WHAT IS THE BOTTLENECK ANALYSIS APPROACH FOR THE MANAGEMENT OF SEVERE ACUTE MALNUTRITION?

A range of surveys and tools exist to gain an understanding of a nutritional situation, service delivery performance, bottlenecks and coverage (e.g. MICS/DHS/SMART, coverage assessments [e.g. SQUEAC and SLEAC], routine information and surveillance etc.). Yet currently, severe acute malnutrition (SAM) information systems are not usually designed to routinely indicate bottlenecks (obstacles) to effective service delivery coverage in a structured, logical manner. Tools and approaches are required to support structured identification of bottlenecks, determination of causes and solutions and routine monitoring of corrective actions.

With the aim of addressing this gap we are looking to the bottleneck analysis approach to facilitate the monitoring of bottlenecks and support decision-making processes for SAM programmers and supervisors. Within a broader frame of promoting equitable coverage of service delivery\(^1\), this approach builds on health system conceptualisation of service coverage\(^2\) and is a systematic way to look at the main determinants of effective coverage for interventions in order to identify problem areas and purposefully act on them in a timely manner.

At its core it involves:
- identification of bottlenecks to service delivery, root causes and solutions
- activity planning for resolving bottlenecks and tracking corrective actions
- monitoring of bottlenecks to determine whether the actions are effective and to support service providers to adjust action as needed

This approach supports the implementation of more responsive and equitable programmes to achieve better results.

DETERMINANTS OF COVERAGE FRAMEWORK

As per the adapted health system strengthening framework based on the Tanahashi model, there are four domains influencing effective service coverage: the enabling environment, supply, demand and quality. Within each domain there are specific determinants which directly affect coverage and which are analysed and monitored. This framework can be applied to each delivery platform (e.g. health facility, community, campaign etc.).

UNICEF is supporting countries\(^3\), governments and organizations to implement this approach across sectors (including nutrition and SAM management) and will produce country case studies early next year for publication. Ongoing evidence building and refinement of steps 1 and 2 for SAM management is being piloted by ACF-UK, CMN, UNICEF and David Doledec (consultant) - with initial inputs from FANTA - in selected country contexts. The results are due to be published in early 2016. For specific information and updates, contact the names below.

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\(^1\) Alternatively community-based activities can be assessed as a separate delivery platform and you can analyse all the determinants (supply, demand and quality) discretely for that platform.
DEFINE INDICATORS, IDENTIFY INFORMATION SOURCES AND COLLECT DATA
A carefully selected group of stakeholders identify the level of analysis (national, provincial or district), for the supply, demand and quality domains select contextually relevant indicators for each determinant and their data sources and create or use existing data collection tools. Ideally, much of the data should be routine to avoid too much additional data collection (e.g. CMAM database). Once all data are collected, the indicators are calculated for each determinant. Example of indicators per determinant:

<table>
<thead>
<tr>
<th>COMMODITY AVAILABILITY</th>
<th>HUMAN RESOURCES</th>
<th>COMMUNITY MOBILISATION</th>
<th>GEOGRAPHIC ACCESSIBILITY</th>
<th>UTILISATION OF SERVICES</th>
<th>CONTINUITY OF SERVICES</th>
<th>QUALITY OF SERVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of health facilities that did not have stock outs of RUTF</td>
<td>% of health workers providing SAM treatment services</td>
<td>% of Community Health Workers trained and active</td>
<td>% of functional health facilities offering SAM treatment</td>
<td>% of clients admitted in SAM treatment</td>
<td>% of clients who complete SAM treatment</td>
<td>% of clients who are discharged cured</td>
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IDENTIFY BOTTLENECKS
Graphs are created which provide a visual representation of the indicators for each determinant of supply, demand and quality. Generally they should reveal a cascade from supply, to demand and quality (depending on indicators and denominators used) as each determinant is limited by the one before.

Stakeholders undertake an analysis and interpretation of the determinants of coverage, identifying:
• Priority/most critical bottleneck(s) from the supply side (the supply determinant/s with the lowest percentage/s) – HR in this example
• Priority/most critical bottleneck from the demand / quality side by assessing the variation between utilisation, continuity and quality – continuity of services in this example

ANALYSE CAUSES OF BOTTLENECKS
Once the main bottlenecks have been identified, stakeholders investigate why that specific determinant is low; the key is to go beyond the symptoms to identify the root cause (apply the 5 why approach, i.e. an approach entailing asking “why” 5 times to get to the heart of the issue) carefully considering the enabling environment. There may be multiple root causes for one bottleneck.

FIND SOLUTIONS AND CORRECTIVE ACTIONS AT NATIONAL, PROVINCIAL AND DISTRICT LEVELS
Determine solutions to address the causes of the bottlenecks, prioritising solutions. In prioritisation, consider:
• Is the proposed solution feasible? Cost effective? Acceptable to all stakeholders? Equitable? Does it promote resilience?

PLANS, ACTIONS AND MONITORING (WITH FEEDBACK LOOP)
Stakeholders create a work plan to implement the corrective actions and carefully monitor their progress, adjusting actions if they are not effective. This can be integrated into broader nutrition or health plans / strategies or can be a standalone initiative.

1 UNICEF has been implementing this approach globally as part of its organisational equity refocus from 2010; see http://www.unicef.org/evaldatabase/files/2120-UNICEF-MoRES_pubs-Main.pdf
3 Summary found at: http://files.ennonline.net/attachments/2348/SAM-Bottleneck-Monitoring-Toolkit_Summary.pdf