Cost-Effectiveness of RSV Preventive Interventions in Mali

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Disclosures

The authors have nothing to disclose.

Introduction

- Respiratory syncytial virus (RSV) is the leading cause of acute lower-respiratory tract infections in infants.
- Developing countries have the most RSV associated infant morbidity and mortality. **(Shi et al. 2017)**
- The current monoclonal antibody, Palivizumab, is cost-prohibitive for low-resource settings.
- New products for RSV prevention are in development. **(Web Page 2019)**

Objective

Evaluate the cost-effectiveness of current and novel RSV preventive interventions in Mali to inform policy recommendations for low-resource countries

Methods

Our model considers four scenarios:

1. No intervention
2. Monthly dose of Palivizumab (mAb)
3. Single dose of long-lasting MEDI8897 (llAb)
4. Infant mothers receive ResVax (mVax)

- We simulated the epidemiological impact of each scenario using a monthly cohort model
- We estimated associated health and economic costs
- We evaluated cost-effectiveness using WHO standards

New Long-Lasting **Monoclonal Antibody** May Be **Cost-Effective** Investment to Protect Infants from **RSV** in Low-Resource Countries

Results

Our analysis indicates that the long-lasting monoclonal antibody would have the largest health impact in terms of DALYs averted, Figure 1.

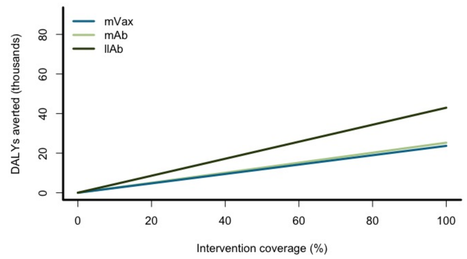

Figure 1: Disability-adjusted life years (DALYs) averted as coverage increases for each intervention.

The mAb, llAb, and mVax would be considered **very cost-effective** at up to $15, $65, and $27 per dose respectively, Figure 2.

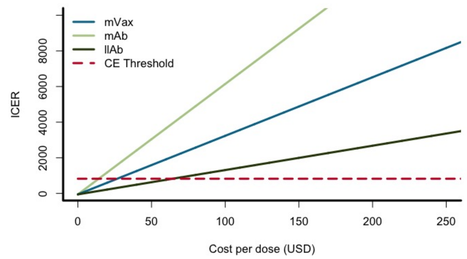

*Figure 2: Incremental cost-effectiveness ratio (ICER) as cost per dose increases for each intervention. The red dashed line indicates the **very cost-effective** threshold, equal to the per capita GDP of Mali.*

If llAb were priced at less than ~$40 per dose upon market licensure then it might provide greater value for money than mVax, Figure 3.

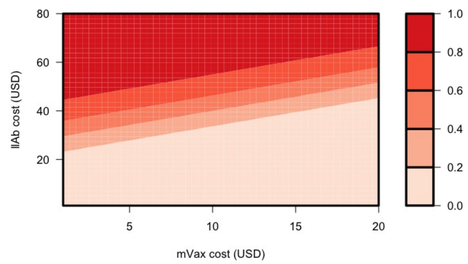

Figure 3: Probability mVax has greater net health benefits than llAb at a given cost per dose for each intervention

References

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