Session 12. 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

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
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: events are registered within time limit and statistical reports are filed according to schedule
* 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 according to ethnic groups

<table>
<thead>
<tr>
<th></th>
<th>Indigenous mothers</th>
<th>Non-indigenous mothers</th>
</tr>
</thead>
<tbody>
<tr>
<td>percentage</td>
<td>15-18% de sub-registro</td>
<td>1.8% de sub-registro</td>
</tr>
</tbody>
</table>

- 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 at least two censuses: balancing equation, Lexis diagram
  - If only one census: compare aggregates
- Methods for incomplete data
  - Manual X
- Questions on birth registration in surveys or censuses
### Direct or indirect?

<table>
<thead>
<tr>
<th></th>
<th>Advantages</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct methods</strong></td>
<td>• More accurate assessment of registration completeness</td>
<td>• Accuracy is affected by the choice of the second source of records</td>
</tr>
<tr>
<td></td>
<td>• May indicate sources of under or overregistration</td>
<td>• True independency of the second source is unlikely</td>
</tr>
<tr>
<td></td>
<td>• Can be applied at any geographical level</td>
<td>• Matching criteria difficult to find if there is no ID number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If manual: time consuming</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If automated: computer algorithms can get too complex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cost</td>
</tr>
<tr>
<td><strong>Indirect methods</strong></td>
<td>• Prompt assessment of vital statistics completeness</td>
<td>• Some have assumptions that may not hold</td>
</tr>
<tr>
<td></td>
<td>• Several can be applied at various geographical levels</td>
<td>• Some require reliable data from two censuses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Accuracy is affected by the degree of census completeness</td>
</tr>
</tbody>
</table>
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.
- However, coverage and accuracy of vital statistics are also affected by the steps in the production.
- 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
Gracias  Thank You
Merci  Спасибо
شكرًا  谢谢