

INTRODUCTION

Reduced fetal movements (RFM) is the most common reason for emergency presentation to obstetric units during the 2nd and 3rd trimesters of pregnancy (local data). Increasing emphasis on their importance through multiple government and organisational initiatives (1) aims to increase patient awareness of RFM in order to reduce the stillbirth rate. In response, this places an increased burden on health services to manage these patients in a timely and safe manner.

The aim of this study is to assess whether implementation of a care pathway decreases patient length of stay and associated treatment costs.

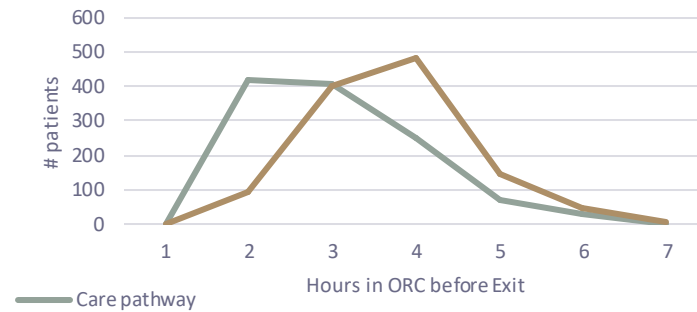
METHODS

The care pathway involved the creation of a business hours midwifery navigator for patients who presented with RFM. Patients were grouped into pre (usual care) and post (care pathway) implementation groups. Care was as per Queensland maternity guideline recommendations (2), with the standard flow pathway shown to the right. Details around admission time, management decisions and clinical outcomes were collected from hospital databases. A total of 300 patients data was utilised to create the model.

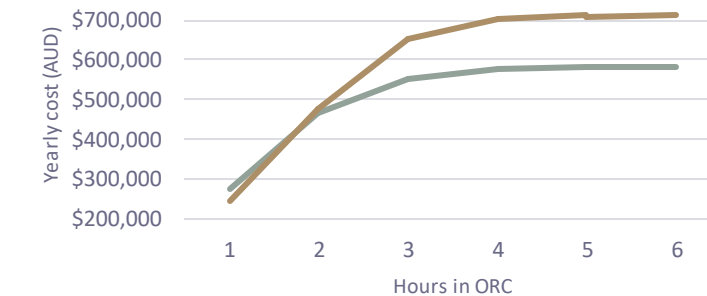
For economic analysis, a model was created using the following:

- Transition probabilities (time dependent): calculated from the patient movement data for each arm.
- Costing data: hourly ORC costs (3) were extrapolated from other studies, staffing cost obtained from QLD health pay scales, consumables and space from government sites
- Patient numbers: 1172/year – Estimated cases of RFM that present during business hours Monday-Friday. Currently 28% of patients through RBWH.

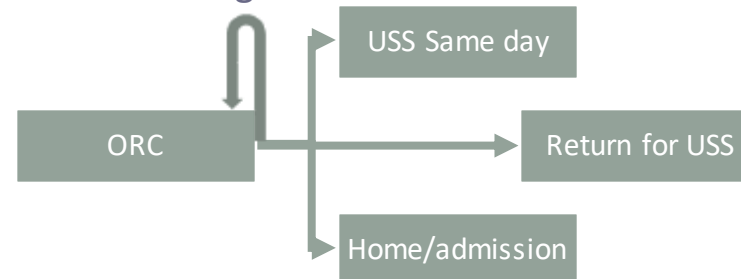
Time spent in ORC before exit



Cumulative cost



Patient flow through ORC



RESULTS

- Patients spent 35% less time in ORC in the care pathway group (1.9 hrs vs 3.0 hrs, 95%CI 1.63 to 2.23hrs, P<0.001)
- In our model, this results in 1257 hours less patient admission time per year
- Total cost benefit for the care pathway group was estimated to be \$132 126 per year (\$582 139/year vs \$714 265/year), or \$112 per patient (\$496 vs \$609)
- Demographic, maternal and fetal outcome data for patients was not statistically significant between the two groups. There were no stillbirths in either group

CONCLUSION

- A care pathway for RFM significantly decrease the amount of time patients are admitted to busy acute obstetric centres
- It is expected that this would further result in decreased, wait-times for patients presenting with other conditions, however more research is required to confirm this
- This decreased time, through the use of a clinical pathway midwife, results in overall cost savings to the department
- Although not assessed in this model, economic benefit would also be seen from a patient and family perspective, as well as an improved standardisation of care through a single provider.
- Care pathways are an effective tool to improve patient flow through a department. Expansion to other common presentations should be studied for cost effectiveness and safety.

REFERENCES

1. Safer BabyBundle. Stillbirth CRE. Brisbane, Mater Hospital. 2020.
2. Queensland Clinical Guidelines. Fetal Movements. Brisbane: Queensland Clinical Excellence; 2018
3. Independent Hospital Pricing Authority: National hospital cost data collection Australian public hospitals Cost Report 2011 – 2012, Round 16. Canberra. 2012.

