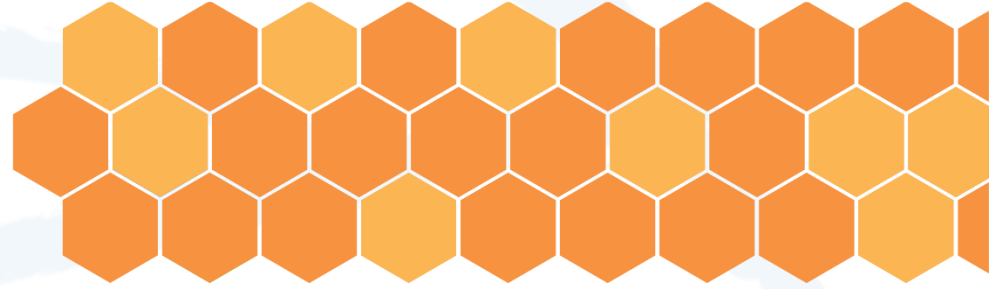




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Sources of Data

United Nations ESCAP

Workshop on the midterm reporting of the Asia-Pacific Civil Registration and Vital Statistics (CRVS) Decade, 2015-2024

Bangkok, Thailand, 20 September 2019

Sources of data for the midterm questionnaire



Civil Registration



Population Register



Census or Survey



Health sector



International data

Population and institution based sources

- ◆ Population-based data sources are those that are representative of the whole population.
 - ◆ population surveys
 - ◆ censuses
 - ◆ civil registration
- ◆ Institution-based data sources are those collected routinely from administrative and operational activities,
 - ◆ Health Information Systems (HIS)
 - ◆ hospital discharge data
 - ◆ health facility surveys, where data are collected in an institution

Periodic vs. Routine collections

◆ Periodic collection

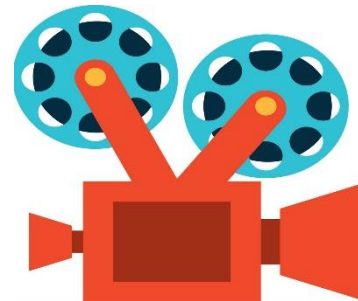
- ◆ Censuses
- ◆ Surveys



SNAPSHOT

◆ Routinely collected administrative data

- ◆ CRVS
- ◆ HIS/ Hospital information
- ◆ Health facility data



CONTINUOUS NATURE

Civil Registration

- ◆ **Civil registration** provides a legal basis for the recording of vital events such as live births & deaths
- ◆ In most developed countries, it is a legal requirement that:
 - ◆ vital events, such as births and deaths, are registered
 - ◆ a medical practitioner completes a *death certificate* with a cause of death whenever anybody dies
- ◆ An efficient routine CRVS system, with medical certification of cause of death, provides continuous and relatively low cost data collection
 - ◆ upheld as the “**gold standard**” for birth and death data
- ◆ An effective civil registration system requires coordination across Ministries and government agencies.

Complete Civil Registration



Provides

Information on all Vital Events

- Birth
- Death
- Marriage
- Divorce

Depending on country, Personal Identification Number (PIN)

- Linkages between the events

Does not include

Address

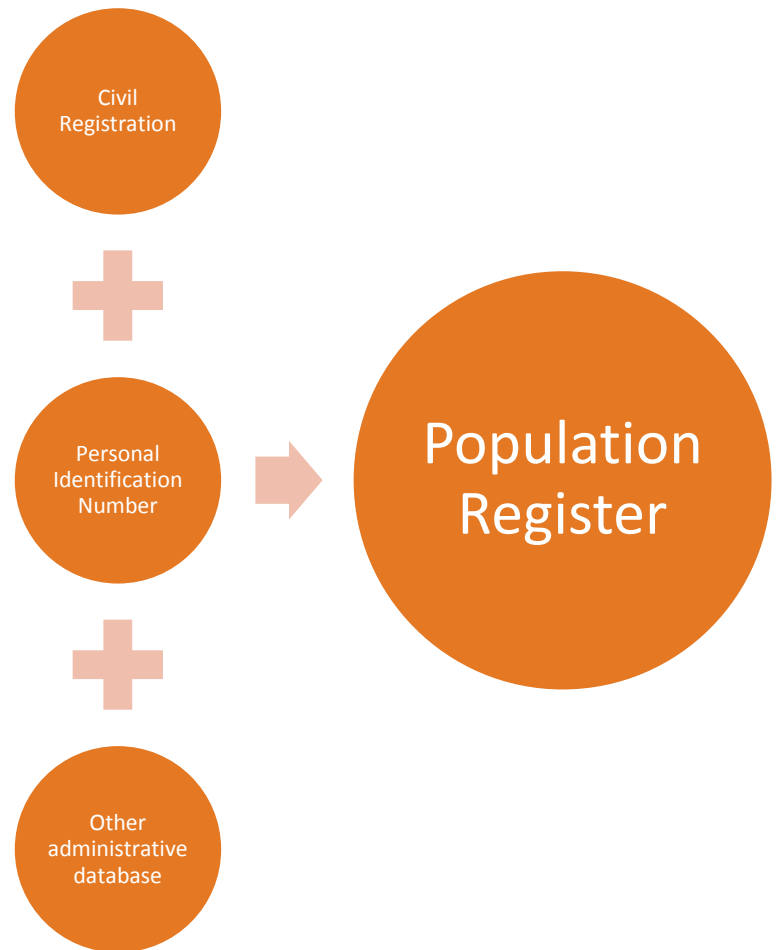
Migration

- Internal
- External

Nationality

From Civil Registration to Population Register

- Facilitate administrative processes
- Facilitate the production of vital statistics



Population Register



- ◆ Administrative purposes
 - ◆ Programme planning
 - ◆ Budgeting
 - ◆ Taxation
 - ◆ Education
 - ◆ ...

- ◆ Potential data
 - ◆ Date and place of birth
 - ◆ Sex
 - ◆ Date and place of death
 - ◆ Address
 - ◆ Date of arrival/departure
 - ◆ Citizenship(s)
 - ◆ Marital status
 - ◆ Personal Identification Number

Census collections

- ◆ *A population census is a compulsory, universal and simultaneous enumeration of the national population, conducted on a periodic basis*
- ◆ Provide population denominator for completeness rates
- ◆ Information on births and deaths may be derived
 - ◆ directly
 - ◆ indirectly
 - ◆ from changes in population (by age and sex) based on survival and migration
 - ◆ reliant on accurate migration data

Periodic Surveys

- ◆ Household surveys such as Demographic and Health Surveys (**DHS**) and the UNICEF Multi-Indicator Cluster surveys (**MICS**).
- ◆ Not continuous data collections, but are collected in a **specific period** of time and re-occur ~every 5 years.
- ◆ Collect data for a **proportion** of the population considered to be representative of the broader population of interest.
- ◆ The reliability of estimates from survey data is driven by how well the **sample selection** reflects the broader population of interest
- ◆ May calculate direct estimation of mortality from reported deaths, or indirect estimation methods. But it should be considered that is often limited to specific age-groups & causes rather than all-ages all-causes mortality
- ◆ Before any analysis it should be checked whether there are enough observations.
- ◆ Surveys are also subject to
 - ◆ **recall bias**, and
 - ◆ **response bias**



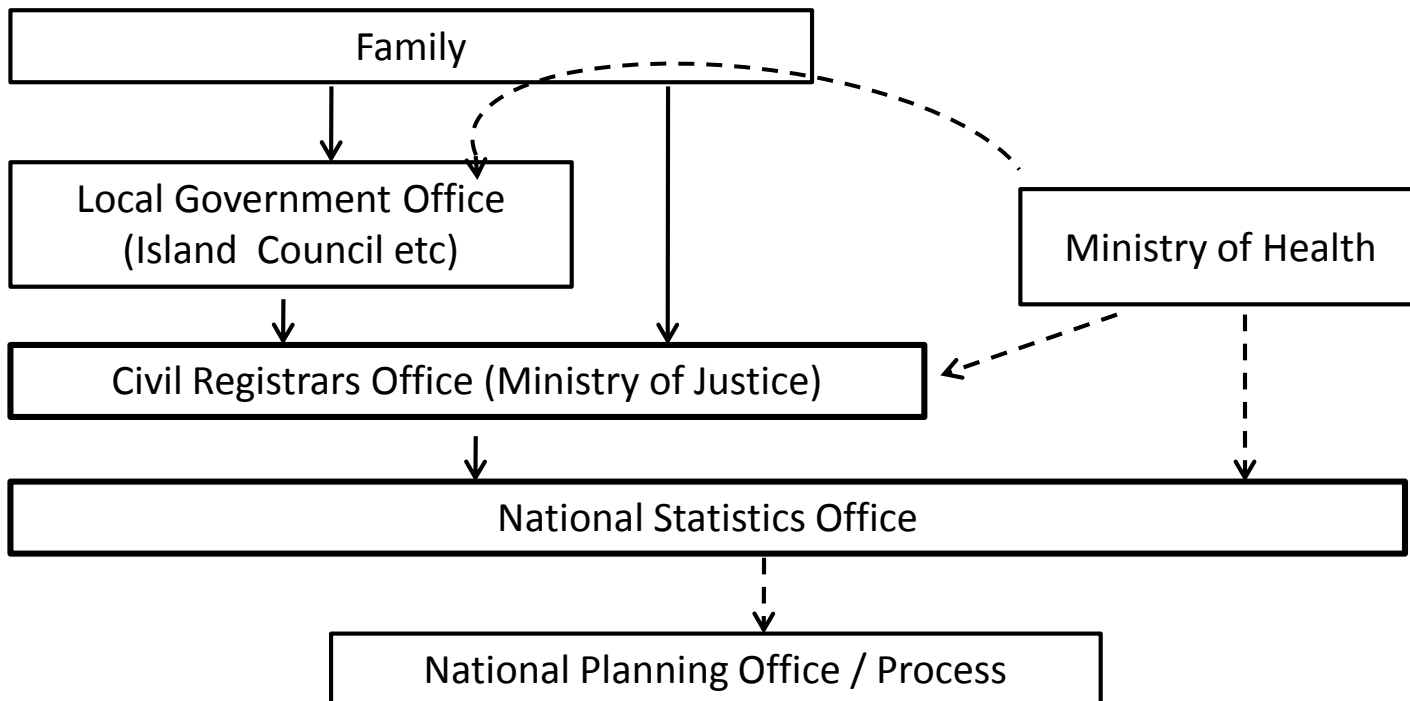
REPRESENTATIVE

Health registration of vital events



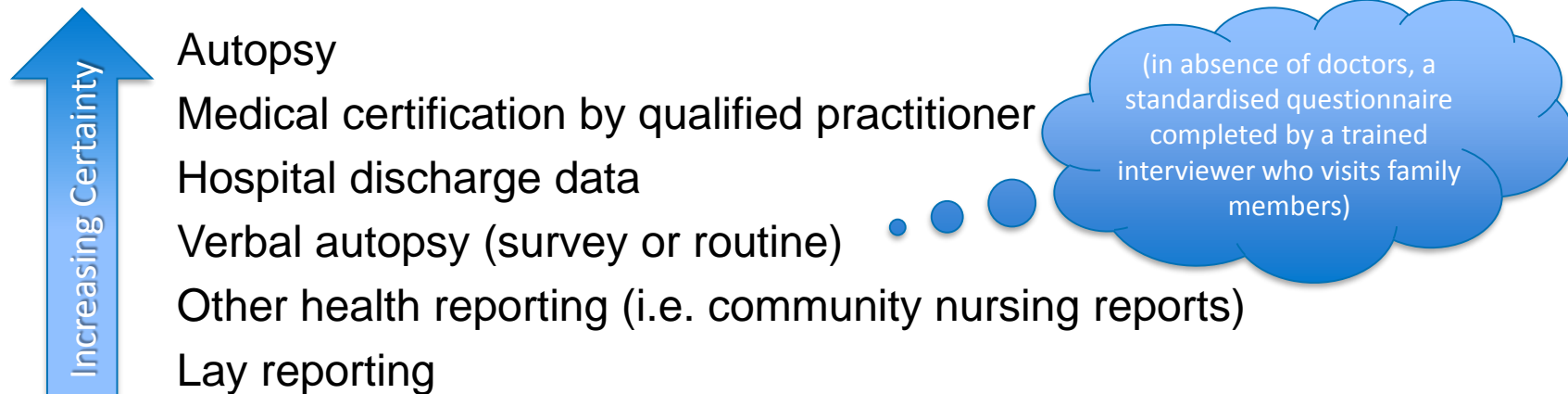
- ◆ Vital events such as births and deaths are also often recorded through routine data collections within the health system.
- ◆ Compared to civil registration system, health data collections are primarily to inform operational decisions, and CoD is central to this purpose.
- ◆ Health systems for reporting death may include a vital registration system (a record of all deaths both in the health facilities and the community) based on medical certificates or community nursing reports, or facility based data

Diagram of the reporting and registration processes for deaths



Data sources to ascertain causes of death

- ◆ Cause of death data can be obtained through medical certification, hospital discharge records, verbal autopsy, nursing reports, or lay reports from family and other community representatives.
- ◆ Level of certainty of underlying cause of death by data source



(Source: Carter K, 2013)

Summary of Population based Data Collection Approaches

Data Source		Periodicity	Sample frame	Period of interest	Data collection (mortality level data)	CoD Data Collected?
Census		Periodic – 5-10 years	Whole Population	Retrospective	Direct - (deaths in the household) Indirect – partial birth history (CEB/CS) & orphanhood data	No
Survey	DHS	Periodic – ~ 5 years	Selected sample – representative of whole population	Retrospective	Direct – complete birth history	No
	MICS	Periodic – ~ 5-10 years	2 stage clustered sample – representative of whole population	Retrospective	Indirect - partial birth history (CEB/CS)	No
	Other household based surveys	Usually once-off	Varies	Retrospective	Varies	Possible - using verbal autopsy
Routine vital registration	Civil Registration	Continuous	Whole population (depending on coverage)	Current	Direct reporting of event	Yes
	Health vital registration	Continuous	Whole population (depending on coverage)	Current	Direct reporting of event	Yes
	Hospital discharge records	Continuous	Hospital cases only	Current	Direct reporting of event	Yes
Other routine databases	Various	Continuous	Varies – usually targets sub-population of specific interest.	Current	Direct reporting of event	Usually limited
Demographic surveillance Sites		Continuous	Selected areas – usually not representative of whole population over time.	Current	Direct reporting of event	Yes

International Data

- ◆ Modelled data or data reported by countries
- ◆ Comparison purpose
- ◆ Used as the denominator of some targets if national data isn't available
- ◆ United Nations Population Division
- ◆ United Nations Statistics Division
- ◆ SPC
- ◆ UNICEF