

Collaborative Referral Pathway Improves Hepatitis B Care in Pregnancy

Chand S¹, Roder C², Hunning E³, Dabkowski P¹, Athan E², Wade A²

¹Department of Gastroenterology, University Hospital Geelong, Barwon Health, Victoria

²Department of Infectious Diseases, University Hospital Geelong, Barwon Health, Victoria

³Department of Obstetrics and Gynaecology, University Hospital Geelong, Barwon Health, Victoria



BACKGROUND

- Hepatitis B affects 0.9% of the Australian population.¹
- Preventing mother to child transmission (MTCT) is crucial.
- A previous study of health services across Victoria demonstrated the management of hepatitis B in pregnant women was suboptimal.²
- In 2013, a five year retrospective audit identified a health service gap at Barwon Health for pregnant women with hepatitis B, and developed a new referral pathway to improve care.³
- Five years on, we evaluated the efficacy of this referral pathway by undertaking a retrospective cohort study.

AIM

- To compare adherence to the RANZCOG guidelines⁴ for management of pregnant women with hepatitis B at Barwon Health before and after the implementation of a new referral pathway.

METHOD

Patient Selection

- Pre-intervention cohort:** pregnant women with hepatitis B managed at University Hospital Geelong from 2008 - 2013.
- Post-intervention cohort:** pregnant women with hepatitis B managed at University Hospital Geelong from 2013 - 2018 after introduction of new referral pathway.

Data Collection

Patients were identified from delivery records and positive HBsAg on antenatal screening from clinical laboratory.

Medical records were examined for the following:

- Patient demographics
- Hepatitis B health information
- Management of hepatitis B during pregnancy and delivery

Adherence to RANZCOG guidelines was labelled appropriate care and defined as follows (score /4):

- Referral to liver clinic
- Hepatitis B work-up
 - HBsAg, viral load, HBeAg, LFTs
- Antiviral therapy recommendation
 - Threshold viral load 6 log/ml or >200,000IU/ml³
- Neonate care
 - HBV immunoglobulin and vaccination at birth

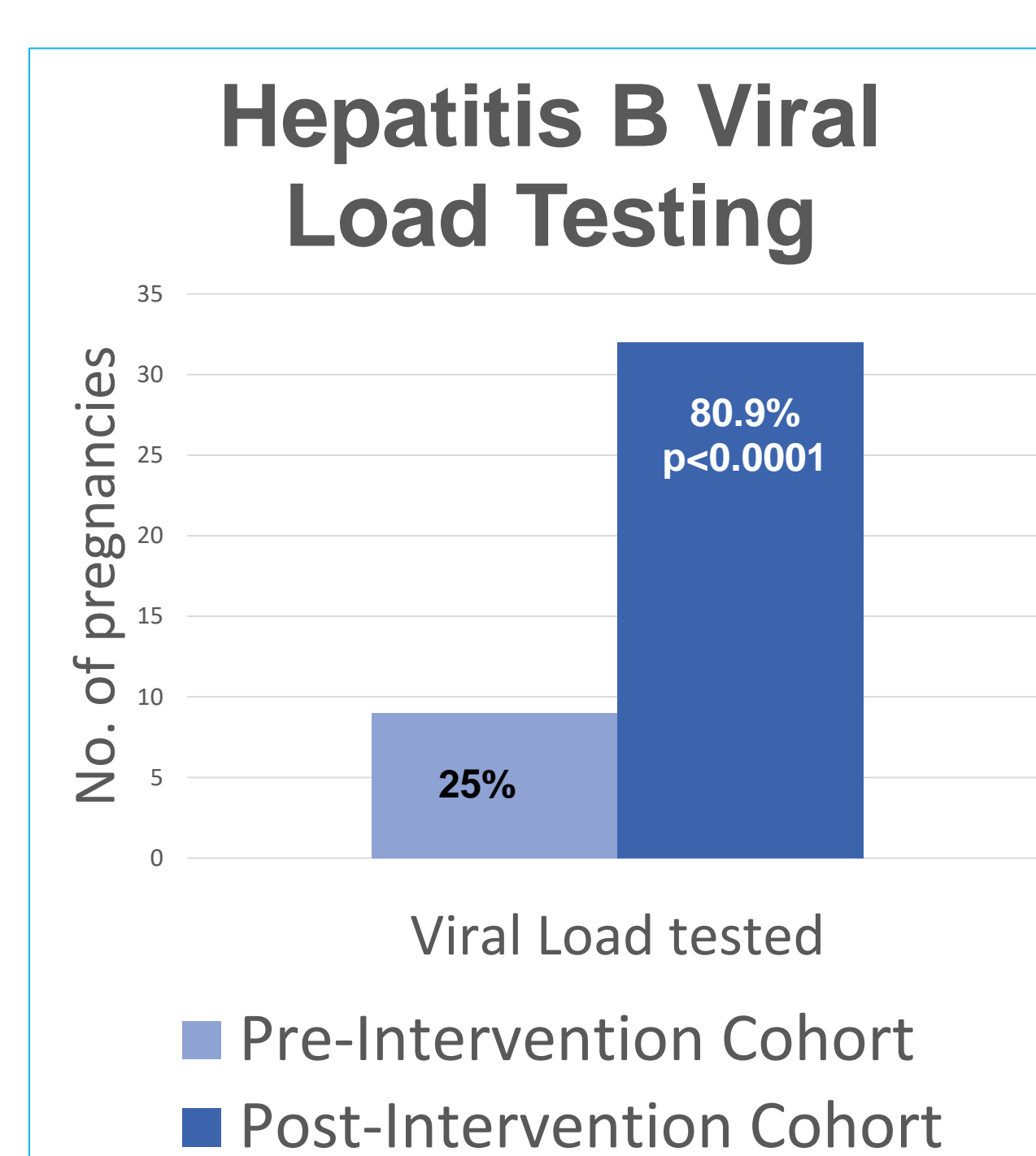
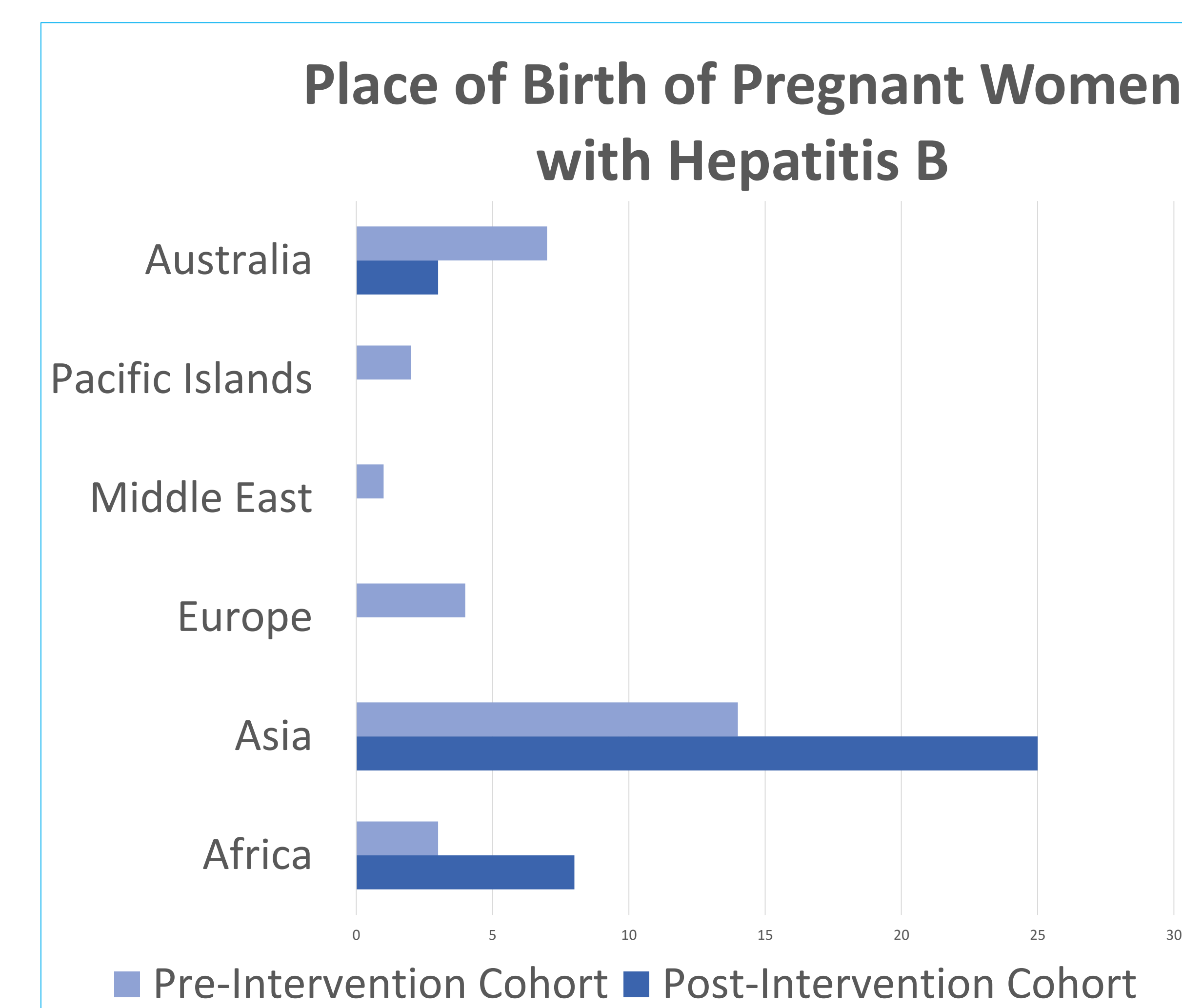
Outcome data was collected for the post-intervention cohort, and then compared with the pre-intervention cohort.

Data Analysis

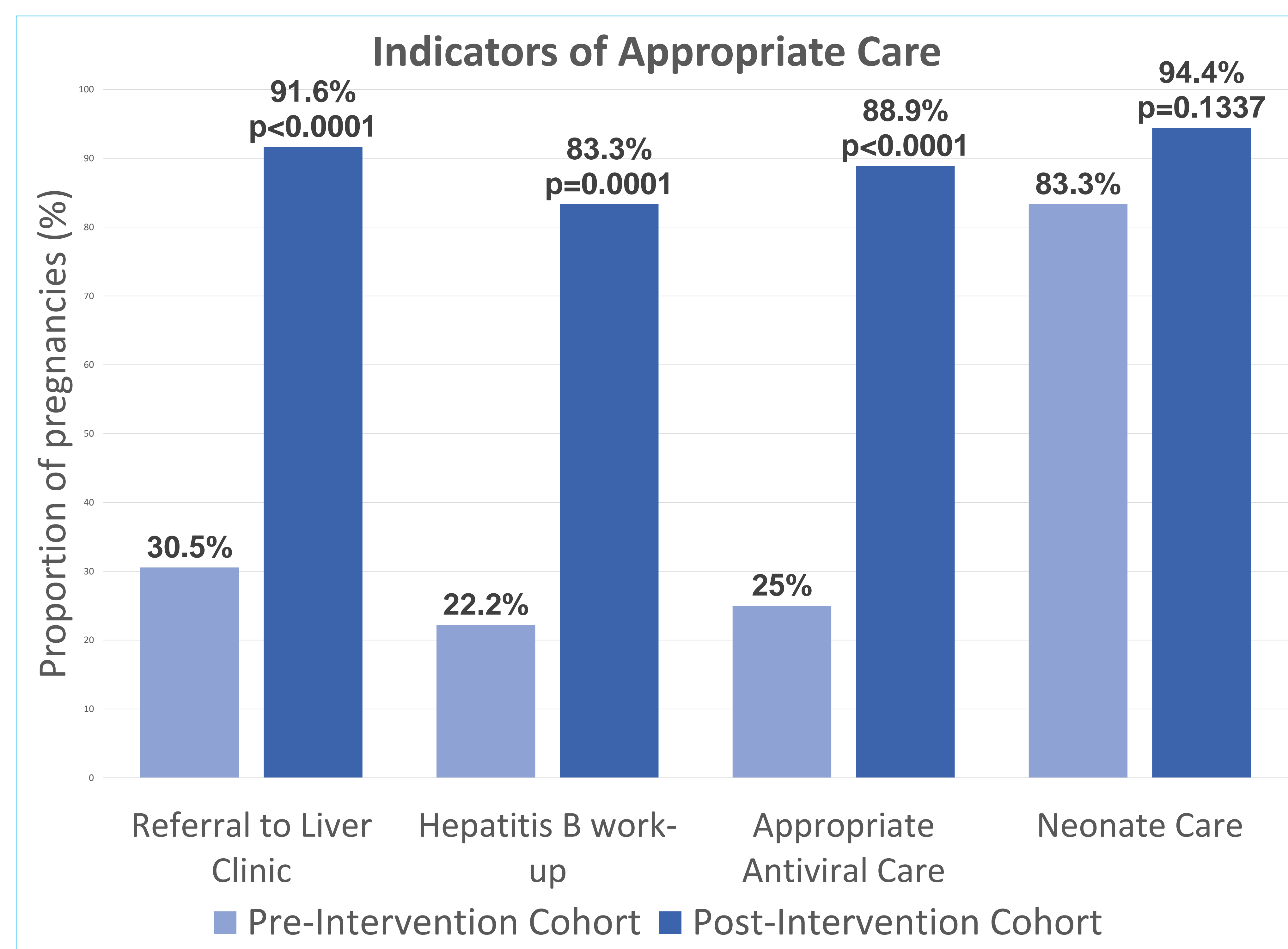
- Descriptive statistics were performed.
- Comparison of appropriateness of care between the two groups was done using a two proportions z test with a 95% confidence interval to determine the probability (P) value.

RESULTS

Patient Characteristics		
Variable	Pre-intervention Cohort	Post-intervention Cohort
	N (%)	N (%)
No. of pregnant women with hepatitis B	31	32
No. of pregnancies	36	36
Mean age	30.5 (SD 5.6)	28.9 (SD 4.5)
Mean gravida	2.8 (SD 1.7)	2.4 (SD 1.3)
Mean parity	1.6 (SD 1.2)	1.3 (SD 1.1)
Overseas born	29 (80.5%)	33 (91.6%)
English-speaking	16 (44.4%)	19 (52.8%)
Non-English speaking/unknown	20 (55.5%)	17 (47.2%)
Interpreter provided	7 (35%)	15 (88.2%)



Appropriate Care Score		
Score/4 (referral, work-up, antiviral care, neonate care)	Pre-intervention cohort N (%)	Post-intervention cohort N (%)
< 2	21 (58.3%)	3 (8.3%) p<0.0001
2 - 4	11 (30.5%)	4 (11.1%) p=0.04
4	4 (11.1%)	29 (80.5%) p<0.0001



DISCUSSION

- Appropriate care was improved in all four domains (referral to liver clinic, hepatitis B work-up, antiviral care and neonate care) following the introduction of a new referral pathway (p<0.0001).
- This includes significant increased hepatitis B viral load testing of 25% vs 81% (p<0.0001).
- Future study into subsequent rates of hepatitis B transmission to newborns would be useful to evaluate the reduction in MTCT as a result of the new referral pathway.

CONCLUSION

- The introduction of a collaborative referral pathway for hepatitis B in pregnant women at Barwon Health has significantly improved adherence to RANZCOG guidelines.
- Implementation of similar site-specific pathways across the state may be beneficial.

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For enquiries, contact Dr. Amanda Wade at amanda.wade@barwonhealth.org.au