



Session 7a. Quality assessment and assurance in the civil registration and vital statistics system



Basic framework

Adequately funded evaluation activities are essential

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

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Quality assurance

A light blue, cloud-shaped graphic containing the text "Quality assessment".

Quality assessment



Basic framework

United Nations Statistics Division

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



Standards

Completeness

Correctness
or Accuracy

Availability

Timeliness



Completeness

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

Correctness

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

Availability

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

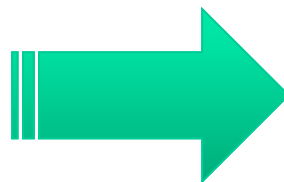
Timeliness

- * CR: every event is registered within time limit
- * VS: prompt dissemination



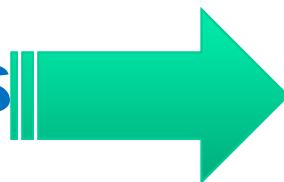
Quality assessment methods

Direct methods



Matching of records

Indirect methods

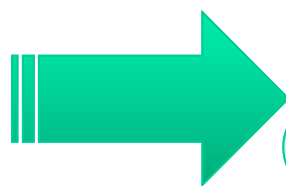


Demographic analysis



Quality assessment. Direct methods

Matching of records



Match registration records with records from an *independent* source

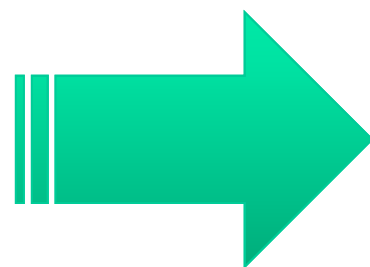
- Birth registration with death registration
- Administrative records
- Lists from population censuses and surveys
- Dual records system
 - Set up survey specifically to collect information on vital events



Quality assessment. Direct methods

Practical example: Health services of the state of Queensland, Australia

Primary source:
Perinatal Data
Collection



Secondary
source:

Birth
registration

Linkage file:
file containing
person identifiers
from various
admin. sources



Direct methods. Practical example: Health services of the state of Queensland, Australia

Some results

- 2.7% of Perinatal Data records could not be linked to registration data.
- Significant differences in linkage between Indigenous mothers (15-18% under-registration) and non-Indigenous mothers (1.8% under-registration)
- Remote and very remote geographical areas also had high rates of under-registration

<https://www.health.qld.gov.au/hsu/peri/underreg.pdf>



Quality assessment. Indirect methods

- Comparison of trends
- Delayed registration

Demographic
analysis

- **Comparison with census data**
 - If two censuses: balancing equation, Lexis diagram
 - If only one census: compare aggregated numbers
- **Methods for incomplete data**
 - Manual X
 - Tools for Demographic Estimation (online and print update of Manual X)
- **Questions on birth registration in surveys**



Direct or indirect ?

	Advantages	Limitations
Direct methods	<ul style="list-style-type: none">• More accurate assessment of registration completeness• May indicate sources of under or overregistration• Can be applied at any geographical level	<ul style="list-style-type: none">• Accuracy is affected by the choice of the second source of records• True independency of the second source is unlikely• Matching criteria difficult to find if there is no ID number• If manual: time consuming• If automated: computer algorithms can get too complex• Cost
Indirect methods	<ul style="list-style-type: none">• Prompt assessment of vital statistics completeness• Several can be applied at various geographical levels	<ul style="list-style-type: none">• Some have assumptions that may not hold• Some require reliable data from two censuses• Accuracy is affected by the degree of census completeness



Direct or indirect ?

- If vital statistics are compiled fully from civil registration, both direct and indirect measure the quality of civil registration and vital statistics.
- When the two systems do not correspond completely, measures of quality of one system cannot be used to represent another



Direct or indirect ?

Choosing the appropriate method depends on:

- Objectives
- Degree of precision
- Timeliness
- Type of event
- Resources



Gracias Thank You
Merci Спасибо
شكرا 谢谢