

Cost-effectiveness of condom uterine balloon tamponade to control severe postpartum hemorrhage in Kenya

Abstract

Objective

To evaluate the cost-effectiveness of condom uterine balloon tamponade (UBT) for control of severe postpartum hemorrhage (PPH) due to uterine atony versus standard PPH care in Kenya.

Methods

A cross-sectional analysis was conducted using cost data collected from 30 facilities in Western Kenya from April 15 to July 16, 2015. Effectiveness data were derived from the published literature. The modeling analysis was performed from the health-system perspective for a cohort of women who gave birth in 2015. Sensitivity analyses tested the robustness of model estimates. Costs were in 2015 US dollars.

Results

Compared with standard care with no uterine packing, condom UBT could prevent 1255 hospital transfers, 430 hysterectomies, and 44 maternal deaths. At \$5 or \$15 per UBT device, the incremental cost per disability-adjusted life year (DALY) averted was \$26 or \$40, respectively. If uterine packing was assumed to be done with standard care, the cost per DALY averted was \$164 when the UBT price was \$5 and \$199 when the price was \$15.

Conclusion

Condom UBT was a highly cost-effective intervention for controlling severe PPH. This finding remained robust even when key model inputs were varied by wide margins.

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