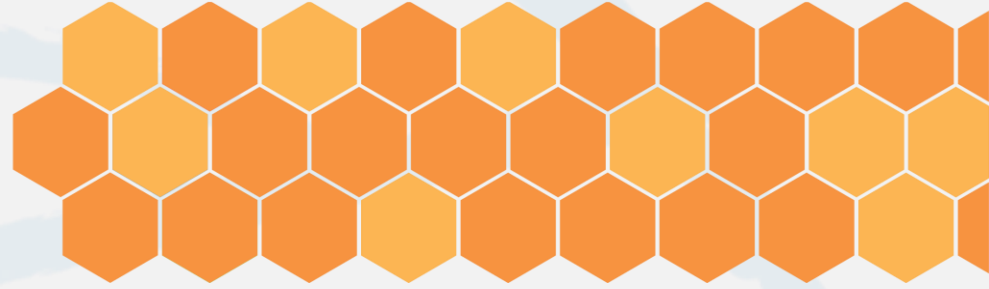




Get
every one
in the picture



Session 4: Data Quality

Quality Assurance: Dimensions of Quality

2nd TRAINING WORKSHOP

Project to strengthen national capacity in producing and disseminating vital statistics
from civil registration records in Asia and the Pacific

Bangkok, Thailand, 6-10 March 2017

Basic framework

Adequately funded evaluation activities are essential

- ❑ For improving systems that have deficiencies
- ❑ For maintaining systems that function satisfactorily



**Quality
Assurance**



**Quality
Assessment**

Basic framework

Quality Assurance

- Encompasses each stage of CRVS operations
- All vital events are registered without duplication
- All related information is recorded
- Information is compiled, validated and processed
- Vital statistics are released in timely manner

Quality Assessment

- Specific studies for specific questions
- Coverage of registration of vital events
- Accuracy of variables
- Overall functioning of sub-systems
- Can be ad hoc or regular exercises

Quality Standards

Completeness

Correctness
or Accuracy

Availability

Timeliness

Quality Standards

Completeness

- Every vital event is registered
- Statistical report is filed for every registered event
- Coverage error

Correctness or Accuracy

- Every data item is filled
- Data items are accurately filled
- Content error

Quality Standards

Availability

- Data and statistics are available to users in a friendly format

Timeliness

- every event has been reported for registration within the legally stipulated
- Prompt production, publication and dissemination of the vital statistics

Steps in Quality Assurance



local registration areas have carried out the required registration

every vital event in a given area has a record in the system

all local offices transmit the records to a higher-level registration office

Set-up procedures in compilation and processing

Quality Assurance in VS System

Coding

Keying

Sorting

Posting

Tabulation



Quality Assurance in VS System

Coding

- independently recoding a sample of the data recorded
- performed by a person other than the one who did the original coding
- Set tolerance limits and redo if the limit is exceeded

Keying

- If mechanical and manual transcription, 100 per cent verification is needed by an independent group of verifiers
- If computer data processing is used, sophisticated and extensive checks of the data through the use of an edit program
 - missing values
 - values that are outside an acceptable range
 - Values inconsistent with other related data
 - missing data may be imputed

Quality Assurance in VS System

Posting

- posted tables can be verified by proofreading ie one person reads from the original tables while another scans the posted data
- “internal checks” ie summation of marginal subtotals to the table total and checking the consistency among several tables
- technical review of tabulations for credibility, consistency and plausibility

Tabulation

- errors might be introduced through programming mistakes
- all tabulations to be inspected by both statisticians and data-processing personnel

Example of Edit Specs

https://www.cdc.gov/nchs/data/dvs/birth_edit_specifications.pdf



Example on data quality check

Table 19 List of scores in the area of Data quality and plausibility checks

| Rapid assessment questions | Response | Scores |
|--|---|-------------|
| Data quality and plausibility checks | | 2.00 |
| 20. What consistency and plausibility checks on fertility and mortality levels are carried out before the data are released? | B. Checks on overall levels of fertility and mortality derived from vital statistics data are undertaken by calculating rates and comparing these to earlier time series | 2 |
| 21. What consistency and plausibility checks are applied to data on cause of death? | B. Routine checks of the consistency of patterns in cause of death are made to ensure that mortality from any disease group does not vary significantly from year to year, and that any fluctuations can be explained | 2 |

Exercise

Identify the quality assurance procedures of the vital statistics systems in your country

