

Who Counts? 4



The way forward

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Good public-health decisionmaking is dependent on reliable and timely statistics on births and deaths (including the medical causes of death). All high-income countries, without exception, have national civil registration systems that record these events and generate regular, frequent, and timely vital statistics. By contrast, these statistics are not available in many low-income and lower-middle-income countries, even though it is in such settings that premature mortality is most severe and the need for robust evidence to back decisionmaking most critical. Civil registration also has a range of benefits for individuals in terms of legal status, and the protection of economic, social, and human rights. However, over the past 30 years, the global health and development community has failed to provide the needed technical and financial support to countries to develop civil registration systems. There is no single blueprint for establishing and maintaining such systems and ensuring the availability of sound vital statistics. Each country faces a different set of challenges, and strategies must be tailored accordingly. There are steps that can be taken, however, and we propose an approach that couples the application of methods to generate better vital statistics in the short term with capacity-building for comprehensive civil registration systems in the long run.

This article is the fourth in a series about the importance of collecting data for health development, and several key messages have emerged from previous articles in this series.¹⁻³ First, statistics on numbers of births, deaths by age and sex, and medical causes of death are crucial for good public-health decisionmaking, and civil registration is the most effective and efficient method of generating these vital statistics. Second, civil registration—unlike all other information systems—can provide benefits to individuals and communities in terms of legal status, nationality, inheritance, and human rights. Third, investments in the systems needed to generate vital statistics have been fragmented and inadequate in the past 30–40 years. Fourth, from a public-health perspective, there are interim solutions that yield data relevant to policymaking, for example on infant and child mortality; however, these are no substitute for statistics derived from functioning civil registration systems that are continuous and comprehensive. Fifth, a range of methods exists to enable countries to improve the availability and quality of vital statistics and to strengthen their civil registration systems.

We acknowledge that the achievement of comprehensive civil registration will require long-term commitment and investment. In this article, we outline courses of immediate action that vary according to the status of a country's registration system.⁴ These actions will also help strengthen capacity in birth and death registration and cause-of-death certification, thus ensuring long-term sustainability. We also describe the critical ingredients needed for civil registration, including political commitment, a supportive legal framework, allocation of roles and responsibilities among stakeholders, mobilisation of human and financial resources, and, most critically, ensuring public trust.

Strategic approaches to establishing civil registration systems

There is no single pathway to reach the goal of establishing an effective system—the magnitude and complexity of the task varies tremendously between countries, and strategies need to be tailored accordingly. Building loosely on the country classification according to the quality of vital statistics used by Mahapatra and colleagues,² we describe four strategic approaches relevant to different types of country situations.

Countries with very limited registration of births and deaths and medical certification of cause of death

As interim measures, censuses and survey-based approaches will have to be used to obtain the population representative data on births and child deaths for planning and programme management.⁵ In addition, demographic surveillance in selected sites can generate data on vital events, including adult mortality. Although not representative of the population as a whole, data from such settings can provide important information on levels of mortality by age and sex. Enumeration can be coupled with verbal autopsy to determine cause of death (bearing in mind the limitations of verbal autopsy that have been described elsewhere).⁶ Creating the skills for demographic surveillance contributes to building the capacities required for sustainable civil registration.

Hospital-based data for mortality can be of value, especially in urban areas where the population is more likely to use formal health-care facilities than are those in rural areas. Deaths in hospitals are generally accompanied by medical records, which can yield useful information even though they are not representative of deaths in the population as a whole. Moreover, building the skills of health professionals in death certification is

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Key messages

- All countries should aim to establish civil registration systems that generate statistics on births, deaths, and causes of death. There is no single pathway to reach this goal, and strategies need to be tailored according to countries' existing situation
- Civil registration serves a dual role of generating continuous vital statistics while offering protection of basic human rights. Civil registration cannot succeed unless there is acceptance by the public of its value, both for individuals and societies, from a broader public good perspective
- No single UN agency has a clear mandate for both normative guidance and technical support to countries in this area. The result is that civil registration remains an "orphan" issue in health and development: everyone's concern but no-one's responsibility
- Even in the most challenging settings, methods are available to enable countries to generate better vital statistics, including cause of death, even in the short term
- The global development community should assist countries in taking the measures needed to improve civil registration, including support for policy development, institutional strengthening, increased funding, and capacity-building

important for the eventual success of the "cause-of-death component" of the civil registration system.

Strategies such as these do generate vital statistics but do not confer the legal and human-rights benefits associated with civil registration. In parallel, civil registration can be built up gradually, starting in major cities where events are more likely to be registered than in rural and remote areas. As coverage increases, complementary data sources can be used, as described by the UN in this series, to "enrich and evaluate civil registration data or to gather information on demographic or epidemiological processes in a way that enriches the information obtained through civil registration."⁵

Countries with incomplete or patchy registration of births and deaths, and where medical certification of cause of death is limited

A first step is to improve the systems that are already in place and ensure that the vital statistics produced are used. Urban areas are likely to reap the greatest improvements since they usually have registration offices and the population is more likely to respond to registration incentives than are those in rural areas. Public service health workers could be enrolled as suppliers of official information on births or deaths; new registration offices could be opened; publicity campaigns can be initiated; and certificates might be required to receive government services. Mobile registration systems could be introduced to improve registration coverage in remote areas. Successful mobile systems can be advanced, as in Chile and Argentina, or simple, as in Botswana, Ecuador, and Thailand, depending on the resources available and the area needed to cover.⁷

In addition to demographic surveillance in one or two sites, there might be sufficient capacity to permit surveillance of vital events to be extended more broadly to representative sample areas as in Bangladesh, China, or India, for example.⁸⁻¹⁰ Moving from non-representative

surveillance sites to nationally representative sample registration systems offers benefits in terms of the coverage of the information and its ability to serve as a basis for public-health decisionmaking. When the data are used in this way, it helps create positive feedback and further strengthens confidence in the system. Although there is no necessary linear sequence from sample to complete registration, sample systems can nonetheless help build the human capacities for eventual comprehensive civil registration. The challenges of implementing sample registration should not be underestimated, however, especially when active follow-up is required as is the case in the Indian sample registration system.¹⁰

Vital statistics should be generated in a timely way for all areas where there is reasonably complete registration coverage, and made available to health and other officials and to researchers, the media, and the public at the local, as well as national level. This feedback loop will encourage local officials to improve registration coverage and should enhance public support for the system and produce new allies, such as researchers, public-health officials, physicians, and others in the communities. In Ghana, for example, although registration in urban areas is estimated to be around 70% complete, no vital statistics are produced. Faced with human and other resource constraints, the Ghana Statistical Services have never analysed or used the records received from the civil registration authorities.¹¹ This is a wasted opportunity. Even incomplete coverage can yield valuable information, as work on maternal mortality in Egypt has demonstrated. Here, efforts to improve cause-of-death attribution in women of reproductive age used both verbal autopsy and medical review. The review noted that maternal deaths had been significantly under-reported, and the results led to more reliable estimates of maternal mortality.¹²

In these settings, where most deaths take place at home without any medical certification, information on cause of death can be obtained from demographic surveillance sites or from sample registration where enumeration of vital events is coupled with verbal autopsy to determine cause. For the deaths that do occur in health facilities, it is important to train physicians and coders in the correct use of the International Classification of Diseases (ICD)¹³ and to undertake regular analyses of cause-of-death patterns. Although not representative of the population, the results can offer valuable insights into mortality in selected groups. Research on ways of correcting for bias in such data can help maximise their usefulness. Building skills and capacities for death certification, coding, and analysis is an essential investment that will enable better cause-of-death attribution as civil registration expands.

Countries with almost-complete registration of births and deaths but where not all deaths have a medically certified cause or where ICD standards are not uniformly applied

When human resources for registration and certification are generally available and non-registration is limited to

remote or marginalised populations, coverage can be increased by reaching out to under-served population groups and providing incentives for registration. Active outreach can include mobile registration vehicles for remote areas, involving local communities themselves in running registration offices, and ensuring that registration forms are available in local languages.

Physicians should be trained in WHO recommendations for certifying causes of death, and records and clarifications should be obtained promptly before the details of the person's death are forgotten. Regular quality control and feedback educates the certifier about proper certification methods and signals to the physician that the reported information is being scrutinised and will be used for health purposes.¹⁴ Better cause-of-death attribution can be achieved by increased training of medical and statistical personnel in standardised, ICD-compliant certification and coding procedures. A crucial aspect is the coding of underlying cause of death based on the physician reports. Improvements can be achieved quickly as experiences from Jordan demonstrate.⁶ Here, initial efforts focused on improving the quality of cause-of-death certification, which led to rapid improvements in the overall quality of mortality statistics (panel 1).

Countries with complete registration of births and deaths, and medical certification of cause of death for all deaths, according to ICD standards

Even when civil registration reaches high levels, ongoing vigilance is needed to ensure that marginalised groups are not missed. The UN and WHO use the relatively low threshold of 90% coverage to classify civil registration as "complete". However, from a public-health perspective, the bias introduced when one out of ten events is missed, or up to 10% of deaths are wrongly classified, is potentially very serious. In addition, regular quality assurance is needed to ensure that medical practitioners apply ICD death certification rules, and that clinical certification is validated through forensic autopsy in specific cases.¹⁶ Automated coding of cause-of-death information ensures that most questionable causes of death are identified for query, and correctly and consistently coded.

Even where registration coverage is universal and complete, it is important to maintain quality assurance. For example, public-health decisions can be driven in wrong directions when whole categories of causes of death are inappropriately classified or coded—*ischaemic heart disease* is one of the most common problematic areas. Audits on causes of deaths, for example of maternal mortality, help both maintain the quality of cause-of-death attribution while ensuring that the data generated are used to address quality of care issues, thus providing a direct link between data and health outcomes.¹⁷

Critical ingredients for civil registration

The value of interim strategies, such as sentinel and sample registration, in enabling low-income and lower-

Panel 1: Improving mortality data in Jordan

Before 2004, Jordan had virtually no information on deaths apart from data from household surveys on levels of infant and child mortality, and simple counts of deaths produced by the civil registration office. About 70% of deaths were registered, and about 90% of births, but no vital statistics were produced by the government. The section of the death certificate on cause of death was inadequate, asking only for direct and indirect causes of death. 40–50% of deaths were reported as due to "ill-defined causes"—ie, symptoms or signs that do not identify a final diagnosis such as cardiac arrest.

In 2002, a major conference was organised involving the country's health ministers, the Chief Medical Examiner, senior staff of the Civil and Passport Office, the Department of Statistics, and experts on mortality statistics. In the following 2 years, key changes were put into effect:

- The registration law was revised, and a revised death certificate developed in alignment with WHO standards for certification of cause of death
- The system was revised to include the preparation of duplicate copies of the death certificate which are now sent directly to the Ministry of Health
- All physicians in Jordan were required to attend a training course on the proper certification of cause of death
- Staff from the Ministry of Health Information Center received training on how to correctly code cause of death using the tenth revision of the ICD (ICD-10)
- The Ministry of Health Information Center developed a program to process civil registration data, including quality assurance procedures

The Ministry of Health produced the first annual mortality statistics report in 2007, based on 2004 data.¹⁵ The report provides mortality statistics based on 12 000 deaths (of an estimated 17 000 deaths registered, and an estimated total of 24 000 deaths occurring annually). The expectation is that the percentage of death certificates sent to the Ministry of Health will gradually increase over time, as the regions see the value of the vital statistics produced. The quality of cause-of-death information improved dramatically, with only 6% classified as due to ill-defined causes.

The issue of completeness of death registration has not yet been addressed. The level of completeness remains 70% but approaches 95% in urban areas. The rural areas are most problematic for death registration, especially the poorer and more remote areas because much of the population is nomadic and there are few registration offices.

middle-income countries to generate vital statistics is indisputable. However, these strategies do not provide the additional benefits to individuals and communities that are associated with comprehensive civil registration. Here are some key steps in the process of building or strengthening civil registration.

Assess current status

The UN Statistics Division offers guidance on assessing the administrative, infrastructural, and technical capacities of the existing system, and provides methods to determine the coverage and quality of vital statistics generated.^{5,18} The quality and usefulness of cause-of-death statistics can be assessed by investigating the process by which they are generated; coverage and completeness of the data; and the procedures for certification and coding of deaths.¹⁹

Stimulate political commitment

High-level political backing with commitment to long-term budgetary funding is essential for creating and

maintaining civil registration systems. This lesson was demonstrated by the foundering of efforts to strengthen civil registration globally during the 1970s and 1980s.²⁰ Absence of political commitment was the main problem faced by civil registration officials according to a survey by the International Institute for Vital Registration and Statistics (IIVRS) in the late 1970s, and little has changed in the past 30 years.²¹

Create a supportive legal framework

The establishment, operation, and maintenance of a national vital statistics system is a core governmental responsibility, which should be described in law and associated regulations. While the actual legislation might vary in content from country to country, it should be consistent with UN principles.⁵ Although almost every country has created basic legislation regarding the registration of vital events, in practice, the legislation has often proved inadequate in content or enforcement, or both. The legal framework for civil registration and vital statistics should encompass both a national law and relevant regulations covering: designation of a central registration authority; compulsory registration of vital events; and safeguards for the confidentiality of information collected; the law should stipulate that the registration of events will be free of charge.²²

The legal framework should include the adoption of a death certificate that follows the rules laid down in the ICD, thus permitting comparison of data between individual hospitals, provinces, or countries as well as internationally and at different points in time.

The absence of legal enforcement and public compliance is particularly acute with regard to burial requirements, and the provision of a death certificate before a burial permit is issued. Where prompt burial is a religious stipulation, special efforts have to be made so that bereaved families can comply with both the religious and legal requirements. In Sri Lanka, for example, special measures are in place to ensure that death certification can take place out of normal working hours in order to meet Muslim requirements for immediate burial. Sri Lanka is also one of the few Asian countries that have enforced penalties for non-registration.²³ In Taiwan, where religious preference is usually for people to die at home rather than in a hospital, processes have been established for medical certifiers to visit the homes of the deceased in order to issue the necessary legal documents.²⁴

As far as birth registration is concerned, there is conflicting evidence about the net effect of penalties for non-compliance.²⁵ Where lack of participation is due to other logistical factors, as is the case for the poor in sparsely populated rural areas far from registration centres, other solutions must be found. Each country, therefore, will need to arrive at its own mix of incentives, requirements, and penalties to accomplish its aims for civil registration.

Assign roles and responsibilities for civil registration

Given the multiple stakeholders involved, it is essential to allocate roles and responsibilities, and identify the appropriate mechanisms for coordination between different government offices. Coordination is essential between the bodies involved in registration, statistics, health services, and research. Many countries cite weak links between the health sector (which reports vital events through health-care facilities) and the civil registration system which relies on individual reporting.²⁶ Poor communication between civil registration and statistical offices can result in data not being used even though registration is occurring. In South Africa, for example, the exchange of data between the registration authorities and Statistics South Africa was stalled for several years because of a lack of cooperation and communication between the civil registration offices and statistical offices resulting in a large backlog of unused data.¹⁹

Coordination and collaboration are essential to ensure standard concepts, definitions, and classifications, and avoid duplication of responsibility. A national committee could be set up to coordinate priorities, encourage line-ministries to release data promptly, and publicise the benefits of the civil registration system to the highest levels of government, helping to ensure long-term support. National committees need to be representative of all organisations directly involved in civil registration and focus on inter-institutional collaboration in pursuit of system improvements.²¹

Nurture public trust

Legal provisions alone will not guarantee public participation in civil registration requirements. The willingness of citizens to participate in registration is largely determined by societal consensus around the value of the system, and trust that it will be used to their benefit rather than as an instrument of repression.²⁶ Thus, civil registration must be accepted and recognised by the public as a public good if it is to be successful.

As a foundation for public trust and as a defence against possible abuses, it is extremely important that the system be run by officials who are independent of elected government, with strict legal duties and responsibilities to protect the integrity of the data collected. The right to consult individual records should, in the first instance, be restricted to the registered individuals, their close family members, their legal agents, and to public authorities legitimately seeking to verify registered individuals' identities. Anonymised or aggregated data can, of course, be made available to government and other researchers for economic and regional planning and to explore trends in vital statistics. The cost of maintaining strict standards of confidentiality is outweighed by the value of ensuring that the system is ethical, trusted, and safe.

Foster and support advocacy

In countries lacking a civil registration system, in-country champions could lobby senior government officials of its value. The global development community could also convince the government that such a system would be an investment in national development rather than a drain on resources. A national conference could be held to bring together relevant ministries and also influential interest groups and civil society organisations to generate high-level support among decisionmakers.

Use of data by stakeholders outside of government stimulates demand and informs advocacy which, in turn, should contribute to a political environment supportive of improving collection. One way to create pressure for national action is to ensure that the media and civil society have access to whatever statistics can be generated, however scarce. For example, media accounts of differing measures of maternal mortality rates in Mexico generated intense political pressure to address long-standing defects in vital events measurement across government agencies.^{27,28}

Where legal protection is assured, public-education campaigns can be useful, especially in initiating registration improvement. Non-governmental organisations can draw the attention of the public to the importance of registration but also publicise failings and abuses of the system. In big countries such as India, where over 4 million deaths and 16 million births are registered every year, drawing attention to problems can help improve quality throughout the system (panel 2).

Establish incentives

Governments can reinforce education campaigns through incentives—for example, requiring birth or death certificates for access to government services such as school enrollment, health care, and inheritance rights. Such incentives will have greater impact in urban areas where government services are available and in demand. However, incentives tend to work better for births than deaths, especially where neither life insurance nor inheritance is common.

Registration of birth and certification of deaths of neonates and infants is frequently problematic,³⁰ even in developed countries.³¹ Where many infants die young, parents might be reluctant to go through the formalities of registration until they have some confidence in the child's survival prospects. Cultural norms might dictate that parents should refrain from the formal naming of infants (and therefore giving them an identity and the status of full personhood) until a prescribed time period has elapsed or marker of physical development has emerged. Although the UN stipulates the right of a child to a name at birth, care is needed to avoid cultural and bureaucratic confrontation.

When an infant dies immediately after birth it is often recorded as a stillbirth rather than a neonatal death in order to alleviate parental grief and, sometimes, to deflect

scrutiny of clinical handling of the birth. Newborn care can be strengthened through accurate classification of stillbirths and neonatal deaths and causes of the neonatal deaths.³²

Individuals should never be charged to register vital events. Fees are a strong disincentive to public cooperation, particularly by poor and marginalised people. In most developed countries, registration of a birth or death is free, but payments are required for copies of the birth or death certificate.

Mobilise financial support

Registration systems must be continuously maintained and, unlike ad hoc surveys, their budgets have to be met every year. The cost of setting up and maintaining a civil registration system is difficult to estimate. Administrative and statistical functions are budgeted by different ministries and the information generated serves numerous stakeholders and government functions (legal documentation, administrative files such as electoral rolls, calculation of vital statistics, etc). Costs should,

Panel 2: Case studies in civil registration in India

In a study of civil registration in India, PRIA (an NGO working to promote the participation of the poor and the marginalised through democratic governance) identified large gaps in death and birth registration and very low levels of awareness about registration especially among poor and marginalised populations. They identified lapses in following statutory provisions, both among registrars and health-care workers.²⁹

Case 1

A poor widow from a small town of Andhra Pradesh became aware of the need for the death certificate of her late husband (who had died 10 years earlier) in order to obtain the widow's pension. She was unable to obtain the certificate from the authorities, even after payment of a hefty bribe and many visits to the municipality over several months.

Case 2

A city resident had died on Nov 8, but when her family members, after numerous visits to the office, managed to get her death registration certificate they were shocked to read the date as Oct 8. The relatives needed five copies of the death certificate for which they had to visit the registration office almost ten times.

Case 3

A man was refused his wife's death certificate by the hospital where she died after surgery. The hospital did not report the death to the Registrar of Births and Deaths, but claimed that the patient died in another hospital where she was transferred after the surgery. On enquiry with the second hospital, it emerged that because the woman had been dead on arrival and never admitted, the second hospital would not give a death certificate.

For more on PRIA's work see <http://www.pria.org>

therefore, be shared among multiple final users in health and other sectors, and not the civil registration offices alone. Because the intent of the system is primarily legal, the vital statistics produced can be considered statistical byproducts of a legal system.

Costs can be contained by imposing reasonable fees for additional copies of certificates (though not for the registration itself). For example, Chile in 2000 reported that its Civil Registration and Identification System (Servicio de Registro Civil e Identificación), which has been functioning since 1885, is completely self-financed. 80% (US\$36 million) of its annual budget is generated by the system itself through the issuing of certificates, driving licences, passports, and other services. The remaining 20% is financed by taxes raised by the system and used to cover the portion of national budget allocated to civil registration.³³

The costs of civil registration need to be considered alongside the funding currently directed to development assistance in health. Funds for project-based monitoring from development partners are typically approved in the range of 2–7% of operational budgets. With total health development assistance of some \$5 billion per year or more, this means that about \$100–250 million dollars per year are made available for monitoring and evaluation. Donors should be encouraged to contribute some of these resources to developing underlying national information systems. For example, an estimated \$30 million was spent on health information in Tanzania in the 1990s, but little went to strengthening vital statistics or improving representative cause of death statistics.³⁴ Tanzania spent roughly \$700 000 per year to maintain its civil registration system, although data from the system have never been compiled to calculate a single indicator. Costs per event of civil registration in Tanzania was estimated at \$0·23, while the cost of sample or sentinel registration costs have been reported at being from \$0·83 in Tanzania to less than \$0·33 for the Indian Sample Registration System, including publication, state-support, and core salary support.³⁵ Although the data are limited, it seems clear that in the long run, systems requiring active follow-up and application of verbal autopsy to determine cause of death, such as the sample system in India, are more costly to maintain than civil registration, which relies on routine reporting by individuals and health facilities.

Develop a human resources base

Many countries cite shortages of registrars (and the fact that their duties are ill-defined), especially in remote areas, as important contributory factors to the low levels of registration coverage. In India for example, registrars work only part-time on registration, and in an honorary capacity. Lack of budget for forms, registers, training, supervision, and community outreach all reduce the effectiveness and efficiency of their work.^{35,36}

The role of medical records officers is undervalued although their skills are essential to ensure that the

registration system produces usable statistics. These officers are key in the conversion of individual records to data of public health relevance and in ensuring that the critical feedback loop between data generation and data use is completed. In Ghana, for example, faced with shortages of staff to code and analyse registration returns, the Bureau of Statistics ceased to analyse the data and the forms now languish unread in registration offices.¹⁹

The skills of health-care professionals are equally important. Currently, medical curricula devote little time to the use of the ICD as a public health tool. Both pre-service and in-service training are essential for professionals who attribute cause of death and issue a death certificate. Where most deaths occur at home without the involvement of health professionals, verbal autopsy can be used to ascertain probable cause of death on the basis of signs and symptoms described by family members. Verbal autopsy requires active follow-up and works best when the interviews are done by peripheral health or social workers who live among the communities they work in. New international standard procedures for implementing a verbal autopsy entail the production of a death certificate (clearly marked as coming from verbal autopsy) and coding to ICD.³⁷ Such approaches are a vast improvement on current practice but medical certification remains the long-term goal for reporting cause of death.

Modernise data storage and retrieval

As with any form of record keeping, the civil registration system has to have the ability to store, file, abstract, and retrieve records. Many countries describe overflowing storerooms filled with mouldering paperwork that is never sorted or analysed. Shortages of basic commodities, such as paper, pens, and simple calculators or computers, make it difficult for families to obtain copies of birth or death certificates, further adding to the disrepute of the system and to the reluctance of communities to comply with its requirements.

Increased application of relatively inexpensive information and communication technology (ICT) could go far towards solving the problem of management and maintenance of registration systems and to speed up the compilation and availability of derived vital statistics (figure). This has been shown in countries such as Chile, Thailand, and India that have made large investments in ICT over the last decade or so.

Data entry, checking, and validation are now usually computerised and in digital format in most developed registration systems. The rapid drop over the past few years in the cost of storing and processing information in digital format now makes it possible to archive inexpensively all registration forms and accompanying documentation. Data transfer has also benefited from ICT development. Internet and wireless technology have reduced the time for transferring registration data between users and producers from weeks, months, or even longer, to a few seconds. Adequate training and

salaries for the vital human capital is as essential as the hardware and software of the ICT systems.

Caution needs to be exercised in advocating for the technological 'quick fix'. International commercial organisations can tender to provide ICT systems for the data collection or information processing aspects of civil registration systems. Citizens' trust in the security and confidentiality of the system is of paramount importance. Commercial contracts need severe legal penalties for any breaches by employees, and these penalties should extend well beyond the contracts' expiration. Unless confidentiality can be guaranteed, older, tried and tested methods should be retained, even if they are more costly. Although new technology promises greater technical efficiency and lower cost, these advances should not come at the price of reduced security or compromised confidentiality.

Who is responsible?

It is ironic that civil registration systems are still being neglected at a time when the demand for accurate vital statistics is growing. Instead of supporting the creation or maintenance of country civil registration, perceived to be time-consuming and expensive, international donors have responded to the urgency of the need for data on births and deaths by establishing their own data collection methods, mainly household surveys. But these are essentially short-term fixes; long-term sustainability and country ownership requires investment in systems that not only track events but also bring broader benefits to individuals and societies such as advancement of human rights.

New opportunities are emerging to increase the coverage and completeness of vital statistics, especially in the case of births for which advocacy is generally more straightforward. The efforts of UNICEF³⁸ and of non-governmental organisations such as Plan International have moved the agenda forward by making the case for birth certification in terms of legal recognition and protection, and access to education and other services. Such campaigns need to be complemented by advocacy for death registration; evidence about numbers and causes of mortality is essential for protecting life. Moreover, sustainability requires country-wide systems: all activities to increase certification should bear in mind the necessity of putting into place the systems that will also generate vital statistics on an ongoing basis.

Countries must acknowledge their responsibility and take the lead; donors and technical partners must play a strong supportive role. International agencies such as the World Bank and those within the UN, including UNFPA (UN Population Fund), UNICEF, and WHO, that share common interests as users of vital statistics, need to coordinate their efforts better. UNICEF activities to promote birth registration as a human right should be leveraged to promote registration of deaths, including those in childhood. The World Bank support to descriptive



Figure: Civil registration administration. (A) How not to do it and (B) how to do it well

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epidemiology should highlight what can be done to address the paucity of cause-of-death data. UNDP (UN Development Programme), which hosts the Commission on Legal Empowerment to promote expanded access to legal protection and economic opportunities for the poor,³⁹ should realise that such protection relies on proof of identity that only the civil registration system can assure. The UN Statistics Division, responsible for setting standards for civil registration, and WHO, responsible for standards in cause of death certification, coding and tabulation, must better coordinate their support to countries. Standards in themselves are of little value without support to countries to enable them to adapt, adopt, and implement such standards according to their circumstances and capabilities; such support has been lacking in recent years.

Conclusions: where next?

So what are the solutions, and where can we go from here? There are three options, which are not mutually exclusive. First, development agencies and donors must advocate for and provide technical and financial support to governments to enable them to strengthen their

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activities in the areas of civil registration and generation of vital statistics. There is no doubt that the agencies most concerned, WHO and UN Statistics Division, have limited resources at their disposal for this area of work. Both have tended to focus more on their norm-setting mandate than on country implementation—whether this could change rapidly is debatable.

Second, a case can be made for establishing an international body with the specific mandate of improving civil registration systems by bringing all the relevant parties together more effectively. Currently, there is no single body within the international global health architecture that has a specific responsibility in the area of civil registration. No doubt this has contributed to its status as an orphan issue: everyone's concern, but no one's responsibility. A new international body could bring together national registrars and other experts with knowledge and skills in public administration along with the global development community. It would be able to assist ministries of interior or home affairs (usually in charge of civil registration systems) in their efforts to improve the registration of vital events in their countries. The health sector, as a major user of the data generated by the systems, would have much to offer, ensuring that the systems generate demographic and health information, providing expertise on how to establish and maintain information systems, and ensuring organic links between mortality measurement and causes of death. However, although such a body could be useful, it is by no means clear that there is any desire in the international health and development community to establish it.

We also need ways of harnessing the significant new funding flows in global health including through the private sector and foundations, such as the Bill and Melinda Gates Foundation (currently disbursing some US\$2 billion annually for global health), the Global Alliance for Vaccines and Immunization, and the Global Fund to fight Aids, TB and Malaria (which has approved grants of \$7 billion since its inception in 2002). All these agencies pay particular attention to the importance of monitoring and evaluation, and could represent new opportunities to strengthen country capacities in vital statistics. These funds are streamed according to disease, and countries applying for support inevitably develop their priorities in line with funding streams. Yet, as this Series has shown, few developing-country decisionmakers have the kind of epidemiological data that enable them to assert unequivocally who is dying and from what cause. Surely it is time for the new donor agencies to recognise the need to address this challenge?

This series has asked “Who counts?”. Sadly, the answer seems to be that too many people, especially the poor, are never counted; they are born, and live and die uncounted and ignored. It is a fundamental principle of human rights that every life counts, that every individual matters. If we are to give life to such principles, it is time to start

counting everyone. Individual proof of birth and death is possibly the clearest indicator of that much-hyped concept “good governance”. Its absence surely ranks as the single most critical failure of development over the past 30 years.

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Conflict of interest statement

We declare that we have no conflict of interest. The opinions in this paper are those of the authors and not necessarily those of the institutions they represent.

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