

Cost Analysis of Maternity Waiting Homes in Rural Liberia



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BACKGROUND & SIGNIFICANCE

- Maternal morbidity and mortality remains a great concern in low resource settings.
- Liberia has a maternal mortality ratio of 1,072/100,000 live births, ranking them 8th in the world for maternal mortality.
- Maternity waiting homes (MWHs) are residential dwellings located near health facilities where women stay to await delivery and receive immediate postpartum services.
- MWHs are used in a variety of settings as a 'geographic bridge' to overcome distance and transportation barriers that can prevent women from receiving timely skilled obstetric care.
- Although MWHs have demonstrated their value by reducing maternal mortality rates, there is little information about their cost-effectiveness.

PURPOSE

Analyse the cost-effectiveness of MWHs in rural Liberia.

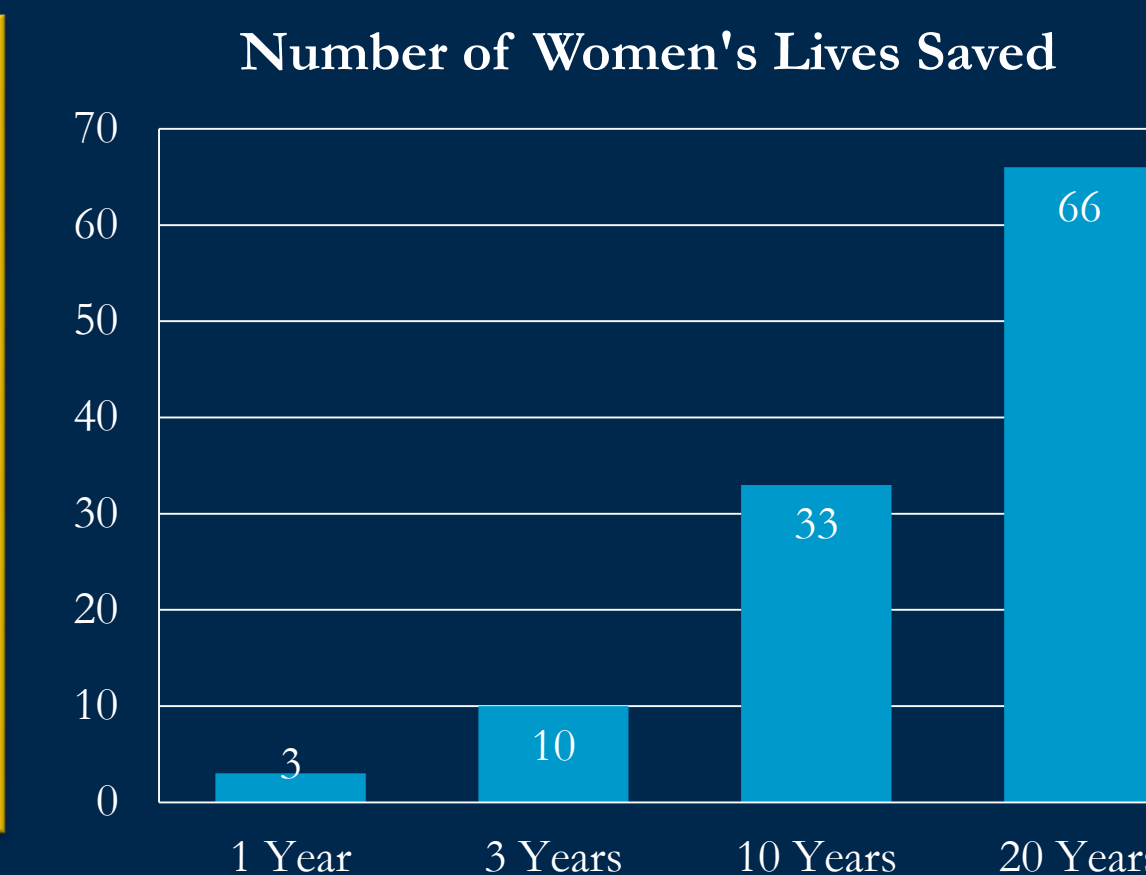
RESEARCH QUESTIONS

"What is the cost-effectiveness of MWHs as an intervention to reduce maternal mortality?"



METHODS

- A cost-effective analysis was performed to examine the cost per life saved and economic effect of MWHs on maternal mortality.
- Aggregate cost-effectiveness calculations were computed.
- Total women saved calculated as number of maternal deaths non-MWH minus number of maternal deaths MWH.
- Total cost per maternal life saved (C_{LS}) = $\frac{\text{total } C}{\text{total } LS}$ per identified time period (3 years).
- District wide cost of MWH = $\frac{\text{total cost MWH}}{\text{total district catchment population}} \times 100,000$.

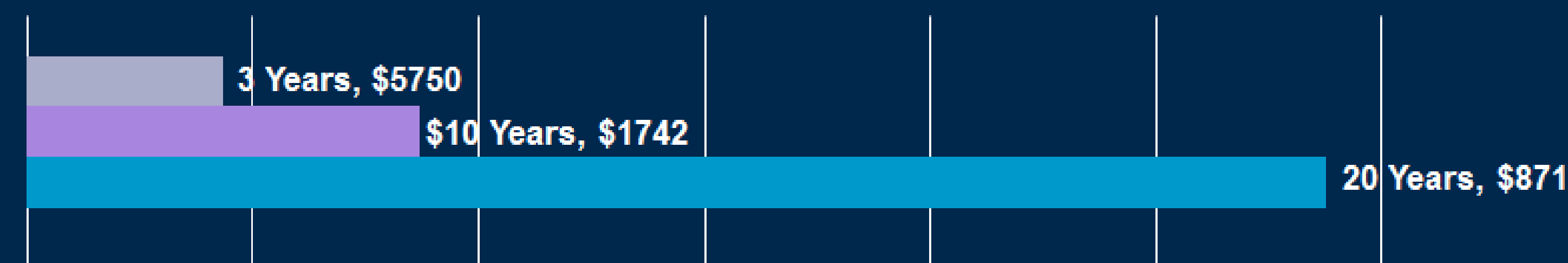


RESULTS SUMMARY

- Results indicate a low cost per maternal life saved at MWHs in a rural district in Liberia.
- Total number of women's lives saved over 3 years is 10.
- \$73,309 represents total costs of building MWHs in the entire district for a population of 100,000.

Cost-Effectiveness Analysis

Total Cost per Life Saved



CONCLUSION

- Maternity waiting homes are a highly cost-effective and affordable strategy to reduce maternal mortality in Liberia.
- MWHs should be thought of as a geographic bridge to maternal healthcare.



RECOMMENDATIONS

- Discussion of the scaling up of MWH interventions for improving maternal outcomes in Liberia and other low resource settings is warranted.
- Findings can be used to advocate for policy changes at the national level to increase the allocation of resources for building additional MWHs in low resource settings.

REFERENCES

- Demographic and Health Surveys (DHS) Program (2016). *Liberia demographic and health survey 2013*. Retrieved from: <http://dhsprogram.com/what-we-do/survey/survey-display-435.cfm>
- Lori, J.R. et al., (2013). Maternity waiting homes and traditional midwives in rural Liberia. *International Journal of Gynecology & Obstetrics*, 123(2), 114-118.

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