Monitoring Mortality in the Sustainable Development goals era

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WHO: The International Classification of Diseases

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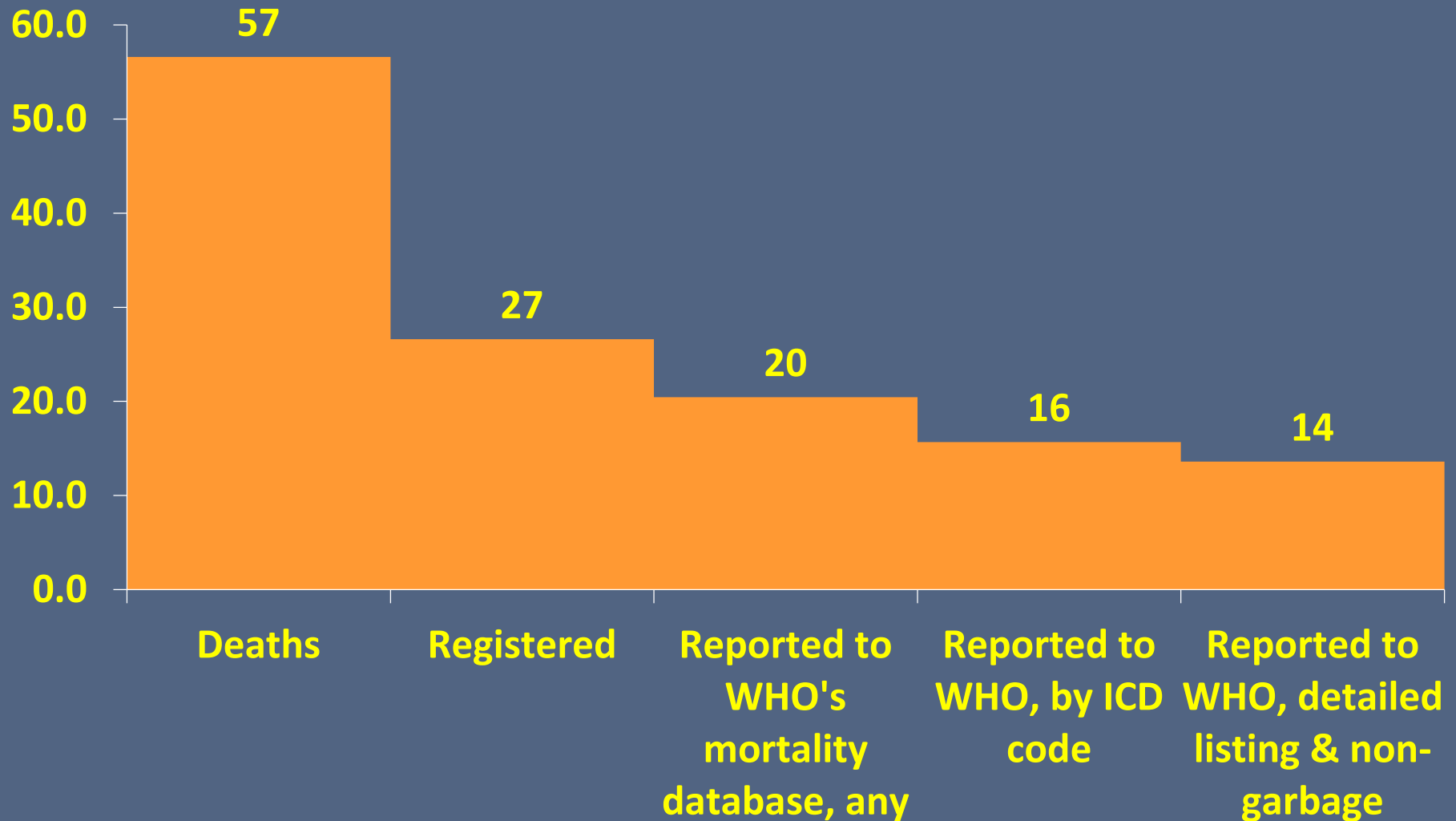
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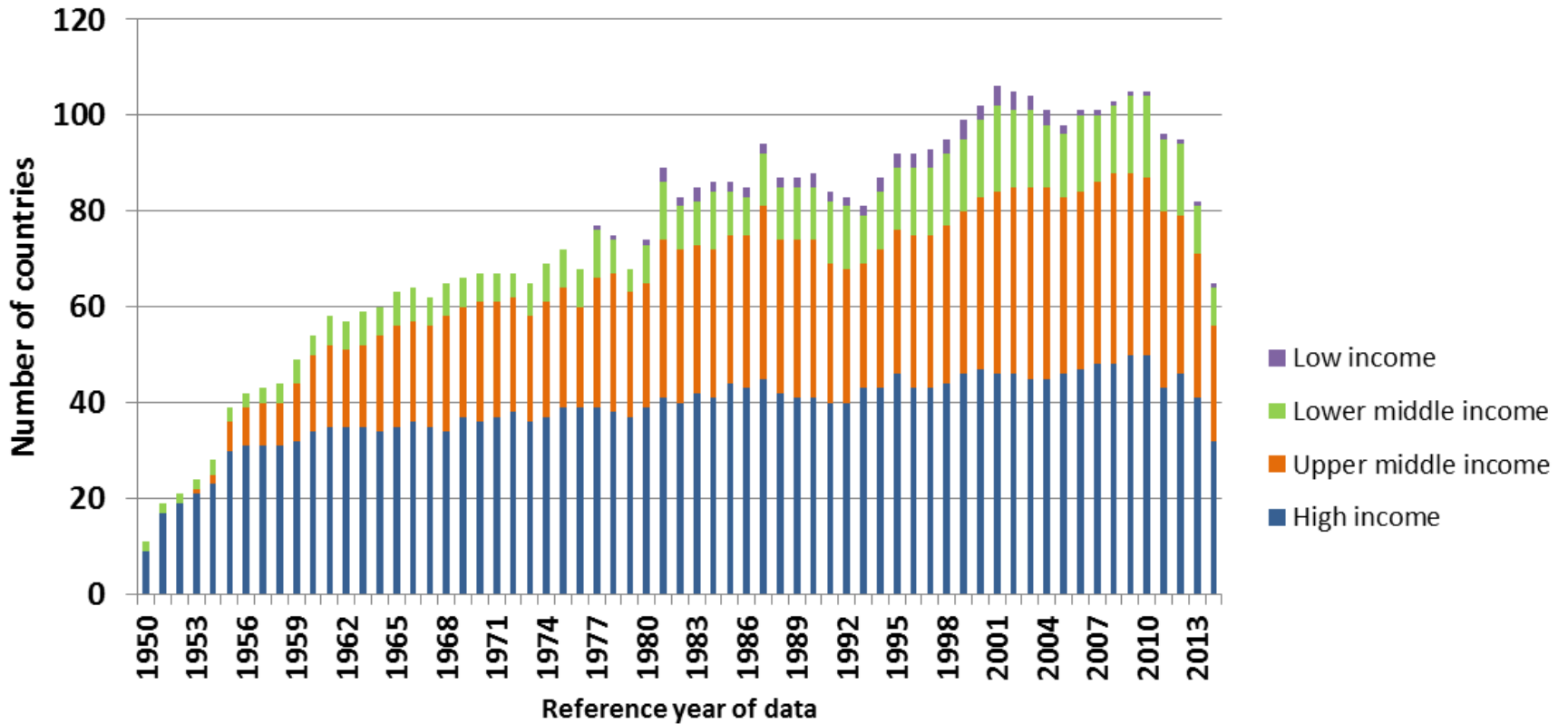
Mortality statistics & SDGs

- General: Mortality by age, sex and cause of death is the foundation of public health, globally and in countries: need for comparable statistics over time

- Sustainable Development Goals (SDG) 2016-2030: nearly a dozen mortality by cause targets and indicators (NCD, suicide, violence, environmentally related, maternal etc.)

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Current situation: Global number of deaths by registration and reporting status to WHO, 2015

Category	Value
Deaths	57
Registered	27
Reported to WHO's mortality database, any	20
Reported to WHO, by ICD code	16
Reported to WHO, detailed listing & non-garbage	14

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Trends in cause-of-death reporting, by country income group

Number of countries (y-axis: 0 to 120)

Reference year of data (x-axis: 1950 to 2013)

Legend:
- Low income (purple)
- Lower middle income (green)
- Upper middle income (orange)
- High income (blue)

Because of the typically observed lag of 18-14 months before countries report finalized latest data, it should not be inferred from these charts that reporting for the most recent years has decreased

Countries with well-functioning systems

- Mortality statistics based on death registration and use of WHO medical certificate of the cause of death: completed by physicians, coroners

- Coding using the ICD: with trained coders or automated coding tools (IRIS)

- ICD-10: 43 languages

ICD-10

The International Statistical Classification of Diseases and Health Related Problems

Tenth Revision

Volumen 1

PAN AMERICAN HEALTH ORGANIZATION
Pan-American Sanitary Office, Regional Office of
THE WORLD HEALTH ORGANIZATION

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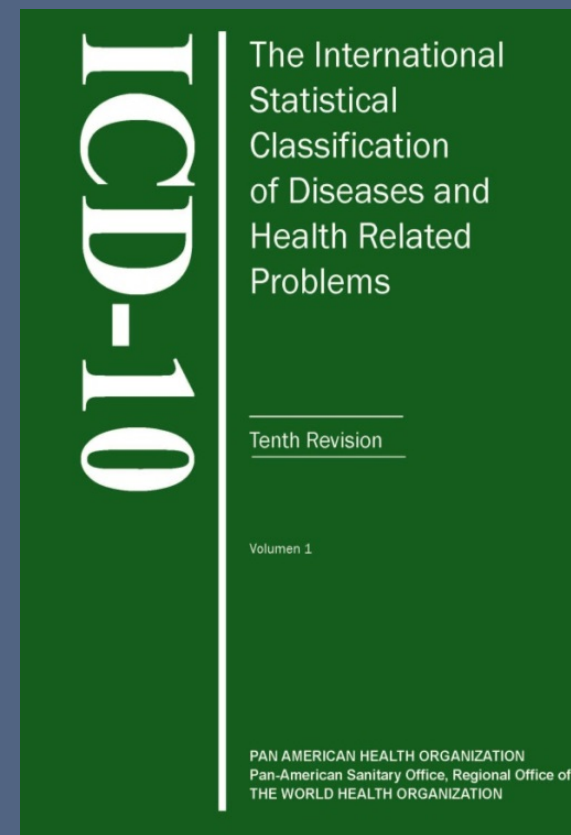
International Classification of Diseases (ICD) Basis for all cause-of-death information
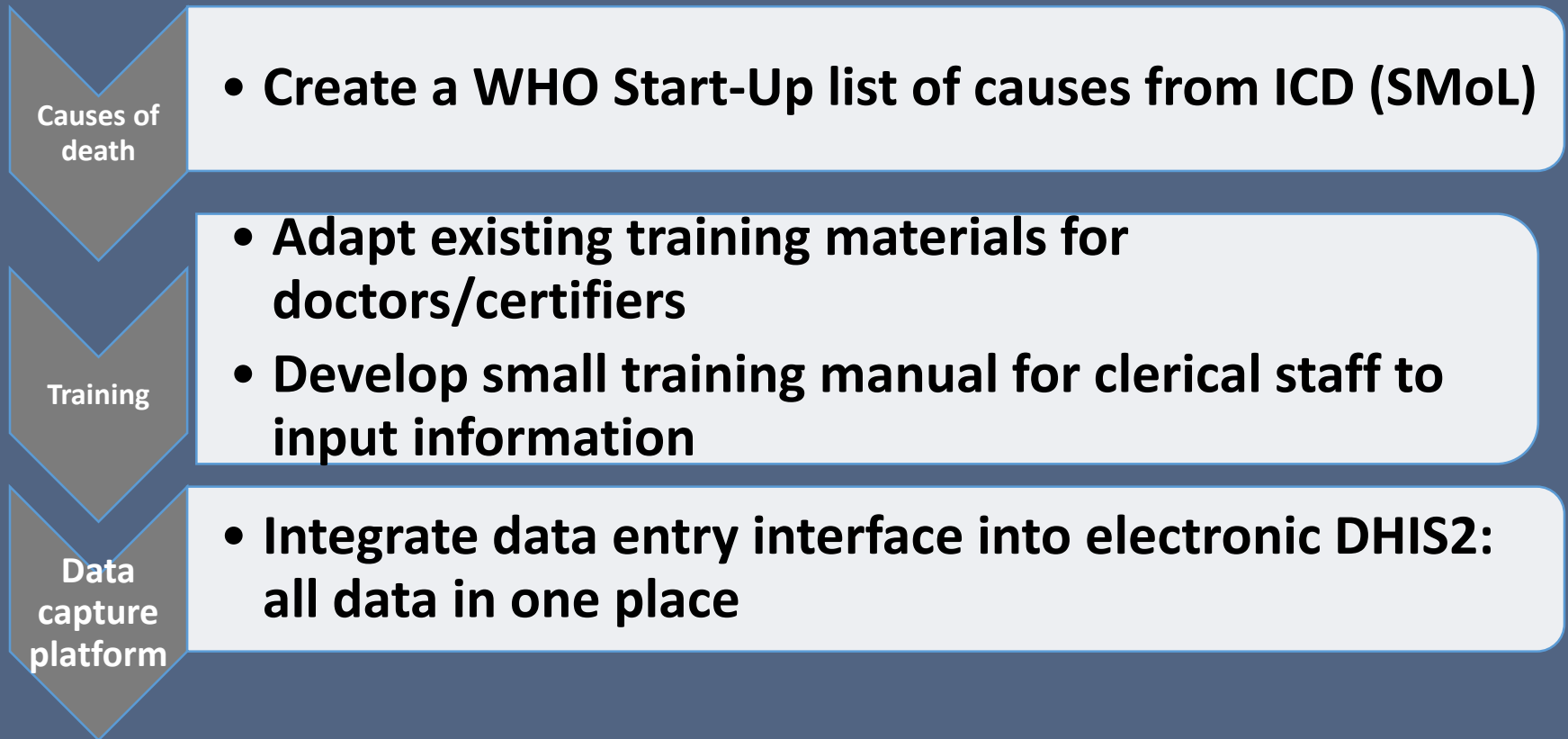
Number of codes by ICD revision
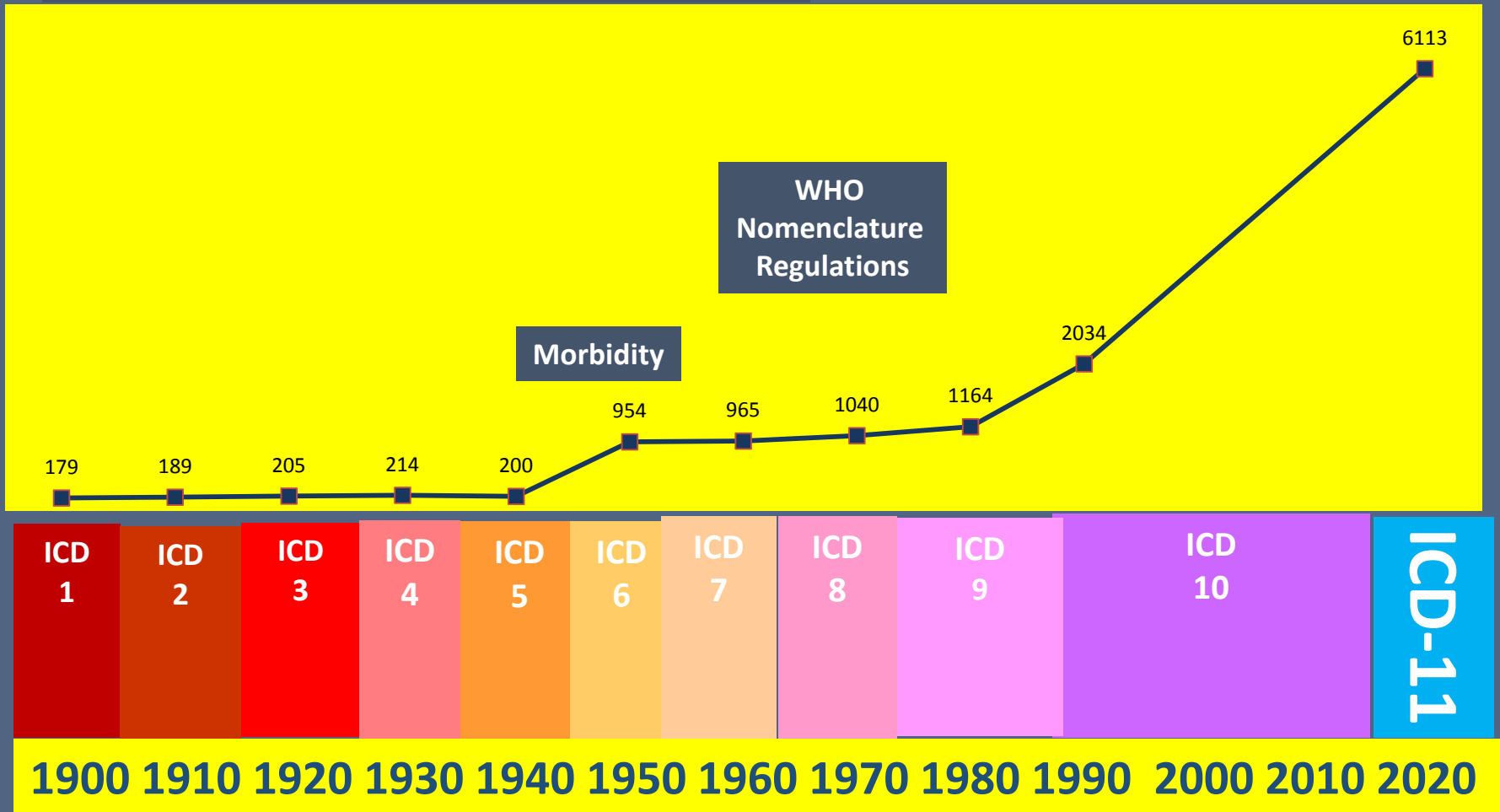
Data sources for mortality statistics in countries with inadequate CRVS systems

1. Health facility data

2. Household surveys (& population census)

3. Health & Demographic Surveillance Studies

4. Sample registration systems

- Mortality and cause of death statistics based on data from multiple sources; much reliance on modeling

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1 Health facility data – causes of death
A simplified approach

Causes of death

- **Create a WHO Start-Up list of causes from ICD (SMoL)**

Training

- **Adapt existing training materials for doctors/certifiers**
- **Develop small training manual for clerical staff to input information**

Data capture platform

- **Integrate data entry interface into electronic DHIS2: all data in one place**

Drawbacks: less than 30% of deaths occurring in health facilities; cause of death patterns not representative for population

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2 Household surveys (and census)

- Data on levels of child & adult mortality

    - birth histories and sibling survival histories (and other demographic methods)

- Causes of death

    - maternal mortality as part of sibling survival history

    - verbal autopsy module, either in survey or as follow-up

- Drawbacks

    - No continuous data: conducted once every 5 years or longer, VA module less frequent; no local data; large uncertainty

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3 Health & Demographic surveillance studies

- One or more longitudinal study sites in a country, with variable populations – INDEPTH Network

- Data on trends in levels of mortality by age and sex

- Often include verbal autopsy for all deaths

- Drawbacks: non-representativeness for country, special features related to selection and funding of site

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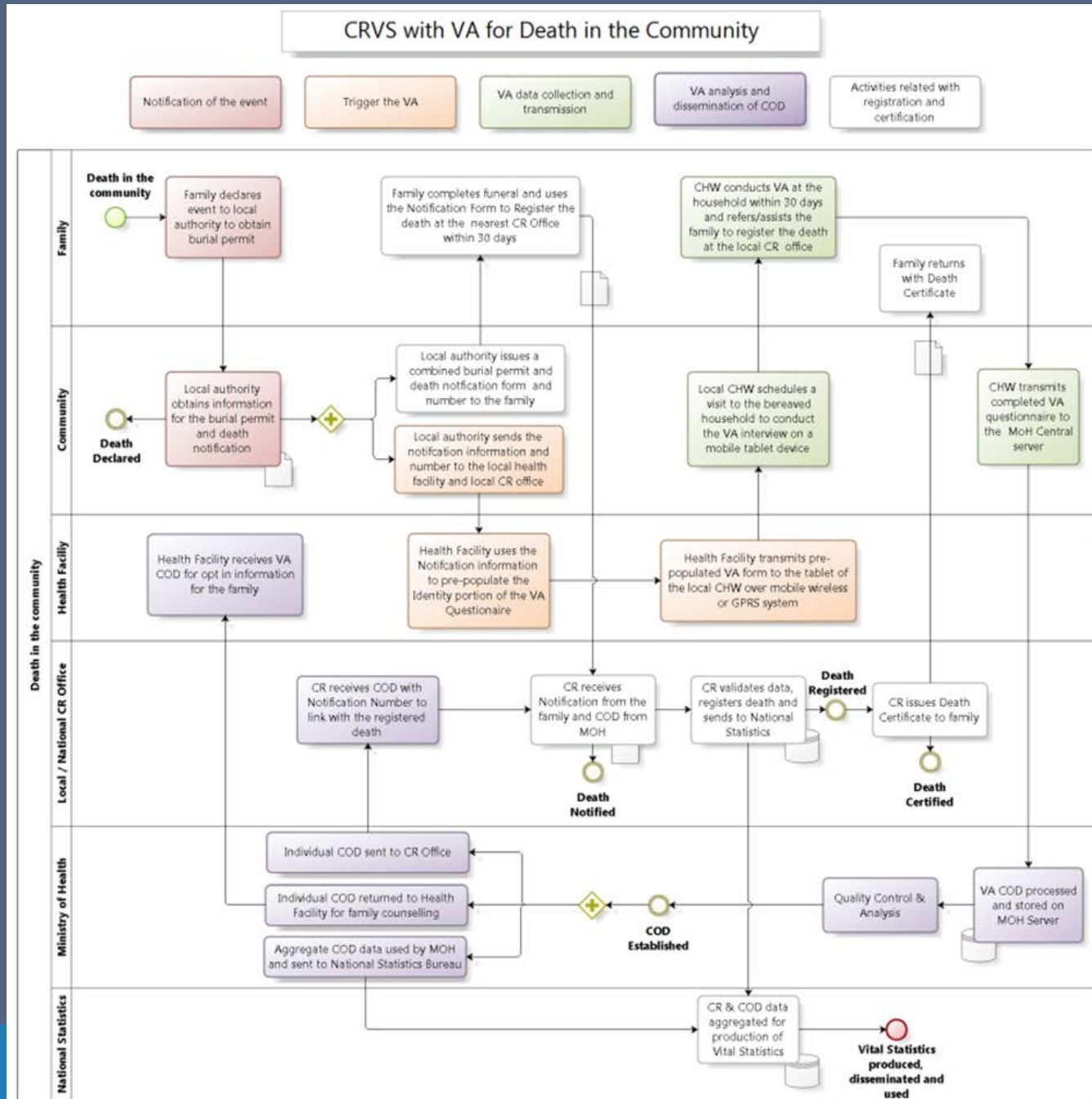
4 Sample registration systems

- India and China have long running SRS, but also used in several Africa countries in recent years

- Can provide trends in levels of mortality and cause of death patterns including verbal autopsy

- Its development and running must support strengthening of the CRVS system

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Enhancing mortality statistics
During the SDG 2016-2030

- Strengthen CRVS systems - political momentum

  - increase birth and death registration coverage; assess completeness

  - obtain cause of death data from both health facilities and communities

- Establish Sample Registration Systems

  - To obtain national trends in mortality by age and sex (with a few strata)

  - Include verbal autopsy

- Continue mortality data collection in household surveys and health and demographic surveillance systems

Developing a CRVS system that includes verbal autopsy for deaths in the community

(from De Savigny et al. 2016)

CRVS with VA for Death in the Community

Improving cause of death statistics during CRVS system strengthening

- **Improve cause of death reporting by hospitals using ICD and electronic systems**

- **Implement verbal autopsy** in sample registration systems using common standards:

  - use of standard WHO 2016 instrument

  - cause list for VA mapped on to the ICD

  - automated analytical tools: InterVA, Tariff, (physician coding)

- Enhance analytical methods and country capacity to synthesize data from multiple sources

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SDG target

- **SDG target 17.19**: by 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement GDP and support statistical capacity building in developing countries

- **Indicator 17.19.2**: proportion of countries that (a) have conducted at least 1 population census in the last 10 years and (b) have achieved 100% birth registration and 80% death registration

- World Bank / WHO Global CRVS scaling up investment plan 2015-2024

	2020	2025	2030
Births in given year are registered	80%	90%	100%
Children whose births are registered have been issued certificates	70%	85%	90%
Deaths in given year reported, registered, and certified with key characteristics	60%	70%	80%
Maternal and newborn deaths reported, registered, and investigated	80%	90%	100%
Deaths in children under 5 reported, disaggregated by age and sex	60%	70%	80%
Cause of deaths in hospitals reliably determined and officially certified	80%	90%	100%
Countries have community assessments of probable cause of death determined by verbal autopsies using international standards	50%	65%	80%

Thank you

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