Effective Diagnosis, Treatment, and Monitoring of Hypertension in Primary Care: Training Workshop

Session 6

Assessment: Turning Data into Actionable Intelligence

Content should be adapted with country-specific information prior to use. Red text denotes places where modification may be required. Guidance on how to adapt the training is provided in the Course Overview.
Competency and objectives

**Competency**

*Ability to manage, analyse, and interpret data and prepare periodic performance reports*

**In this session you will learn about:**

- Data management and checking data for accuracy
- Data analysis and interpretation
- Performance reports for monitoring and feedback
Assessing hypertension management

• **Assessing data patterns and trends** to provide real-time information for mid-course adjustments

• **Articulating this information well and to the appropriate people** to inform local, subnational, and national decision-making
Effective assessment criteria

1. **High-quality, consistent data collection and management**
   - Well-organized data tracking
   - Regular data quality checks or audits
   - Documented data cleaning

2. **Accurate, ethical data analysis and interpretation**
   - Accurate calculations resulting in actionable interpretation of analyses

3. **Dissemination of findings for improvement and decision-making**
   - Incorporate analyses into feedback loop
Three levels of reporting

1. **Health facility-level**
   - Occurs at least quarterly
   - Demonstrates progress toward intended long-term outcomes

2. **District- or regional-level**
   - Occurs quarterly and annually
   - Looks comparatively across health facilities reports to highlight strengths and identify challenges

3. **National-level**
   - Occurs annually
   - Looks across facilities at their annual outputs and progress toward long-term goals
   - Allows for observing trends over time
District- or regional-level: Data management

Process
• Identify and sequence key tasks for collecting, tracking, and troubleshooting data
• Determine who is responsible for each task
• Revisit assignments at least twice per year in case adjustments are needed

Tasks
• Maintain a spreadsheet in Excel for tracking reports received from facilities
• Identify follow-up action for missing reports and synchronize follow-up action with tracking spreadsheet
• Check monthly for completeness, credibility, and consistency in each report received
Data analysis: Quarterly indicators

Indicator 1.a

• The number of patients in each facility for whom hypertension treatment was initiated in the last quarter, and
• The cumulative number since the outset of the programme

Indicator 1.b

• The proportion of patients whose blood pressure is controlled 6-9 months after the initiation of treatment

\[
\text{Cumulative number of registered patients with controlled (<140/90) blood pressure 6-9 months after the initiation of treatment} \div \text{Total number of registered patients in the facility}
\]
Indicator 1.c

- The proportion of participating facilities in the district whose 6-9 month control rate falls into each tier: <50%, 50-70%, >70%

Sample chart showing district- or regional-level quarterly control rates

<table>
<thead>
<tr>
<th>Facility</th>
<th>Facility control rate &lt;50%</th>
<th>Facility control rate 50%-70%</th>
<th>Facility control rate &gt;70%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility A</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Facility B</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Facility C</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Facility D</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1/4 (25%)</td>
<td>2/4 (50%)</td>
<td>1/4 (25%)</td>
</tr>
</tbody>
</table>

Total participating facilities in district

1/4 (25%) 2/4 (50%) 1/4 (25%)
Data analysis: Annual indicators

Indicator 2.a
• The proportion of health facilities in a district participating in reporting for the programme

Number of health facilities participating in and reporting to the programme

<table>
<thead>
<tr>
<th>Total number of health facilities in a district</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

Indicator 2.b
• The proportion of facilities in the district whose annual blood pressure control rate falls into each tier: <10%, 10-30%, >30%

<table>
<thead>
<tr>
<th>Facility</th>
<th>Annual control rate &lt;10%</th>
<th>Annual control rate 10%-30%</th>
<th>Annual control rate &gt;30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility A</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Facility B</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Facility C</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Facility D</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Total facilities in district:

| Annual control rate <10% | 1/4 (25%) | Annual control rate 10%-30% | 2/4 (50%) | Annual control rate >30% | 1/4 (25%) |
### Data Analysis: Example for Indicator 2a

Sample chart showing proportion of facilities participating in a district

<table>
<thead>
<tr>
<th>District</th>
<th>Number of facilities participating in programme</th>
<th>Total number of facilities in district</th>
<th>Indicator: proportion of facilities participating in programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>District A</td>
<td>39</td>
<td>56</td>
<td>70%</td>
</tr>
<tr>
<td>District B</td>
<td>25</td>
<td>28</td>
<td>89%</td>
</tr>
<tr>
<td>District C</td>
<td>28</td>
<td>43</td>
<td>65%</td>
</tr>
</tbody>
</table>
Identify patterns and trends

**Step 1: Set a benchmark** for each indicator.
- Choose a threshold that is appropriate and realistic for your programme and for its goals

**Step 2: Analyse your data against the benchmarks**

**Step 3: Identify the top five and bottom five facilities** based on their performance against the benchmarks

**Step 4: Monitor trends** across time

**TIP**
It can be difficult to set realistic benchmarks at the outset of a programme if there is little data preceding the programme to give you clues as to what an appropriate threshold might be. Consider using the first quarter’s data as a means of determining an appropriate benchmark.
Data Comparison: Benchmark Example

Sample chart showing benchmarking and trends

<table>
<thead>
<tr>
<th>Facility</th>
<th>Benchmark</th>
<th>Percentage of patients with controlled BP (2 quarters ago)</th>
<th>Percentage of patients with controlled BP (previous quarter)</th>
<th>Percentage of patients with controlled BP (reporting quarter)</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility A</td>
<td>70</td>
<td>53</td>
<td>60</td>
<td>65</td>
<td>Improving</td>
</tr>
<tr>
<td>Facility B</td>
<td>95</td>
<td>80</td>
<td>82</td>
<td>83</td>
<td>Improving</td>
</tr>
<tr>
<td>Facility C</td>
<td>70</td>
<td>55</td>
<td>60</td>
<td>55</td>
<td>Fluctuating</td>
</tr>
<tr>
<td>Facility D</td>
<td>95</td>
<td>78</td>
<td>75</td>
<td>70</td>
<td>Declining</td>
</tr>
<tr>
<td>Facility E</td>
<td>65</td>
<td>38</td>
<td>45</td>
<td>55</td>
<td>Improving</td>
</tr>
</tbody>
</table>
Data Comparison: Example of Trend

Facility control rate

- Facility A
- Facility B
- Facility C
- Facility D
- Facility E
Interpret and report results

Step 5: Interpret data analyses and plan for implementation adjustments

- For each facility-level indicator meeting or exceeding the benchmark, identify markers of success
- For each facility-level indicator falling short of the benchmark, determine:
  - Whether the shortfall is substantial enough that it signals a problem that needs to be addressed
  - Whether the shortfall is a trend over time, or a one-time occurrence
  - Whether the facility is struggling to meet benchmarks for most or all of its indicators, or just the one
  - Whether you have any other information to help you identify the cause of the facility’s struggles
  - Whether there are corrective courses of action you can recommend

Step 6: Reports and feedback

- Details and guidance provided in sessions 5 and 7
EXERCISE 1

Setting benchmarks

Choose two of the key indicators from slides 7-9.
Select a benchmark for each that is relevant to your programme.

Practice creating a chart for tracking whether facilities meet the benchmark you have set.
EXERCISE 2

Charting a trend over time

Choose one of the key indicators you benchmarked in Exercise 1.

Create a chart allowing you to watch that indicator’s trend over time for five imaginary facilities.