



Every individual has the right to be counted and to have their birth and death legally recognized. More than 100 countries do not have well-functioning civil registration systems, and it is estimated that over three quarters of uncounted births and deaths are in sub-Saharan Africa and south-east Asia. Further, there is insufficient data on the causes of maternal and child deaths. These data are required to inform planning for health and socioeconomic development, take remedial action, and to track progress. Progress towards reducing maternal deaths (MDG 5) and child deaths (MDG 4) is greatly hindered due to inaccurate and incomplete reporting. The Commission on Information and Accountability for Women's and Children's Health calls for 74 countries in high burden and low-income areas to take significant steps towards strengthening civil registration and vital statistics systems by 2015.

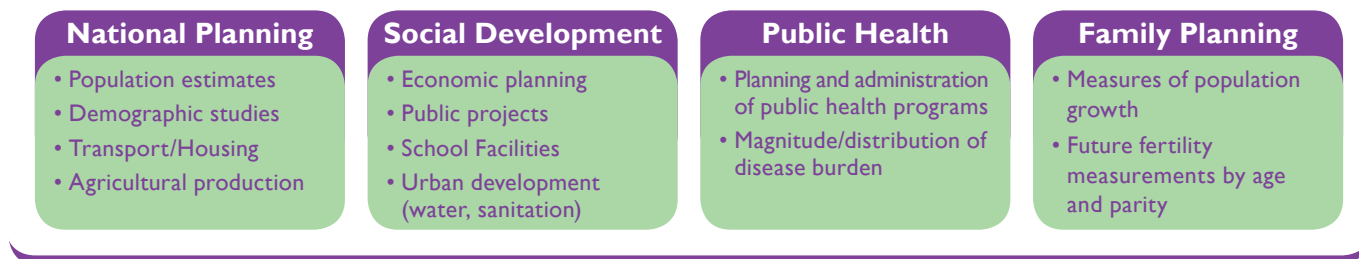


Civil Registration and Vital Statistics (CRVS)

Civil registration systems are used to record vital events—including births, deaths, and marriages—and have the potential to serve as the main source of national vital statistics. These data are required to develop ‘vital statistics’ which are the basic demographic and epidemiological measures needed in national planning, such as for education, labor and health programs (Figure 1).

Figure 1

Key sectors dependent on well-functioning civil registration and vital statistics systems



The challenge

Globally, more than 100 countries do not have well-functioning civil registration systems. As a result, fertility, morbidity and mortality statistics are not available on a consistent, timely basis, and do not cover large segments of the population. Even more countries do not have reliable cause of death information. Hospital reporting of deaths is often poor and the medical certification and coding of the underlying causes of death are often not done as per the rules of the standard International Classification of Diseases (ICD-10).¹ No cause is attributed to most deaths outside hospitals and, when reported, even where CRVS systems are reliable, deaths are often ascribed to immediate causes, rather than underlying causes of death.^{2,3} The absence of CRVS systems in low and middle-income countries has hampered efforts to build a reliable evidence base upon which decisions for health improvement and overall socioeconomic development can be made. For example, data obtained from CRVS systems provide inputs for 42 out of the 60 Millennium Development Goals (MDG) indicators, including to track progress on women’s and children’s health; inadequate data are the main reason for inconsistencies between MDG reporting at the national and international level.⁴ In the context of HIV and

AIDS, civil registration systems allow states and governments to monitor their population, enabling effective policies to be formulated and implemented, protecting and fulfilling the rights of people living with HIV and communities affected by the pandemic.⁵

The Report of the **UN Commission on Information and Accountability for Women’s and Children’s Health, Keeping Promises, Measuring Results**,⁶ establishes a framework for global reporting, oversight and accountability on women’s and children’s health in 74 high burden and low-income countries. As part of the Global Strategy for Women’s and Children’s Health, launched by the UN Secretary-General in September 2010, the report makes two key recommendations related to the improvement of CRVS systems for all countries by 2015:

- **Vital events:** Take significant steps to establish a system for registration of births, deaths and causes of death, and have a well-functioning, interoperable health information system;
- **Innovation:** Integrate the use of Information and Communication Technologies (ICTs) in national health information systems and health infrastructure.

Links with RMNCH

Reducing under-5 mortality (MDG 4) through improvements in reproductive, maternal, and newborn and child health (RMNCH) is a global priority given the persistently high rates of morbidity and mortality in developing countries. While pneumonia and diarrhea account for the largest share of deaths among children globally, underreporting or misreporting

of deaths and cause of death reduces the effectiveness of health policy planning and underestimates the extent of the problem in many low-income countries.⁷ Similarly, progress towards reducing maternal deaths (MDG 5) is greatly hindered due to inaccurate and incomplete reporting. Maternal mortality measurement, including numbers of death and cause of death,

are under reported due to poorly functioning civil registration and vital statistics systems in low-income countries. A maternal death surveillance and response system that includes death identification can provide the essential information to stimulate and guide actions to prevent future deaths and improve the measurement of maternal mortality.⁸

For children who do survive past their fifth birthday, birth certificates identify and provide legal proof of name, parents' names, and date and place of birth. As a legal document, a birth

certificate serves to define and protect a person's human and civil rights in society, and the right to birth registration is the first legal recognition of the child in Article 7 of the Convention on the Rights of the Child.⁹ Non-registration can have severe negative consequences for a child's fundamental rights to benefits such as identity, inheritance, education, health, and social services. In the absence of a functioning birth-registration system, it is difficult for a country to enforce age-related requirements and legislation related to health, education, child labor, juvenile justice, early marriage, and sexual exploitation.

Regional challenges

Globally, an estimated one-third of the world's annual births and two-thirds of annual deaths are not legally recognized by civil registration systems; three-quarters of all uncounted people are in sub-Saharan Africa and south-east Asia.¹⁰ In Africa, there have been several efforts in the past to improve the coverage and completeness of CRVS systems, however, at present, only four countries have a complete registration system that can generate cause-of-death statistics: Egypt, Mauritius, Seychelles and South Africa.¹¹ Efforts to date have been mostly statistically oriented with the sole objective of obtaining vital statistics on a regular basis and efforts aimed at improving CRVS systems have

been largely dominated by isolated, project-based and institution-led, *ad hoc* exercises.¹² Some key challenges to African countries improving CRVS systems include addressing vulnerable and politically disadvantaged communities, such as those located in conflict areas and nomadic communities, and those displaced by natural disasters and famine; as well as a lack of demographically distributed and well advertised CR centers in urban areas. In addition, the lack of infrastructure and technology in rural areas, combined with an absence of representation for disadvantaged groups, contributes to poor or non-functioning CRVS systems in Africa.^{13, 14}

What works

To achieve improved planning and development, civil registration and (national) vital statistics offices each contribute to improving CRVS through a combination of appropriate and effective policies, as well as programs designed to raise awareness and strengthen the relationship between CRVS sectors, health workers and civil society to improve responsiveness and efficiency in data collection.^{12, 15} Government officials can ensure the appointment of a high level representative to coordinate the improvement of CRVS systems as well as aid in the facilitation and collaboration between national CR and VS organs.^{5, 16} Furthermore, decentralization of the registration process and the removal of registration fees can greatly improve participation and efficiency.

The Health Metrics Network (HMN)'s MOVE-IT initiative aims to improve monitoring of vital events -- births, deaths and causes of death -- through innovation and the use of information technologies. The HMN supports activities across Africa to improve national CRVS efforts, including:¹⁰

- Assessments of CRVS systems to identify key priorities for action and develop roadmaps for improvement;



Anne Heslop

- Establish coordination committees with relevant stakeholders (i.e. technical experts and civil society);
- Involve outreach health workers using mobile phones to record and transmit birth and death data at the community level;
- Establish systems for tracking pregnancies and pregnancy outcomes in support of MDGs 4 & 5;
- Support measures to improve training of medical professionals in ascertainment of causes of death according to international standards.

Box 1 – Lessons from Liberia: How ICT can improve civil registration and vital statistics

In Liberia, a country recovering from civil war, the birth registration rate among children under 5 was estimated to be about 5% in 2007. Besides young children, large cohorts of people born during the civil war remain without a birth certificate. The Liberian government has supported a national strategy to improve birth registration, particularly in rural areas, through the use of mobile phone technology. The Mobile Birth Registration (MBR) project has been designed to create a mobile birth data collection system and establish and facilitate an inter-ministerial collaboration process in support of developing a population information system in Liberia. Birth registration data are collected using the Nokia Data Gathering Solution¹⁷ and transmitted via GPRS to a main birth registration service, thereby allowing for the printing of an actual birth certificate. Technical infrastructure and training of required Liberian staff have been key elements of the practical implementation of MBR. Although only in the pilot phase, the MBR project has demonstrated a working mobile birth registration system that can be scaled up across Liberia to maintain a country-wide MBR system. The program has also demonstrated to the Liberian government the integral use of ICT in civil registration and vital statistics systems.¹⁸

Conclusion

A successful CRVS system requires country-led programs to establish interoperable systems and create demand among the population and those responsible for registration. Working with partners already engaged with RMNCH activities presents an efficient and effective opportunity for improving CRVS systems for the mutual benefit of aligned interests. The establishment of an effective and complete CRVS

system requires political will for necessary investment and legislation, stewardship by national and local authorities, as well as trust and collaboration of ‘civil society’, households, medical professionals, and health workers. A well-functioning CRVS system is a necessary and essential long-term investment for countries that can be achieved, even in low-resource settings, with sustained political commitment.

References

- 1 WHO. [cited 2012 February 9]; Available from: <http://www.who.int/healthinfo/statistics/mortdata/en/>
- 2 D'Amico M, Agozzino, E., Biagino, A., Simonetti, A., Marinelli, P. Ill defined and multiple causes of death certificates- A study of misclassification in mortality statistics. *European Journal of Epidemiology*. 1999;15:141-8.
- 3 Zomer CA, Uiterwaal, C., van der Velde, E., et al. Mortality in adult congenital heart disease: Are national registries reliable for cause of death. *International Journal of Cardiology*. 2011;152(2):212-7.
- 4 ADB. A reference handbook on using data from education, health, and vital registration systems featuring practices and experiences from selected countries. Asian Development Bank. 2010.
- 5 de Bruin-Cardoso IM, R. Strategic analysis in civil registration in the context of HIV and AIDS. © President's Emergency Plan for AIDS Relief (PEPFAR), Plan International, United Nations Children's Fund (UNICEF) and World Vision. 2008.
- 6 UN. Keeping promises, Measuring Results. Every Woman Every Child. 2011; Commission on information and accountability for Women's and Children's Health.
- 7 Bryce J, Boschi-Pinto, C., Shibuya, K., Black, R. WHO estimates of the causes of death in children. *Lancet*. 2005;365:1147-52.
- 8 Danel I, Graham, W., Boerma, T. Maternal death surveillance and response. *Bulletin of the World Health Organization*. 2011;89(1):779-A.
- 9 CRC. [cited 2/2/2012]; Available from: <http://www2.ohchr.org/english/law/crc.html>
- 10 HMN. Health Metrics Network. 2011 [cited February 9 2012; Available from: http://www.who.int/healthmetrics/move_it/en/index4.html
- 11 WHO. 2011 [cited February 20 2012; Available from http://www.who.int/healthinfo/global_burden_disease/cod_2008_sources_methods.pdf
- 12 UNECA. Synopsis of the Proposed Regional Medium Term Plan: 2010-2012: Reforming and Improving CRVS systems in Africa. United Nations Economic Commission for Africa. 2010.
- 13 ASSD. Preliminary Report: Results of the Civil Registration and Vital Statistics Assessment Study in Africa. 7th Africa Symposium on Statistical Development and 3rd Meeting of the Statistical Commission for Africa. 2012;18-23 January(Cape Town, South Africa).
- 14 ASSD. Africa Programme on Accelerated Improvement of Civil Registration and Vital Statistics (APAI-CRVS). Africa Symposia on Statistical Development. 2012.
- 15 UNESC. Second meeting of the statistical commission for Africa (StatCom Africa II). United nations Economic and Social Council - Economic Commission for Africa. 2010.
- 16 UN. Handbook on Civil Registration and Vital Statistics Systems Policies and Protocols for the Release and Archiving of Individual Records. UN Department of Economic and Social Affairs. 1998;Series F, 70.
- 17 NOKIA. [cited 2/2/2012]; Available from: <http://ncomprod.nokia.com/corporate-responsibility/mobility-in-society/nokia-datagathering>
- 18 VTT. [cited 2/2/2012]; Available from: <http://www.vtt.fi/inf/pdf/workingpapers/2011/W159.pdf>

Available on-line at <http://portal.pmnch.org/>