

Enhancing Efficiency in Induction of Labour: A Retrospective Cohort Study on Reducing Delays in Commencing Induction of Labour

Aim

This project aims to assess if women admitted to hospital during a period of rostered midwifery double staffing will reduce the number of hours they are waiting to commence their induction. At our hospital, this will be a simple intervention of bringing forward the scheduled admission time from 4pm to 2pm.

Introduction

An induction of labour is a common obstetric intervention that stimulates the onset of labour using artificial methods such as mechanically opening the cervix with a balloon catheter, hormonally stimulating contractions to open the cervix and using a specialised hook to rupture the membrane sac surrounding the baby(1). In one study, women described maternity care to be negatively impacted by staffing shortages(2). The impacts included delays in provision of care, which sometimes led to unsafe situations(2). According to a number of studies in Australia and the United Kingdom more than half of elective inductions of labour are delayed (2,3,4). The majority of delays are found to be associated with the total number of women in labour and the number of elective inductions, but not by emergency inductions, women in spontaneous labour or short staffing(3). In spite of this finding, additional staffing has been shown to reduce delays by up to 17.9%(3). In another study, the timing of admission has been shown to influence the duration of time between admission and birth(3,4).

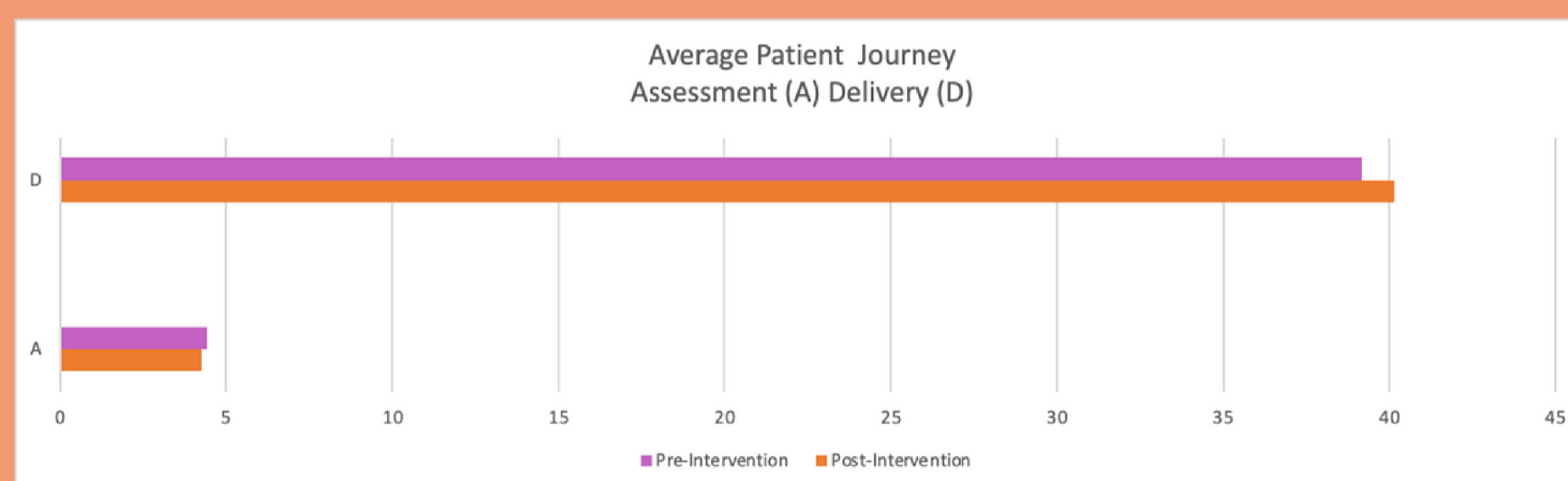
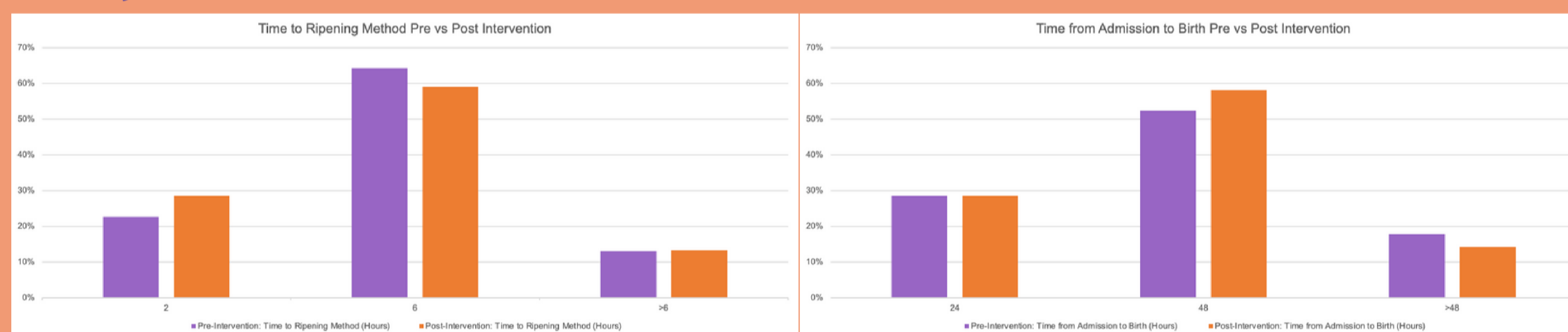
Methodology

Participants were recruited through our Obstetrix database, filtering for patients who were booked for pregnancy care at the Royal Hobart Hospital (RHH) and underwent an elective induction of labour between the 20th of March and the 19th of September 2022. The date of intervention (bringing forward the admission time) was the 20th of June 2022. 865 patient files were reviewed, and after applying our exclusion criteria*, 191 were included in this study in two arms: 86 pre-intervention and 105 post-intervention.

Existing data that was recorded for routine care was collected, including data related to the inclusion/exclusion criteria to ensure eligibility, admission date and time, time of the first assessment of the participant's cervix and type of treatment, type of health care provider (doctor or midwife) and time, date and mode of birth. Within each arm, participants were grouped by time intervals for each determined stage: from admission to first cervical assessment or treatment (within 2 hours, 2-6 hours or greater than 6 hours) and from admission to birth (within 24 hours, 24-48 hours and greater than 48 hours). Once grouped each arm was compared for how many participants fell into each interval.

*Exclusion criteria: favourable or malpresentation on admission, poor/incomplete documentation, certain indications for induction of labour (bleeding, pre-labour rupture of membranes, infection or fetal death in utero) and multiple pregnancy.

Analysis



Results

There appears to be a small improvement in the time from admission to first assessment and ripening, with more being seen within 2 hours and fewer greater than 6 hours. The average patient journey remains relatively unchanged.

Limitations of Study:

- Only 3 months pre and post intervention were analysed
- Significant number of exclusions due to poor or incomplete data entry

Conclusion

This study suggests that by increasing midwifery staffing, inductions of labour can be commenced closer to a patient's admission time. The size of the study and number of excluded participants has potentially reduced the magnitude of difference seen and warrants expansion of the cohorts to better evaluate the intervention.