Estimating national coverage for magnesium sulfate in Liberia: results of a novel methodology

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Presentation outline

• Introduction
• Methodology
• Liberia experience and its results
• Challenges, limitations and advantages of the estimation methodology
• Recommendations
• Conclusion
Introduction

- Magnesium sulfate is the drug of choice for the management of severe preeclampsia and eclampsia.
- Coverage for magnesium sulfate is unknown in most low and middle-income countries as it is rarely reported in the national health management information system.
- Under the MCHIP program, Jhpiego and its partners developed a methodology to estimate coverage of specific life saving commodities, including magnesium sulfate, using existing data and experts’ opinions.
- Using that methodology a study was conducted in Liberia to reach a consensus estimate on the national coverage of MgSO4 in women with SPE/E.
Methodology for conducting the exercise of coverage estimation

1. Preparation of the expert panel workshop

2. Conducting the expert panel workshop

3. Follow up after the workshop
Applying the methodology in Liberia

- **Expert panel**: program leaders in the area of MNH service delivery and program management, measurement, and commodities

- **Background documents**
  - National Therapeutic Guidelines, Pharmacy Division, MOHFW/Liberia, 2011
  - Essential Package of Health Services, MOHFW/Liberia, 2011
  - MNH protocols- antenatal, L&D, Postpartum, Newborn
  - Clinical Standards for ANC, PP & NC, EPI, IMNCI, HIV, Malaria
  - HMIS, 2012-13
  - DHS, 2007 and preliminary DHS, 2013
  - Countdown report, 2013
  - Liberian EmONC assessment report, 2011
Applying the methodology in Liberia continued

- 2-day workshop in Monrovia on May 21-22, 2014 attended by: MOHSW reproductive and general health managers from various counties, providers from public, private and faith-based facilities, NGO representatives, midwives, doctors and public health managers.

- Coverage estimation done for uterotonic, chlorhexidine, magnesium sulfate and dexamethasone

- Consensus was reached most of the time through discussion among experts and use of available data from the national HIMS
Equation to calculate the coverage in a given setting

\[
\text{Proportion of cases in a specific setting} \times \text{Provider performance in that setting} \times \text{Adjusting factors in that setting}
\]
Results in Liberia

<table>
<thead>
<tr>
<th>SERVICE DELIVERY LOCATION</th>
<th>PROVIDER PERFORMANCE</th>
<th>ADJUSTING FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>STOCK IN</td>
</tr>
<tr>
<td>Public Hospital</td>
<td>95%</td>
<td>81%</td>
</tr>
<tr>
<td>Public health center</td>
<td>60%</td>
<td>77%</td>
</tr>
<tr>
<td>Public clinic</td>
<td>5%</td>
<td>48%</td>
</tr>
<tr>
<td>Private hospital</td>
<td>95%</td>
<td>97%</td>
</tr>
<tr>
<td>Private health center</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Private clinic</td>
<td>3%</td>
<td>10%</td>
</tr>
<tr>
<td>LOCATION OF SERVICE DELIVERY</td>
<td>PROPORTION OF CASES OF SPE/E</td>
<td>PROVIDER PERFORMANCE</td>
</tr>
<tr>
<td>-----------------------------</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Range Est.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Home/Community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home birth: With SBA</td>
<td>0.0%</td>
<td>N/A</td>
</tr>
<tr>
<td>Home birth: Without SBA</td>
<td>15.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Facility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public hospital</td>
<td>43.4%</td>
<td>95.0%</td>
</tr>
<tr>
<td>Public health center</td>
<td>12.4%</td>
<td>60.0%</td>
</tr>
<tr>
<td>Public clinic</td>
<td>6.2%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Private sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private hospital</td>
<td>16.1%</td>
<td>95.0%</td>
</tr>
<tr>
<td>Private health center</td>
<td>5.7%</td>
<td>80.0%</td>
</tr>
<tr>
<td>Private clinic</td>
<td>1.1%</td>
<td>3.0%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

**Magnesium sulfate coverage in Liberia**
Challenges, limitations and advantages of the process

- Having an agreement among experts on the panel was the biggest challenge
- The process has limitations such as the quality of data from the national HIMS and the values of the adjustment factors (quality of the drug, stock out)
- Some advantages: consensus driven, transparent, local ownership, acts as a wake up call leading to advocacy and action.
Recommendations and Actions

- Conduct a quality of care survey to understand the provision of MNH care practices, in both the public and private sector.
- Modify/strengthen the monitoring and evaluation tools/methods and HMIS system, capturing both community and facility-level data, to improve availability of relevant data for all four of these key interventions, and the ability to better manage programs based on these data.
- Develop improved supportive supervision approaches, especially from the District Health Team, to improve clinical performance.
- Consider repeat of this exercise in 2 – 3 years to track the progress in achieving greater coverage for these key MNH interventions.
Conclusion

- Despite its limitations the MNH interventions coverage estimation is feasible and reproducible.
- It gives policy makers results that can be used as reference point for strengthening programs in terms of coverage, data quality, collection and use.
- In Liberia national coverage for magnesium sulfate is low at 43%.
- Follow up and implementation of the recommendations should improve coverage.
Acknowledgements

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