

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, MOHSW/ Liberia, 2011**
 - **Essential Package of Health Services, MOHSW/Liberia, 2011**
 - **MNH protocols- antenatal, L&D, Postpartum, Newborn**
 - **Clinical Standards for ANC, PP & NC, EPI, IMNCI, HIV, Malaria**
 - **HMIS, 2012-13**
 - **Annual Review Report, National Health and Social Welfare Plan Implementation, 2011-12**
 - **DHS, 207 and preliminary DHS, 2013**
 - **Countdown report , 2013**
 - **Liberian EmONC assessment report, 2011**

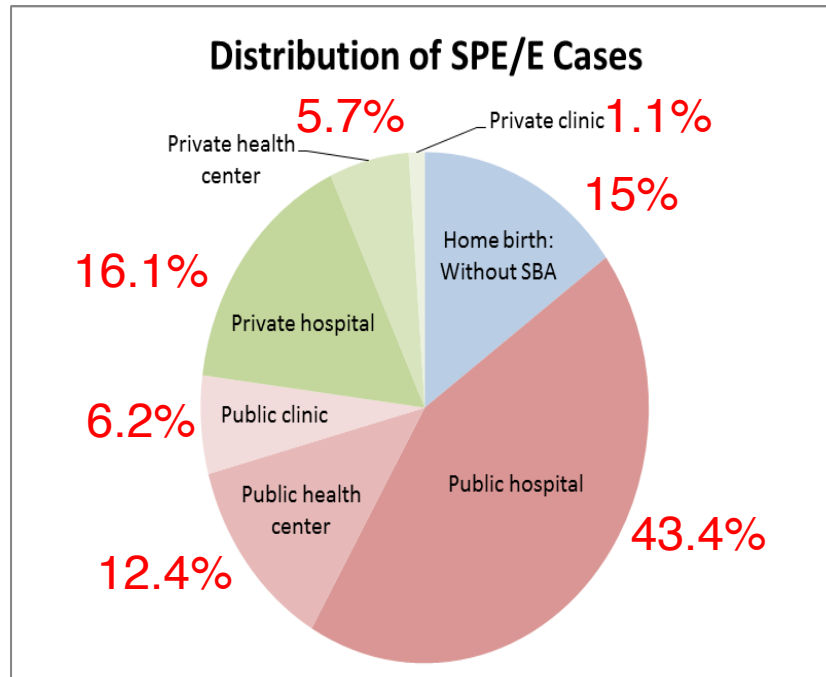
Applying the methodology in Liberia *continued*

- 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 uterotonics, 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

$$\left[\begin{array}{c} \text{Proportion of} \\ \text{cases in a} \\ \text{specific setting} \end{array} \right] \times \left[\begin{array}{c} \text{Provider} \\ \text{performance in} \\ \text{that setting} \end{array} \right] \times \left[\begin{array}{c} \text{Adjusting} \\ \text{factors in} \\ \text{that setting} \end{array} \right]$$

Results in Liberia



SERVICE DELIVERY LOCATION	PROVIDER PERFORMANCE	ADJUSTING FACTORS	
		STOCK IN	PROPER DIAGNOSIS
Public Hospital	95%	81%	80%
Public health center	60%	77%	60%
Public clinic	5%	48%	10%
Private hospital	95%	97%	80%
Private health center	80%	80%	20%
Private clinic	3%	10%	10%

Magnesium sulfate coverage in Liberia

LOCATION OF SERVICE DELIVERY	PROPORTION OF CASES OF SPE/E	PROVIDER PERFORMANCE			ADJUSTING FACTORS		CONTRIBUTION TO NATIONAL COVERAGE		
		Estimate	Range		Stock-In Rate	Proper Diagnosis	Estimate	Range	
			Low	High				Low	High
Home/Community									
Home birth: With SBA	0.0%	N/A	[N/A , N/A]	N/A	N/A	0.0%	[0.0% , 0.0%]		
Home birth: Without SBA	15.0%	0.0%	[0.0% , 0.0%]	N/A	N/A	0.0%	[0.0% , 0.0%]		
Facility	85.0%								
Public sector	62.0%								
Public hospital	43.4%	95.0%	[95.0% , 95.0%]	81.0%	80.0%	26.7%	[26.7% , 26.7%]		
Public health center	12.4%	60.0%	[60.0% , 60.0%]	77.0%	60.0%	3.4%	[3.4% , 3.4%]		
Public clinic	6.2%	5.0%	[5.0% , 5.0%]	48.0%	10.0%	0.0%	[0.0% , 0.0%]		
Private sector	23.0%								
Private hospital	16.1%	95.0%	[95.0% , 95.0%]	97.0%	80.0%	11.9%	[11.9% , 11.9%]		
Private health center	5.7%	80.0%	[80.0% , 80.0%]	80.0%	20.0%	0.7%	[0.7% , 0.7%]		
Private clinic	1.1%	3.0%	[3.0% , 3.0%]	10.0%	10.0%	0.0%	[0.0% , 0.0%]		
TOTAL	100.0%					43%	[43% , 43%]		

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 than 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

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