AIMS

The 2016 RANZCOG Newborn Resuscitation Guideline states that admission temperatures to newborn units are important predictors of outcomes and should be maintained between 36.5–37.5°C (1). There is evidence of a dose effect with mortality increasing by 28% for each degree below 36.5°C at admission. This audit was done to check the admission temperature of babies in our local newborn unit.

METHODS

• Admission temperatures were assessed for all babies admitted to Palmerston North Hospital Level 2A Neonatal Unit in 2015.
• Babies were excluded if they were more than 24 hours old at admission, if it was a readmission, or if the temperature at admission was not recorded.
• The total number of admissions were 499, after exclusion criteria were applied this left 299.
• We calculated the percentage of babies with low (under 36.5°C), normal (36.5–37.5°C) and high (over 37.5°C)

RESULTS

Thirty seven percent of babies had an admission temperature below the recommended 36.5°C. Eighteen percent of babies did not have their temperature recorded on admission. Prematurity and low birth weight were associated with low admission temperatures. Delivery suite had the highest percentage of cold babies per admission source even when adjusted for gestation and prematurity, with 33% of babies having a low admission temperature (see Figures 1 and 2).
RESULTS CONTINUED

Elective caesarian sections had the highest percentage of cold babies per mode of delivery even when adjusted for gestation and prematurity, with 43% of babies having a low admission temperature (see Figures 3 and 4).

Low admission temperatures were associated with longer admissions to the neonatal unit even when adjusting for gestation and prematurity (see Figures 5 and 6).

CONCLUSIONS

• These results show a very high percentage of babies having a low admission temperature. As expected, prematurity and low birth weights were associated with lower temperatures.

• Surprisingly, babies born in delivery suite and babies born via elective caesarian sections had the highest percentage of low admission temperatures.

• Low admission temperatures were associated with longer hospital stays, indicating increased morbidity.

• The results of this audit prompted review and change of hospital protocol with the aim of improving newborn admission temperatures.

REFERENCES