Tools for Strengthening

Civil Registration & Vital Statistics

Funded by:

Australian Bureau of Statistics

Strengthening health systems in Asia and the Pacific through better evidence and practice
Tools for Civil Registration & Vital Statistics Strengthening

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Knowledge Hubs for Health (Hubs)

• AusAID funded initiative established 2008
• Four hubs each addressing different dimensions of the health system:
  – health policy and finance
  – health information systems
  – human resources for health
  – women and children’s health.
Health Information Systems Knowledge hub (HISHUB)

1. Provides research evidence to inform policy makers throughout the Pacific and Asia.

2. Responds to a growing recognition of the need for strong health information systems to guide health programs, policy and to measure progress.
Who we are

The HISHub includes leading experts in Civil Registration and Vital Statistics (CRVS) worldwide.

We have strong links with a wide global network of partners.
What we do

• Produce and disseminate knowledge and information about the best methods for improving HIS to strengthen health systems

• Engage in research that will aid decision making

• Help build country capacity.
Civil registration and vital statistics (CRVS)
The civil registration and vital statistics system (CRVS)

- Events include ‘civil’ events such as marriages & divorces, but births and deaths and causes of death are most important for public health policy.
- Major characteristics recorded:
  1) FACT of birth or death
  2) CAUSE of death
  3) Related socio-demographic information on the birth or death (including marriages)
• Continuous and complete reporting of vital event, with medical certification of cause of death in defined populations.

• Implemented according to international standards (e.g. UN Principles and Recommendations and the WHO International Classification of Diseases).
Importance

• Civil Registration generates essential statistical information that decision-makers depend upon for policy formulation and the planning, implementation and monitoring of programmes.

• Trends in life expectancy, fertility and patterns of mortality are key indicators of human health and development and national progress.

• Reliable statistics on births, deaths and causes of death are, therefore, essential or good governance and sound policy-making. They are, in all senses, “vital statistics”.
Tools for CRVS
Why tools matter

• In many countries, vital statistics are of poor quality, out of date, or simply not available.
• As a result policy-makers have to rely on incomplete and unreliable information.
• Countries urgently require guidance about best practice methods and strategies that are feasible to implement to rapidly strengthen CRVS systems.
Tools available

• The HIS Hub at UQ has developed a series of tools to strengthen Civil Registration and Vital Statistics systems.

• The tools are being applied across Asia, the Pacific and Africa in close collaboration with international agencies and partnerships, including the Health Metrics Network and WHO.
Complete CRVS assessment: using HIS Hub Assessment Tools

Countries have applied the Rapid Assessment Tool (as at August 2012)
Complete CRVS assessment: using HIS Hub Assessment Tools

Countries have applied the Rapid Assessment Tool (as at August 2012)
Strategic Planning: using the Guidance Tool

Intended to assist countries who have undertaken a comprehensive assessment of their CRVS systems to develop a strategic and prioritised development plan.
Implementation: using the HIS Hub
Cause of Death (CoD) Certification Guidelines

Since 2010, 294 medical doctors and students in the Asia-Pacific region have been trained in correct death certification practice.
Implementation: using the HIS Hub

CRVS Resource Kit

Launched in 2011, the Resource Kit is a compendium of material and knowledge about how to strengthen aspects of a CRVS system.
The importance of CRVS to countries?

Anneke Schmider
Director, Australian Bureau of Statistics
Why is CRVS Important to countries?

• Basis for legal identification
• Essential information for health, social and economic planning
• Important for research, especially health research

.... Provides many benefits to a country
Australian CRVS System provides many benefits

Health
• Causes of Death;
• Mortality and Fertility;
• Infant, child, maternal mortality;
• Specialist health topics: Cancer, Diabetes, Suicide Deaths;
• Indigenous mortality.

Population
• Inter-censal population Information;
• Births, deaths;
• Estimated resident population and population projections;
• Life Expectancy;
• population growth and financial transfers

Social
• Ageing population and planning
• Education and community planning
• Child and parental programs

Economic
• population growth
• ageing and economic impact;
• sub-regional growth and impact

Individual Use
• identity confirmation;
• eligibility for social payments.

Legal Use
• Identity confirmation;
• Citizenship and passport
• Fraud prevention

Legal Identity - Birth and Death Registration (Australian State and Territory RBDM)
Mongolia

Use CRVS for legal identification, and for health, social and economic planning.

CRVS Challenges:

• Some geographic collection issues – least densely populated place on earth; remoteness issues
• Nomadic population (around 30%)
• Highest rates of Hepatitis C in the world – also high incidence and prevalence of Hepatitis B
• Health coding issues – coding ‘main cause – so real health issues not reflected in the data
In Mongolia... there are challenges with getting good health information.

<table>
<thead>
<tr>
<th>Site distribution</th>
<th>Male</th>
<th>(%)</th>
<th>Site distribution</th>
<th>Female</th>
<th>(%)</th>
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</thead>
<tbody>
<tr>
<td>Liver</td>
<td>3,723</td>
<td>(4.13)</td>
<td>Liver</td>
<td>2,685</td>
<td>(32.5)</td>
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<tr>
<td>Stomach</td>
<td>1,644</td>
<td>(18.2)</td>
<td>Cervix</td>
<td>1,417</td>
<td>(17.2)</td>
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<tr>
<td>Lung</td>
<td>1,153</td>
<td>(12.8)</td>
<td>Stomach</td>
<td>868</td>
<td>(10.5)</td>
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<tr>
<td>Esophagus</td>
<td>745</td>
<td>(8.3)</td>
<td>Esophagus</td>
<td>686</td>
<td>(8.3)</td>
</tr>
<tr>
<td>Colon/rectum</td>
<td>168</td>
<td>(1.9)</td>
<td>Breast</td>
<td>408</td>
<td>(4.9)</td>
</tr>
<tr>
<td>Pancreas</td>
<td>151</td>
<td>(1.7)</td>
<td>Lung</td>
<td>352</td>
<td>(4.3)</td>
</tr>
<tr>
<td>Bone</td>
<td>140</td>
<td>(1.6)</td>
<td>Ovary</td>
<td>216</td>
<td>(2.6)</td>
</tr>
<tr>
<td>Brain/nervous</td>
<td>139</td>
<td>(1.5)</td>
<td>Colon/rectum</td>
<td>210</td>
<td>(2.5)</td>
</tr>
<tr>
<td>Lip/oral/pharynx</td>
<td>133</td>
<td>(1.5)</td>
<td>Pancreas</td>
<td>114</td>
<td>(1.4)</td>
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<tr>
<td>Leukemia</td>
<td>97</td>
<td>(1.1)</td>
<td>Lip/oral/pharynx</td>
<td>120</td>
<td>(1.5)</td>
</tr>
<tr>
<td>Others</td>
<td>929</td>
<td>(10.3)</td>
<td>Others</td>
<td>1,173</td>
<td>(14.2)</td>
</tr>
<tr>
<td>Total</td>
<td>9,022</td>
<td>(100)</td>
<td>Total</td>
<td>8,249</td>
<td>(100)</td>
</tr>
</tbody>
</table>
In Cambodia... CRVS is only 10 years old.

• Most births are registered ......however, less than 10% of deaths are registered.

• Births and deaths occur mainly outside of hospitals – no guarantee of any recording or certification.

• Given the poor information available, there is often incorrect reporting of health issues – eg HIV/AIDS as ‘leading cause of death’.

• Consequently, there is over reporting and analysis on diseases such as AIDS, TB and malaria, since data is collected separately.
Leading Causes of deaths: Cambodia
Philippines

• Collection challenges include dispersed geography and population size

However, there is significant technology initiative within the country:

• SMS reporting of maternal deaths, which are a known issue

• Mobile registration and “National Registration day”

• Rolling out standardised reporting, databases and coding practice across 1600 administrative offices

• Strategic planning for 10 year improvements across all agencies.
Which leads to the next topic....

**Question:** Would technology help these countries improve CRVS?

**Answer:** It depends on how good their business processes are.....
CRVS Technology and Innovation

• Civil registration and vital statistics is important to modern governance and policy, and should benefit from technology advances which address both the efficiency and the effectiveness of the system.

• The focus for innovation in CRVS at present is introducing new or improved business processes for registration and data collection ..... 

• From this perspective, technology is not necessarily the innovation in itself, it is the supporting instrument to innovation.
Understanding the CRVS Business Process...

**Collecting Birth and Deaths Registrations**
- Registration software improvements
- Web-based collection from regional / remote areas
- Matching technology allowing validation and verification of identity

**Processing Registrations**
- Checking Missing information or values
- Automated certification
- Automated follow up letters

**Analysing Registration and Medical Data**
- Programming:
  - Automated quality checks
  - Programmed derivation or imputation
  - Matching programs and algorithms
- Automated report production
- Automated table generation

**Dissemination**
- Standard Web-based output, including reports, tables
  ... but also, software for customisable report or table generation
Introducing Technology Change – should support the business process

Government Lead:
- Analyze
  - Environment Needs
  - Users
  - Processes
  - Requirements
- Design
  - Specifications
  - Standards
  - Data model
  - Hardware/software Interfaces

IT Vendors Lead:
- Develop
  - Iterative approach
  - Development tools
  - Network
  - Databases
  - Road maps
- Deploy
  - Testing
  - Installation
  - User training
  - Budget and staff
  - Maintenance

Proper Business Planning → Expected solutions

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Business Process Requirements

- Benefit in developing a business process flow diagram
- And develop process descriptions

Courtesy Queensland Department of Justice and Attorney-General (2012)
Example: Birth Notification System

- Develop business requirements
- Develop functional requirements

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Birth registration by SMS in Africa

By Susan Beuce, IRIN Online
Monday, August 16th, 2010 at 1:25 AM

Here's another great use of mobile technology in emerging markets. New parents are being urged to register newborn babies via SMS in Africa.

As you may guess, newborn babies are unfortunately a bit of a blind spot in Africa's poorest nations. Both parents and governments have tough time keeping check of the population. Enter mobile technology, which wants to satisfy the government's need to keep track of the population in benefits to the new parents.

Parents should simply text “Family Name” to predefine will be created. On its first visit, a health care worker with a basic baby kit. Moreover, when the parents receive text messages with helpful information about weigh, eat, sleep, and will have a link to UNICEF online tools.

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SENEGAL: Texting for birth certificates

KOLDA, 9 August 2012 (IRIN) - Only a handful of births are recorded in the remote Kolda region of southern Senegal, but a mobile phone application that allows parents to send a text to a birth certificate could cut down school or check in on children are older.

Senegalese law does not make birth certificates required for enrolling a child in school. The number of births that are registered, combined with poverty, ignorance, or simply happen in the community.

After Swiss NGO Aide d’Action introduced the birth registration application in the pilot phase of the programme in three months from September 2011. The home birth registration centres, combined with poverty, ignorance, or simply happen in the community.

A villager working in the fields often does not have access to implants. He names his child and records the birth without having to make a record of it.

Village chiefs in Kolda have been provided with mobile phones loaded with the birth registration application. I afford the cost of traveling to a registration centre can now give the information about the new baby. The chief government register is a feat message. Birth certificates cost 300 CFA francs (about 60 US cents) and send them to the government.

This method ensures security of information, as it uses a coding system. The data is centralized and stored in

Full-scale campaign for mobile birth registration starts in Kenya

Full-scale campaign for mobile birth registration starts in Kenya

Kenyan parents can now register their new babies via an online birth registration system provided by hospitals. The system will link birth data of each child in a hospital to the civil registration system.

Using Union-supported software, birth data will be instantly synchronized with the civil registration system where regular officials will immediately know and can train midwives that have not reported a birth to make a record of it. If a birth is not registered in the hospital, the midwife is at risk of losing her job.

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Open Source eCRVS software

- **BIRth and Death Registration System (BIRDS)**, Andaman, India
  - Each Unit to register Birth / Death online through Internet in the website of BIRDS (www.and.nic.in)
  - Legally valid birth / death certificate to be issued by from website
  - Office of CRBD to monitor registration of all units through website
  - Citizens to download ‘Gist of Certificate’ through Internet freely
  - Access to BIRDS project for other Govt offices through Internet – Sharing and Interfacing software

Adapted from presentation by NIC, Andaman State Unit, India
Thank you