#apstatsweek2020

Evaluation of Civil Registration and Vital Statistics System in the Maldives – Mortality Cause Specific Approach

Action Area 1. (SB2)
Increasing trust in Official Statistics via transparency on results of quality assessments.

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DECADE OF >>> ACTION

UNITED NATIONS
ESCAP
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from the British people

Overview

- Introduction

- Methodology

- Evaluation Methods

- Results

- Discussion

- Recommendations

2020 Asia-Pacific Statistics Week

Leaving no one and nowhere behind

Introduction

- Maldives is 187 islands with 344,023 people.

- CRVS system established in early 1960

1960
- Reporting of births & deaths started

1990
- 1993: CRVS law enacted
- 1999: Microsoft Access database created

2000
- 2008 - 2009: Online VRS module introduced

2010
- 2010: Decentralization
- 2013: Dedicated staff allocated
- 2015: VRS regulations

Methodology

- Information sources
  - Population estimates of Maldives from Global Burden of Diseases (GBD) group

  - ICD-10 coded deaths from the CRVS system for 2009 to 2018

- Evaluation Methods
  - ANACONDA: Analyses of Causes of National Death for Action

  - Business process mapping

ANACONDA

- Vital Statistics Performance Index: VSPI(Q) Components:

    1. completeness of death registration

    2. amount and type of 'garbage' codes used to record the cause of death, including any non-ICD codes

    3. the degree of cause-specific detail included in the input data

    4. the frequency of biologically implausible causes of death in the dataset

    5. the fraction of deaths for which neither the age nor the sex was recorded

Results

- VSPI(Q) has varied between low and medium during this period.

| Component	2009 - 2010	2011- 2012	2013- 2014	2015- 2016	2017- 2018
Quality of age and sex reporting	100	100	100	100	100
Quality of cause of death reporting	58.7	63.1	63.8	58.7	63.8
Biologically plausible cause of death	100	100	100	99.1	100
Level of cause specific detail available	81.5	81.5	81.0	79.4	82
Completeness of death reporting	95.4	97.5	97.2	97.9	97.2

Results

- Quality of cause of death reporting: garbage codes are redistributed to the GBD groups, about 50% were observed to be in the GBD group 2 (55.1% in 2009-2010 and 47.3% in 2017-2018).

Major GBD groups and garbage codes	2009 - 2010	2011- 2012	2013- 2014	2015- 2016	2017- 2018
Group 1: Communicable diseases	6.7	5.3	3.7	4.5	4.5
Group 2: Non-communicable diseases	27.8	33.2	34.4	29	29
Group 3: External causes	2	3.5	4.3	2	2
Garbage codes including insufficiently specified causes with limited impact	62.2	57.9	57.5	62.7	62.7

Figure 1: Business process map of Maldives CRVS system

Results: Business Process Mapping

- Time lags
  - Bureaucratic process
  - Physical documents for verification – geographic dispersion

- Duplication of effort resulting in wastage and inefficiency and inadequate standard of procedures for data access.
  - Coding in main referral facility

- Outdated and incompatible software with current technologies
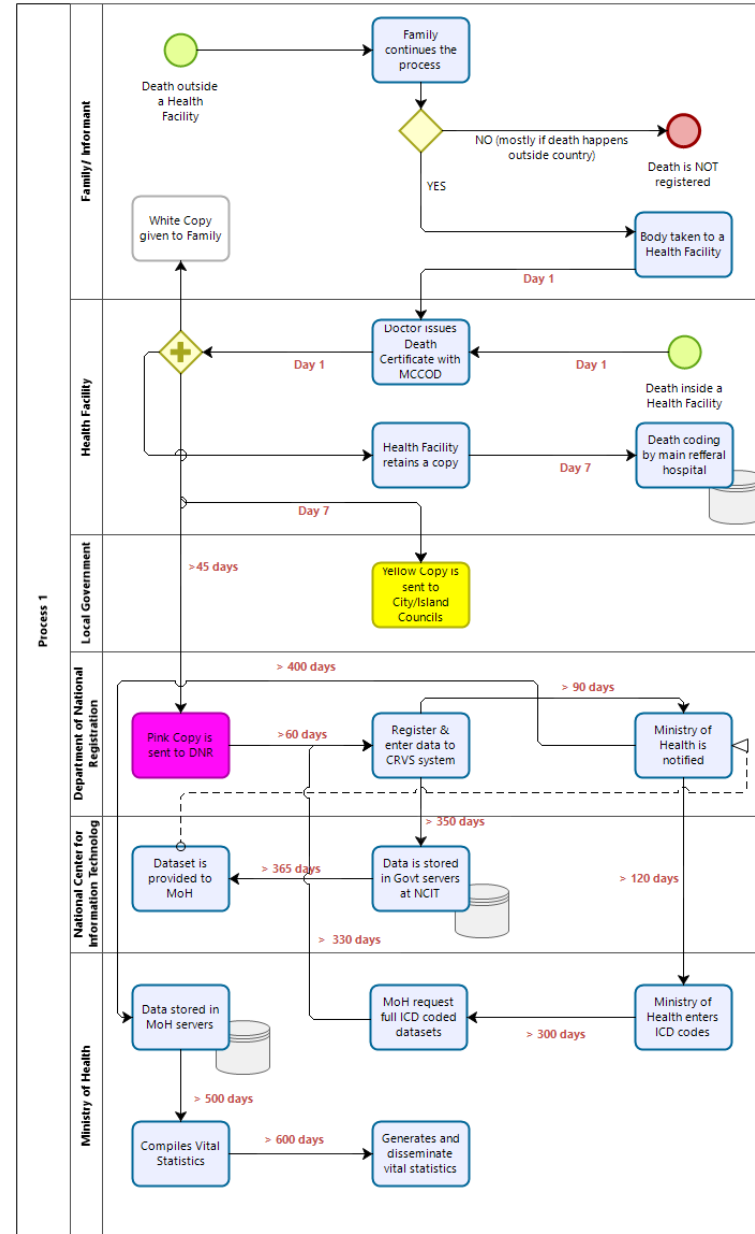
Discussions

- Highest VSPI in the region but little improvement in the VSPI(Q) over the period from 2009-2018 in the Maldives

- A major concern is the garbage codes

- Medical certification of cause of death (MCCOD) assessments shows no time intervals, other guidelines of death certification were also of low quality.

- Multiple parties introducing fragmentation that requires each party to play an important role to improve its functioning

- SDG indicators are monitored using mortality data

Recommendation

- Annual assessments to monitor the VS and understand the status of the current system

- Feedback to all the parties involved in the CRVS is critical for sustained improvement.

- Opportunity for real-time mortality monitoring, if each party today plays its part in coordination with others, bringing new technology to transfer death certificates

- With the expanded use of technology in civil service institutions and universal death certification is possible.

Thank you.

Stay home, stay safe.