

OUTCOMES OF A SAFE SURGERY INTERVENTION ON CESAREAN SECTION COMPLICATIONS: A QUASI-EXPERIMENTAL STUDY



Lauren Kelly, Program in Global Surgery and Social Change, Harvard Medical School

Dr. Augustino Hellar, Jhpiego

SAFE SURGERY 2020 PARTNERS

Dalberg



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AND SOCIAL CHANGE

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PRESENTATION OUTLINE

- Background
- Safe Surgery 2020 Tanzania
- Methods
- Results
- Conclusion
- Acknowledgements

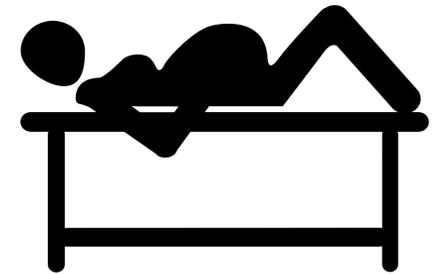
OVERVIEW OF THE PROBLEM



Maternal **mortality rates** after C-sections are **50 times higher** in Africa compared to high-income countries¹



1 in 6 women in Africa develop a **Surgical Site infection** after a C-section²

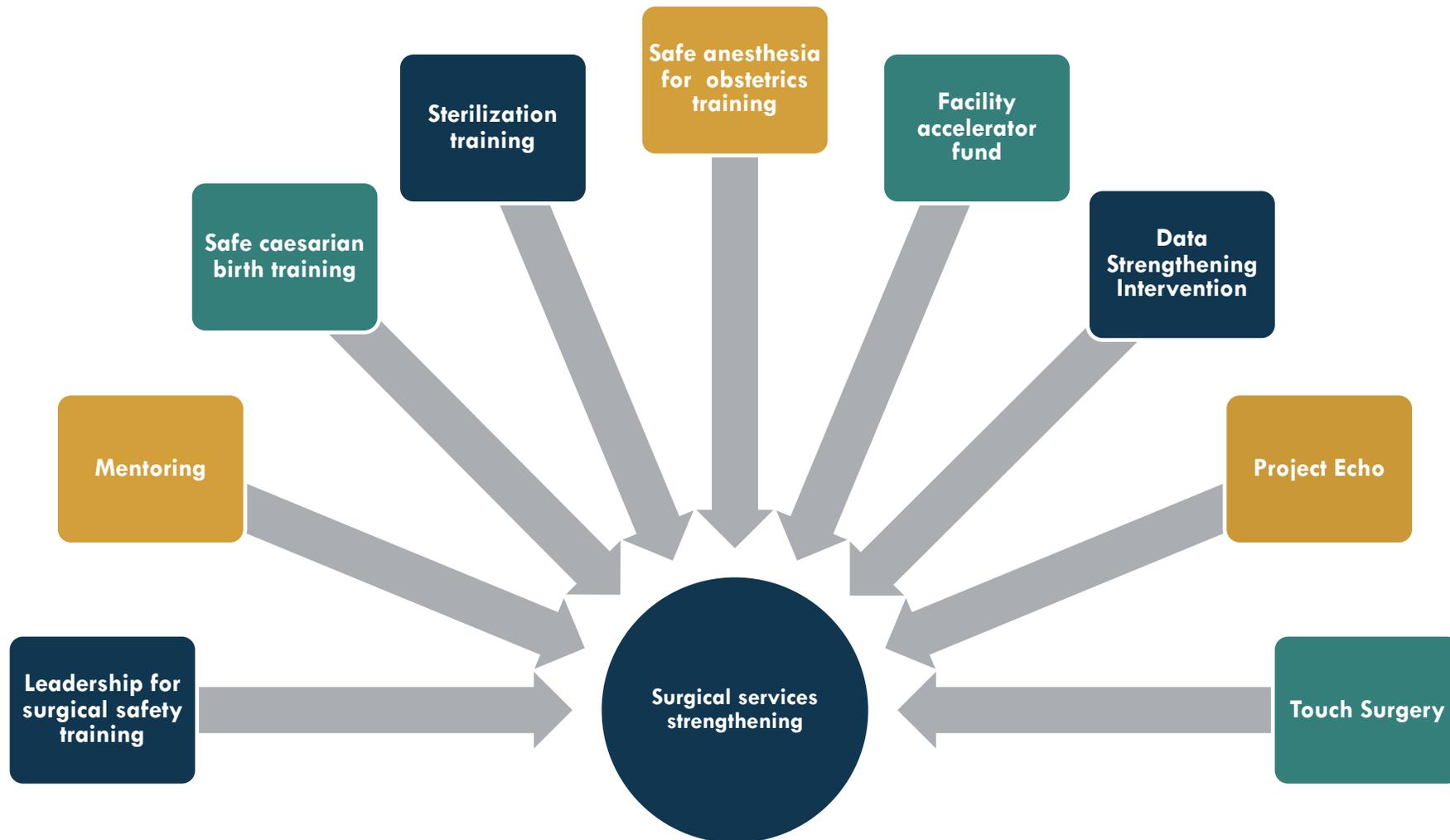


1 in 10 African women **die** as a result of maternal sepsis following C-sections³

RATIONALE

- Safe Surgery 2020 approach:
 - Partnership with governments and facilities
 - Focus on local surgical priorities
 - Suite of interventions: staff, space, stuff, systems
 - Build local capacity and empower surgical teams
 - Evaluation to promote learning about how best to strengthen surgical services in LMICs
- Research Aim:
 - To assess the impact of Safe Surgery 2020 interventions on Cesarean section complications

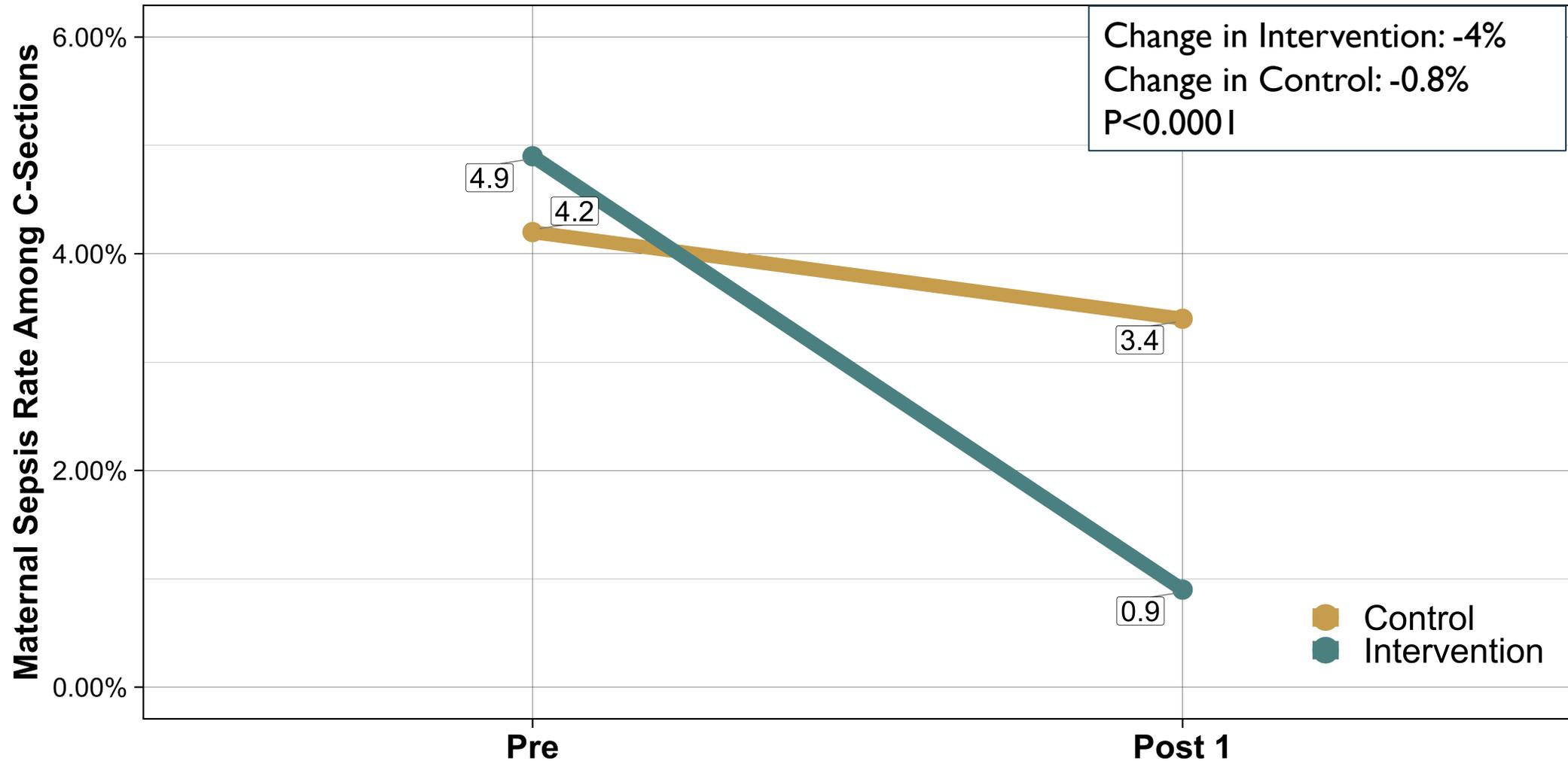
SAFE SURGERY 2020 INTERVENTIONS



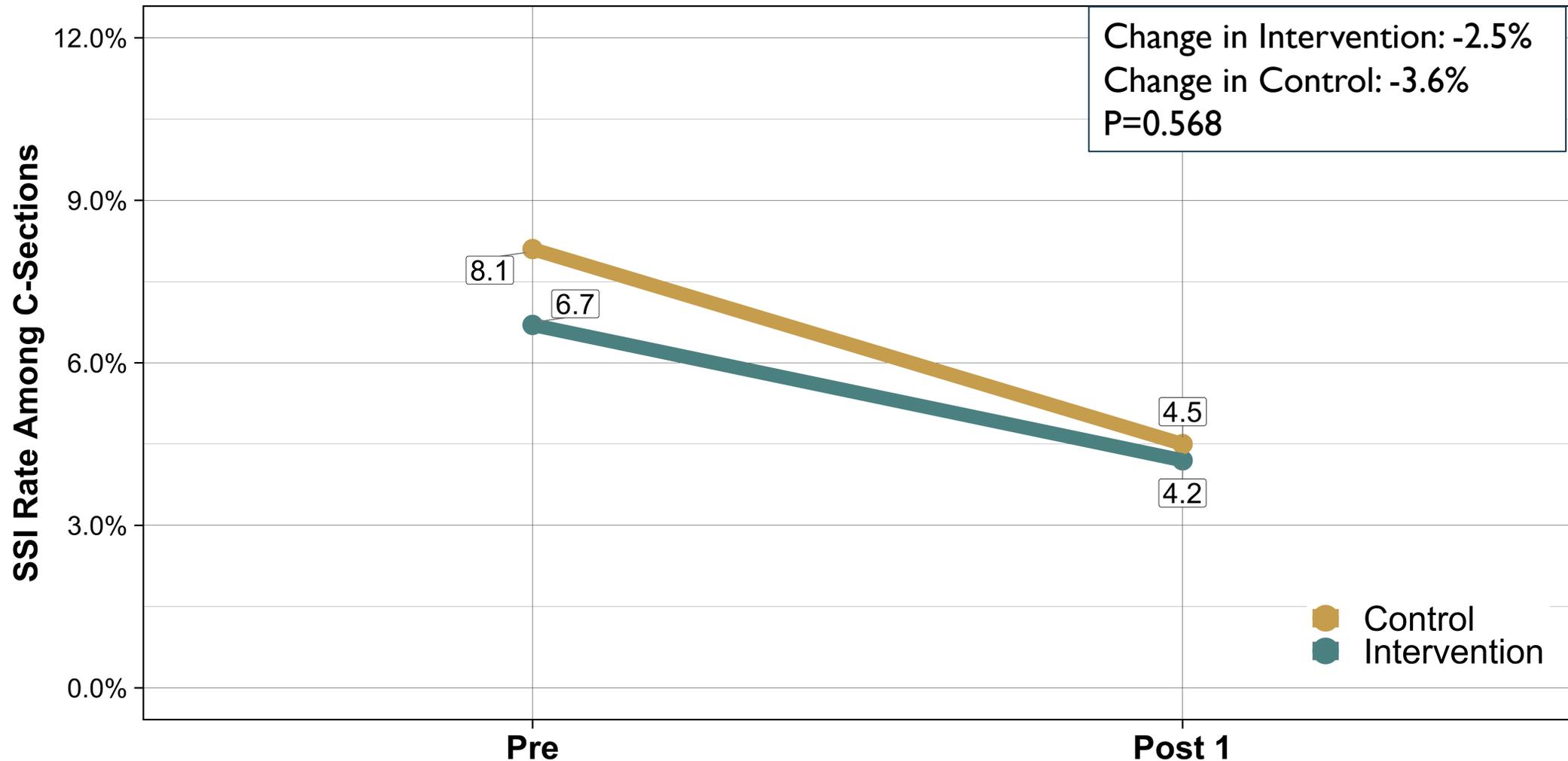
SAFE SURGERY 2020 METHODS

- **Study Design:** Longitudinal quasi-experimental study in 10 intervention and 10 control facilities
- **Setting:** Lake Zone of Tanzania
- **Methods:** Data was collected prospectively for 3 months pre-intervention (2018) and 3 months post-intervention (2019) through daily surveillance by trained medical data collectors. A total of 2,243 patients pre-intervention, and 2,345 patients post-intervention undergoing C-sections were enrolled in the study.
- **Outcomes:** Rates of maternal sepsis, SSIs and maternal mortality in C-section patients
- **Analysis:** Difference-in-difference analysis used to evaluate changes in rates between intervention and control hospitals

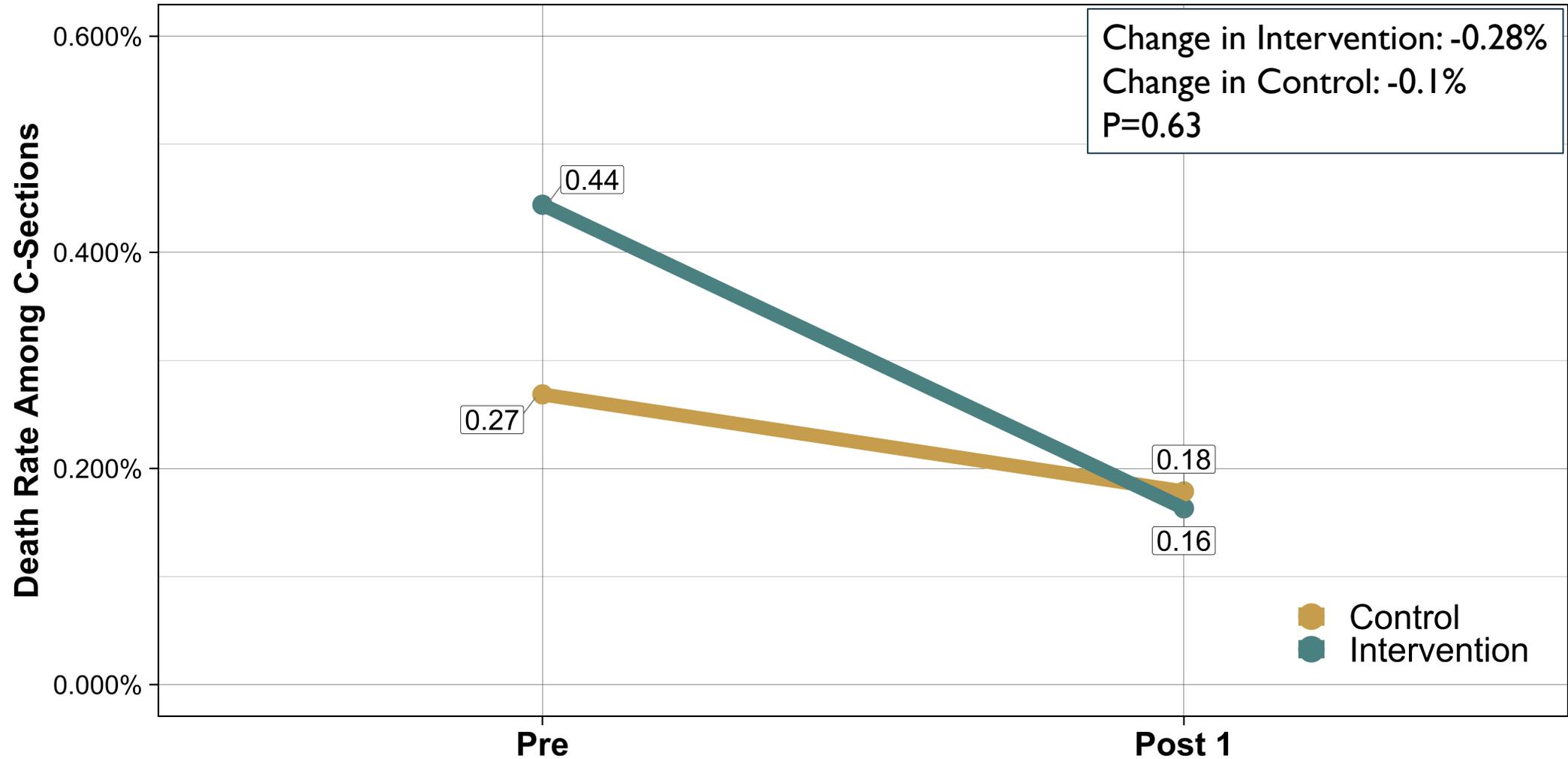
RESULTS – MATERNAL SEPSIS



RESULTS – SURGICAL SITE INFECTION



RESULTS – DEATH RATE



CONCLUSION

- Safe Surgery 2020 Tanzania implementation was associated with improvements in surgical outcomes
- Among all women who had a C-section performed in an intervention facility, maternal sepsis rates decreased by 4% as a result of Safe Surgery 2020 interventions
- The intervention has potential to improve surgical quality and safety of C-sections for mothers in Tanzania

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AUTHORS

- Lauren Kelly*, Shehnaz Alidina, David Barash, Augustino Hellar, Erastus Maina, John G. Meara, Rahma Mushi, Dinnah Nyirenda, Cheri Reynolds, Steven Staffa, Taylor Wurdeman, Ntuli Kapologwe**, Sarah Maongezi**
 - *First Author
 - **Joint senior authors

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¹Bishop, D., Dyer, R.A., Maswime, S., Rodseth, R. N., van Dyk, D., Kluyts, H. L., ... Zubia, N. Z. (2019). Maternal and neonatal outcomes after caesarean delivery in the African Surgical Outcomes Study: a 7-day prospective observational cohort study. *The Lancet Global Health*, 7(4), e513–e522. [https://doi.org/10.1016/S2214-109X\(19\)30036-](https://doi.org/10.1016/S2214-109X(19)30036-1)

[1](#)

²Sway, A., Nthumba, P., Solomkin, J., Tarchini, G., Gibbs, R., Ren, Y., & Wanyoro, A. (2019). Burden of surgical site infection following cesarean section in sub-Saharan Africa: a narrative review. *International Journal of Women's Health*, Volume 11, 309–318. <https://doi.org/10.2147/ijwh.s182362>

³Say, L., Chou, D., Gemmill, A., Tunçalp, Ö., Moller, A. B., Daniels, J., ... Alkema, L. (2014). Global causes of maternal death: A WHO systematic analysis. *The Lancet Global Health*, 2(6), 323–333. [https://doi.org/10.1016/S2214-109X\(14\)70227-X](https://doi.org/10.1016/S2214-109X(14)70227-X)