Are data reliable and complete?

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The onion model

- No access to health care
- Access to health facilities, but don't go
- Presenting to health facilities, but undiagnosed
- Diagnosed by public or private providers, but not notified
- Diagnosed by NTP or collaborating providers
- Recorded in notification data

All TB cases

Undiagnosed cases

Diagnosed but not notified cases

Notified cases
"Data has quality if it **satisfies the requirements of its intended use**…the data must be accurate, timely, relevant, complete, understood, and trusted."

-Jack E. Olson
Intended use of TB notification data

- Estimate of TB incidence
- Estimate of trend in TB incidence over time
Framework

Are data reliable and complete?
- Good coverage, with no missing reports
- No duplicates
- No misclassification
- Data internally consistent
- Data externally consistent

If not, IMPROVE surveillance system

Do changes in notifications over time reflect trends in incidence?
- Assess changes in case-finding effort or in case definitions
- Assess changes in TB determinants
- Examine historical and political events with possible impact on TB and/or reporting

Evaluate epidemiological TRENDS and IMPACT of TB control

Do notifications include all incident TB cases?
- Capture-recapture studies
- Apply “onion” model to identify where cases may be lost/missed
- Cross-validate estimates of TB incidence with TB deaths recorded in vital registration system

UPDATE estimates of burden
if appropriate, CERTIFY or VALIDATE surveillance data
C.3 All notified TB cases
2.1 Are TB data complete?

- Do the nationally aggregated TB notifications include all the data/reports from the reporting units that were expected to report to NTP?
- Were any notification reports missing from the lowest admin levels at any time?

2.2 Are TB data reliable?

- Are reported TB cases actually TB cases?
- Are TB cases classified correctly? e.g. new cases are not classified as re-treatment or vice versa. Or smear unknown cases are not classified as smear-negative.
Comparison of reports received versus expected

C5. Trends in percent of all admins that reported in each year
Unusual fluctuations in the time series?

- **Zambia**
- **Nigeria**
- **Burkina Faso**
- **Côte d'Ivoire**
Identification of unusual fluctuations

A4. Trends – Burkina Faso
### Identification of unusual fluctuations:

<table>
<thead>
<tr>
<th>Trend in notification of new TB cases</th>
<th>See graphs 2-17</th>
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<tbody>
<tr>
<td>2.1.7. Were there unusual fluctuations in the time series? e.g. notifications that differ a lot (like more than 10%) from one year to the next.</td>
<td>Yes / No / Don't know</td>
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</tbody>
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![Graphs showing trends in TB cases](image-url)
My advice...

Before you sit, make sure your chair is sturdy and has enough legs!
Thank you