Strengthening civil registration and vital statistics systems - a necessity for the region to overcome socio-economic and health challenges

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Introduction

- Reliable and timely mortality and cause of death data are essential for monitoring trends in diseases, injuries and risk factors and critically important to guide good public health policy and prevention

- Such information is of particular relevance for the Asia Pacific region where populations are rapidly ageing and disease patterns are changing from communicable to non-communicable conditions - and where UHC remains an aspiration for many

- The improvement of Civil Registration &Vital Statistics(CRVS) systems has become a development imperative and is central to the achievement of the health and development agenda post 2015, including UHC

APO Policy Brief on strengthening vital statistics systems (2014)

Evaluation of CRVS systems in Asia Pacific countries based on VSPI scores, 2005-2012

APO countries	Best year	VSPI score
New Zealand	2007	0.94
Australia	2005	0.92
Japan	2005	0.88
South Korea	2011	0.87
Singapore	2005	0.79
Malaysia	2008	0.75
Philippines	2005	0.64
Thailand	2007	0.57
Maldives	2011	0.52
Brunei	2011	0.40
Sri Lanka	2006	0.36
Fiji	2011	0.30
China	2012	0.25
Kirbati	2005	0.18
Mongolia	2010	0.15
Tonga	2005	0.10
Bhutan	2005	0.06
India	2006	0.05
Marshall Isl	2006	0.03
Myanmar	2006	0.02
Bangladesh	2005	0.00
PNG	2005	0.00

APO countries without data to calculate VSPI scores
Cambodia
Cook Isl
DPRK
Indonesia
Lao
Micronesia
Nauru
Nepal
Niue
Palau
Samoa
Solomon
Tokelau
Tuvalu
Vanuatu
Vietnam

Classification of countries based on VSPI
<25 Very weak
25-49 Weak
50-69 Medium
70-85 Good
85+ Very good
No data

Framework to improve knowledge about causes of death (COD) in APO countries

Five critical areas to strengthen:

1) **CRVS systems to register deaths**

2) medical record practices in hospitals

3) certification of COD in hospitals

4) coding of death certificates

5) **systems for diagnosing causes of deaths that occur outside medical settings**

Application of ICT to all five areas would rapidly lead to substantial improvement in mortality and COD information

What is wrong with the region's CRVS systems?

- Mostly paper-based, which make them labour intensive and slow
- Fail to capture **ALL** births and deaths; often COD is only available (frequently wrong) for those dying in hospitals
- Being paper-based system there is no easy way to avoid duplication of registrations or to ensure that records are removed when people die, particularly if they die in a different place to where their birth was registered
- When a register is neither complete nor up-to-date the data are too unreliable to be used for planning purposes or for providing social assistance to those who need it most (the most likely to be unregistered)

What improvement can computerization bring to Civil Registration systems?

- Facilitate the application, processing and issuing of certificates (and copies). Expedite data additions, changes, correction and retrieval of data
- Speed up the transfer and exchange of data within the system as well as the provision of data to other government administrations
- Help improve data quality by having inbuilt, automated data validation procedures and checks
- Make it possible to extract specific data items, compile them in seconds in different formats
- Enable local and centralized storing and archiving to be done in more cost-effective and secure ways

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- A major advantage of computerization is the ability to link vital events to individuals. This makes it possible to link CRVS data to other computerized registers broadening the use of vital statistics
- By uniquely identifying each individual, duplicate records can be avoided and updates recorded as soon as a death is registered
- The unique identifier will ensure full consistency between the CR register and the VS register and can become the backbone which unifies social programmes
- A fully computerized CR system is the first step towards a future population register – the ideal tool for effective governance

How can ICT help improve completeness of registration and vital statistics?

- Using mobiles phones to report births and deaths can result in substantial improvement of reporting of vital events from remote areas (e.g. by up to 400-500% in rural Tanzania)

- More deaths occurring outside hospital settings can be registered with a COD by using ICT for verbal autopsy (VA). VA is a method to ascertain the probable COD from an interview with relatives based on a series of questions about signs and symptoms experienced by the deceased person prior to death

- Currently most VA applications use paper questionnaires and have physicians review the responses to assign the COD. This makes the process labour intensive, expensive, non-standardised, slow and often inaccurate

Cont.

- When questionnaires are computerized they can be put on a tablet or mobile phone and responses can immediately be transferred to a laptop for processing in real time
- Can thus by-pass physicians and new automated diagnostic methods that use computer algorithms to derive the most probable COD can be applied
- Research conducted in several countries has shown that COD from electronic VA questionnaires, analysed using automated diagnostic methods, are more accurate than those assigned by physicians, and certainly are cheaper and faster
- Integrating VA into CR would lead to massive improvement of COD data for underserved populations, particularly in rural and remote areas

What can we conclude?

- ICT is essential for strengthening CRVS systems; through computerization, efficiency, quality, completeness and timeliness of data can be improved

- The use of unique identifiers will make it possible to link vital events registers to other administrative registers broadening the uses of vital statistics

- Functioning CRVS systems are critical to better understand how disease burdens are changing and for determining real needs. High quality registers matters for not wasting resources and opportunities for health development

Conclusions (cont.)

- CRVS is a public good as well as an essential tool for effective governance at all levels. Accurate population estimates and information on COD are essential to reduce premature mortality and disease burden through more informed policies
- There is increasing evidence that strengthening of CRVS systems is not simply a by-product of development – it contributes directly to development
- The Regional Plan adopted in Bangkok last week launches a collective strategy to improve CRVS in efficient and evidence-based ways that will lead to better health outcomes for countries in the region

Thank you!