

Optimising Induction of Labour to Reduce Out of Hours Deliveries at Townsville University Hospital

Authors: Dr Patrice Brennan, Dr Amanda Wee, Dr Kavitha Vangili

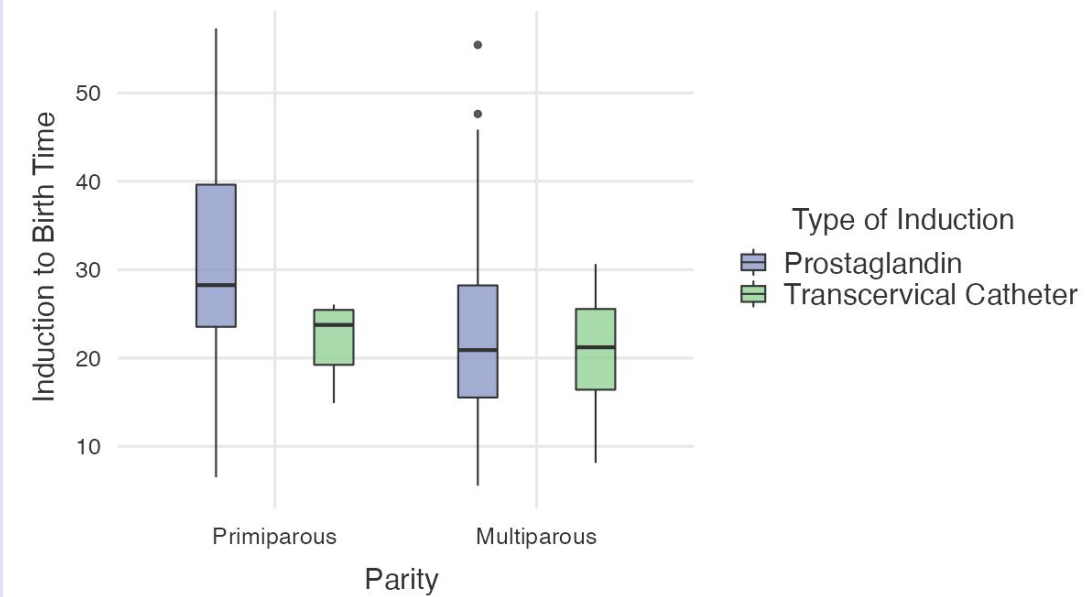
Affiliations: Townsville University Hospital

INTRODUCTION: Induction of labour is increasingly common in Australia. When planning inductions, it is ideal to have daytime deliveries which have better maternal and neonatal outcomes than deliveries occurring out of hours. This audit aimed to guide timing of inductions of labour at Townsville University Hospital (TUH) to strive for more daytime deliveries.

METHODS: This retrospective audit studied 266 women who underwent induction of labour at Townsville University Hospital between June 2020 and December 2020.

RESULTS: The audit found that 53% of women who had an induction of labour, delivered out of hours (between 6pm and 8am). Induction with a cervical ripening balloons (CRB) was found to be significantly more effective than prostaglandin (Cervidil) at inducing labour. Whereby 31 of 33 CRB inductions were successful and only 104 of 133 prostaglandin inductions were successful in inducing labour (X^2 4.32, $p < 0.05$). In primiparous women, induction with prostaglandin took an average of 31.3 hours (SD 13.37) and induction with a cervical ripening balloons took an average of 22.2 hours (SD 4.04). In multiparous women, induction with prostaglandin took an average of 22.7 hours (SD 10.46) whilst cervical ripening balloons took 20.5 hours (SD 6.21). The Bishop score at the time of ARM did not accurately predict length of induction. Furthermore, various methods of induction did not have a statistically significant difference in method of delivery or maternal and neonatal complications.

Figure 1: Time from Induction to Birth



CONCLUSION:

Cervical ripening balloons are more effective in inducing labour than prostaglandins and have a shorter time from induction to birth which may be helpful in planning daytime deliveries. In order to aim for daytime delivery it is recommended to commence prostaglandin inductions at 8am in primiparous women and 5pm in multiparous women. It is recommended to commence cervical ripening balloons at 4pm in both primiparous and multiparous women.

Table 1: Comparison of Prostaglandin vs. Transcervical Catheter Induction for time to Birth

	Type of Induction	Parity	N	Missing	Mean	Median	SD	Minimum	Maximum
Induction to Birth Time	Prostaglandin	Primiparous	33	0	31.3	28.3	13.37	6.52	57.3
		Multiparous	71	0	22.7	20.9	10.46	5.55	55.4
	Transcervical Catheter	Primiparous	10	0	22.2	23.8	4.04	14.90	26.1
		Multiparous	21	0	20.5	21.2	6.21	8.13	30.6



RANZCOG™
Excellence in Women's Health

Townsville Hospital and Health Service