grading of underlying evidence for the estimate; country consultation; emphasis on and clear communication of uncertainty associated with estimates; efforts to provide a clear understanding to countries of the methods used to obtain estimates, preferably by enabling countries to carry out analyses themselves.

2 Focus on producing key health statistics, especially mortality and causes of death

- WHO's priorities for health statistics include reporting on mortality, morbidity, health status, service coverage, and risk-factor prevalence.
- WHO should aim to produce mortality statistics by age, sex, and cause of death on regular basis for all countries. Comparability and quality of estimates should be ensured in close collaboration with countries. Frequency of estimates should be driven by availability of empirical data, but at minimum, 3-yearly is desirable.
- Estimation of composite measures of health, such as health-adjusted life expectancy, is to be limited in frequency in medium term (eg, every 5–10 years) not because they are intrinsically less important, but rather because they require more effort, and, more importantly, mortality and especially morbidity and health-status data on which they are based in many countries are weak. WHO should collaborate with academic or other institutions, contribute to production of estimates, and require transparency and reproducibility of estimates.

3 Strengthen country data collection and analysis

- WHO should take leadership role in developing strategies for country data collection, capacity building, and coordination of such activities across different partners, including advocacy and technical work to promote vital registration systems (full or sample), household surveys, and tools to provide subnational health statistics.
- Country-level statistical and epidemiological capacity to adjust for biases, synthesise, and analyse data is weak in most developing countries. WHO should strengthen analytical capacity through closer collaboration with statistical constituency in countries, investment in user-friendly tools at country level for data analysis, and enhancing use for decision-making.

Over the years, interest in improving the quality of basic health statistics has waxed and waned—no serious sustained effort has been made to get the basics in place. Now, for several reasons, the demand for high-quality data has accelerated. The reporting requirements of the Millennium Development Goals (MDGs) and the monitoring and evaluation measures required by the performance-based disbursement schemes of new global initiatives, such as the Global Alliance for Vaccine and Immunization and the Global Fund to Fight AIDS, Tuberculosis and Malaria, have highlighted the substantial gaps and needs in countries. Measurement systems are urgently needed to enable monitoring and evaluation of health-system interventions, to demonstrate accountability, and to sustain funding. Substantial resources coming through these global health initiatives can and should be used to build better health-information systems, and more investments are expected.

For the promise of better information to be realised, the issues of accuracy and transparency of estimates,

data collection and use at country level, and the comparative requirements, obligations, and institutional advantages of various stakeholders must be addressed. We considered these issues recently as members of a WHO High Level Advisory Panel on Health Statistics. The primary objective of this panel is to advise the WHO on scientific and technical issues related to health statistics, including overall strategies and procedures of the organisation. The major recommendations of the first consultation to WHO are summarised in the panel.⁴

WHO cannot be effective alone.⁵ As with successes in disease control, WHO is most effective when working with other key players and within a broader UN system of data collection norms and demands. In general, data quality for WHO estimates is as good as the quality available at country level, but in developing countries with high mortality, most deaths, for example, are not directly counted (table).

WHO is devoting increased energy to working with countries to get back to basics such as counting the

	Number of countries					Member states with no recent data
	Total	Complete data available	Useable data available	No recent data*	No data available	
Africa	46	1	4	42	25	Algeria†, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde‡, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Swaziland, Togo, Uganda, United Republic of Tanzania, São Tome and Príncipe‡, Zambia
The Americas	35	14	33	2	0	Bolivia, Honduras‡
Eastern Mediterranean	21	3	8	11	6	Afghanistan, Djibouti, Iraq, Libyan Arab Jamahiriya, Pakistan†, Somalia, Sudan, Saudi Arabia, Tunisia†, United Arab Emirates†, Yemen
Europe	52	39	50	2	0	Andorra†, Monaco‡
Southeast Asia	11	0	4	7	4	Bangladesh†, Bhutan, Indonesia, Democratic People's Republic of Korea, Timor-Leste, Maldives†, Nepal†
Western Pacific	27	7	17	10	4	Cambodia, Lao People's Democratic Republic, Marshall Islands†, Micronesia†, Papua New Guinea‡, Palau†, Samoa†, Solomon Islands†, Vanuatu, Vietnam
World	192	64	116	74	39	

Source: WHO Mortality Database. *Information available from 1990 or later. †Information on deaths available but cause of death not included. ‡Latest available year for information on causes of death is before 1990.

Table: Number of countries reporting data on cause of death from their vital registration system to WHO and countries with no recent data (as of Aug 30, 2005)

dead. The new initiatives can also promote better quality and collection of data and more refined data analysis. There is an opportunity to move the agenda forward by making maximum use of existing data sets, using modelling to fill data gaps, and improving estimates of composite measures such as health-adjusted life expectancy, including the appropriate use of uncertainty indicators. The quality of composite measures clearly depends on reliable underlying empirical data. As such, additional work is needed to focus on improving quality and collection of data through revitalised health information systems, assisting countries to streamline international health-information demands, and promoting the use of health statistics for monitoring and evaluation and for decision-making, especially within devolved health systems. If WHO, the Ellison Institute, and the Health Metrics Network work together, each contributing its core strengths, considerable progress could be made. Failure to do so could lead to a worsening situation at country level.

WHO's work in health statistics needs to build on its comparative advantages, including its constitutional and legitimate link with member states, which mandates and facilitates reporting of health data, and its convening power to reach consensus and facilitate harmonisation at the country and regional levels with lead partners in the health field. WHO should further strengthen its capacity to generate statistics, facilitate and enhance collaboration with academic and research groups worldwide, and

encourage the partnership with effective parts of the well-established WHO Collaborating Centre network of almost 1000 institutions.

The opportunity now presented for improving health information worldwide should be embraced by key players. If new ways of working together can be found, the benefits for global health could be profound and rapid.

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Is cannabis use psychotogenic?

Cannabis use and psychotic symptoms are associated, but the nature of the association is controversial.¹ Some argue that the link shows that cannabis use precipitates psychosis in vulnerable individuals,² while others say the relation is either because of uncontrolled confounding^{3,4} or because cannabis is used to medicate symptoms of early psychosis.^{1,5}

A 15-year prospective study of cannabis use and schizophrenia in 50 465 Swedish conscripts⁶ found a dose-response relation between the risk of schizophrenia and the frequency of cannabis use by age 18 years. The risks were lower after statistical adjustment for confounding variables (a psychiatric diagnosis at age 18 years, parental divorce) but the association remained statistically significant. A 27-year follow-up of this cohort found a dose-response relation between cannabis use at baseline and the risk of schizophrenia during follow-up.⁵ The relation persisted after controlling for potential confounders, including psychiatric symptoms at baseline (OR 2.5, 95% CI 1.2–5.1) for those who had used cannabis 50 or more times).

These findings are supported by a 3-year longitudinal study by van Os and colleagues in a community sample of 4848 young people in the Netherlands.⁷ The sample was assessed at baseline for cannabis and other drug use and psychotic symptoms with a computerised diagnostic interview. A diagnosis of psychosis was validated by a telephone interview with a psychiatrist or psychologist and a consensus clinical judgment on whether the disorder was serious enough to need psychiatric care. The frequency of cannabis use at baseline predicted a dose-dependent increased risk of psychotic symptoms during follow-up in individuals without psychiatric symptoms at baseline. The relation persisted when the effects of other drugs were controlled for (OR 3.5, 95% CI 1.6–7.4). The estimated attributable risk of cannabis use for psychosis was 13% for symptoms and 50% for disorders that required psychiatric treatment.

Henquet and colleagues⁸ did a 4-year follow up of 2437 adolescents and young adults in Munich. They found a dose-response relation between self-reported cannabis use at baseline and the likelihood of reporting psychotic symptoms. Young people who reported psychotic symptoms at baseline were more likely to report psychotic symptoms at follow-up if they used cannabis than peers who did not.

These results are supported by two smaller birth-cohorts from New Zealand. Arseneault and colleagues⁹ prospectively studied the relation between adolescent cannabis use and psychosis in 759 individuals. They found a relation between cannabis use by age 15 years and an increased risk of psychotic symptoms by age 26 years. The relation did not change when other drug use was controlled for, but was no longer statistically significant after adjustment for self-reported psychotic symptoms at age 11 years. Onset of cannabis use at age 15 years was related to psychosis (OR 4.5 95% CI 1.1–18.2). This was no longer statistically significant after controlling for a history of psychotic symptoms at age 11 years but the 95% CI around the odds ratio of 3.1 was consistent with a decrease of 30% or an increase of 133% (OR 3.1, 95% CI 0.7–13.3).

Fergusson and co-authors¹⁰ assessed the relation between cannabis dependence at age 18 years and psychotic symptoms reported at age 21 years in a Christchurch birth cohort. Cannabis dependence at age 18 years predicted an increased risk of psychotic symptoms at age 21 years (OR 2.3, 95% CI 1.7–3.2). The association was smaller but still significant after adjustment for self-reported psychotic symptoms at the previous assessment, other drug use and other psychiatric disorders (OR 1.8 95% CI 1.2–2.6).

The self-medication hypothesis was not supported by Van Os', Henquet's or Fergusson's studies because they found no relation between early psychotic symptoms and risk of cannabis use. These negative results are supported by Verdoux and colleagues¹¹ who examined the temporal