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
United Nations sub-regional workshop on applying Principles and Recommendations for a Vital Statistics System, for implementing the Regional Action Framework for CRVS in Asia

Istanbul, Turkey, 15-18 September 2015

Basic framework

- 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 assurance

- 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

- 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

Match registration records with records from an independent source
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

Quality assessment: Indirect methods

- Comparison of trends
- Delayed registration

- 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
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<th>Direct methods</th>
<th>Advantages</th>
<th>Limitations</th>
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|                | • More accurate assessment of registration completeness  
• May indicate sources of under or overregistration  
• Can be applied at any geographical level | • 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 | |

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<th>Indirect methods</th>
<th>Advantages</th>
<th>Limitations</th>
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|                  | • Prompt assessment of vital statistics completeness  
• Several can be applied at various geographical levels | • 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.**
Choosing the appropriate method depends on:

• Objectives
• Degree of precision
• Timeliness
• Type of event
• Resources
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Gracias  Thank You  Merci  Спасибо  شكرا  谢谢