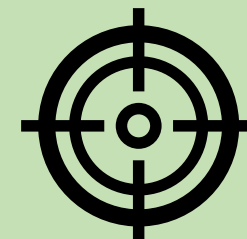


Introduction

- ❖ Postpartum hemorrhage (PPH) remains the leading cause of maternal mortality in India and globally.
- ❖ Oxytocin is the cornerstone of Active Management of the Third Stage of Labour (AMTSL), which is critical in preventing excessive bleeding after childbirth.
- ❖ Despite its efficacy, oxytocin has limitations due to its lack of heat stability.
- ❖ Heat instability poses a significant challenge in countries like India, where peripheral hospitals often face unreliable electricity supply.
- ❖ Addressing these limitations, heat-stable carbetocin emerges as a promising alternative with potential to improve maternal outcomes and ensure effective AMTSL in resource-limited settings.

Objectives:



- I. To compare the safety and efficacy of heat-stable carbetocin versus oxytocin in the prevention of postpartum hemorrhage (PPH).
- II. To assess the need for additional uterotonics and blood transfusions in both groups.
- III. To observe and document any adverse effects associated with the use of oxytocin and carbetocin.

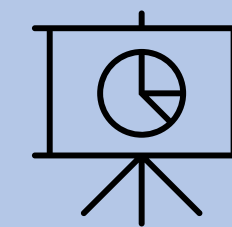
Methodology:

- ✓ Study Design: Retrospective observational study over 1 Year at People's Medical College, Bhopal.
- ✓ Sample Size: 115 participants in the oxytocin group and 137 participants in the carbetocin group.
- ✓ Study Protocol: Patients delivering in the hospital were treated with:
- ✓ Oxytocin Administration: 10 IU IV in 500 ml RL + 10 IU IM.
- ✓ Carbetocin Administration: Single dose of 100 mcg IM.

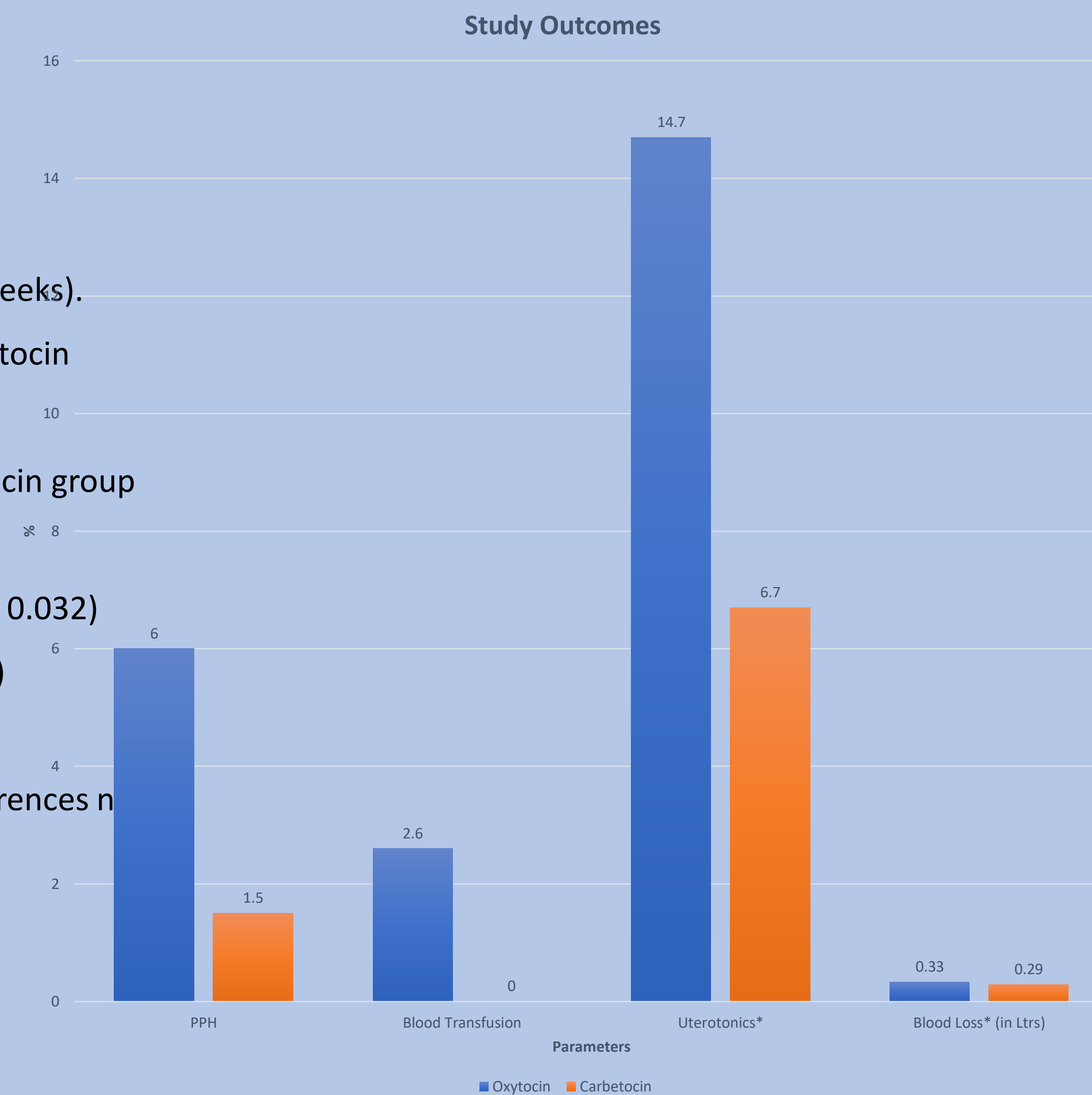
Data Collection Parameters:

- ✓ Amount of blood loss (measured using pictorial blood assessment).
- ✓ Need for additional uterotonics.
- ✓ Requirement for blood transfusion.
- ✓ Adverse effects: headache, nausea, vomiting, sweating, palpitation, and fever.

Results



- ❑ **Age:** Participants in both groups had a mean age of 27 years (range: 22–36 years).
- ❑ **Parity:** Primiparous women: 52% in the oxytocin group and 50% in the carbetocin group.
- ❑ **Gestational Age:** Median Gestational Age was 38 weeks in both groups, (range of 36–41 weeks).
- ❑ **Incidence of PPH:** 7 patients (6%) in the oxytocin group and 2 patients (1.5%) in the carbetocin group experienced PPH (P-value = 0.084).
- ❑ **Blood Transfusions:** 3 patients (2.6%) in the oxytocin group and No patients in the carbetocin group required blood transfusions (P-value = 0.094).
- ❑ **Average Blood Loss:** Oxytocin group: 332.5 ml. versus Carbetocin group: 298 ml (P-value = 0.032)
- ❑ **Additional Uterotonics:** 17 patients (14.7%) in the oxytocin group versus 9 patients (6.7%) in the carbetocin group **needed** additional uterotonics (P-value = 0.038).
- ❑ **Adverse Effects:** Minimal adverse effects reported in both groups, with no significant differences n



Discussion



- ❖ These results indicate that carbetocin is more effective than oxytocin in reducing postpartum hemorrhage and the need for associated interventions. Its adoption in clinical practice could enhance maternal care and outcomes.
- ❖ **Clinical Relevance in Resource-Limited Settings:** The heat stability of carbetocin makes it a practical alternative to oxytocin, particularly in peripheral hospitals with unreliable electricity supply.
- ❖ Its long-acting profile simplifies administration, reducing the need for continuous monitoring and additional doses.
- ❖ **Public Health Implications:** The adoption of carbetocin in AMTSL can improve maternal outcomes, reduce healthcare costs associated with PPH management, and enhance the efficiency of healthcare systems in resource-limited settings.

Limitations:

- ✓ The retrospective observational design may introduce bias, limiting the generalizability of results.
- ✓ Blood loss measurement via visual estimation may have inherent inaccuracies compared to objective metho