

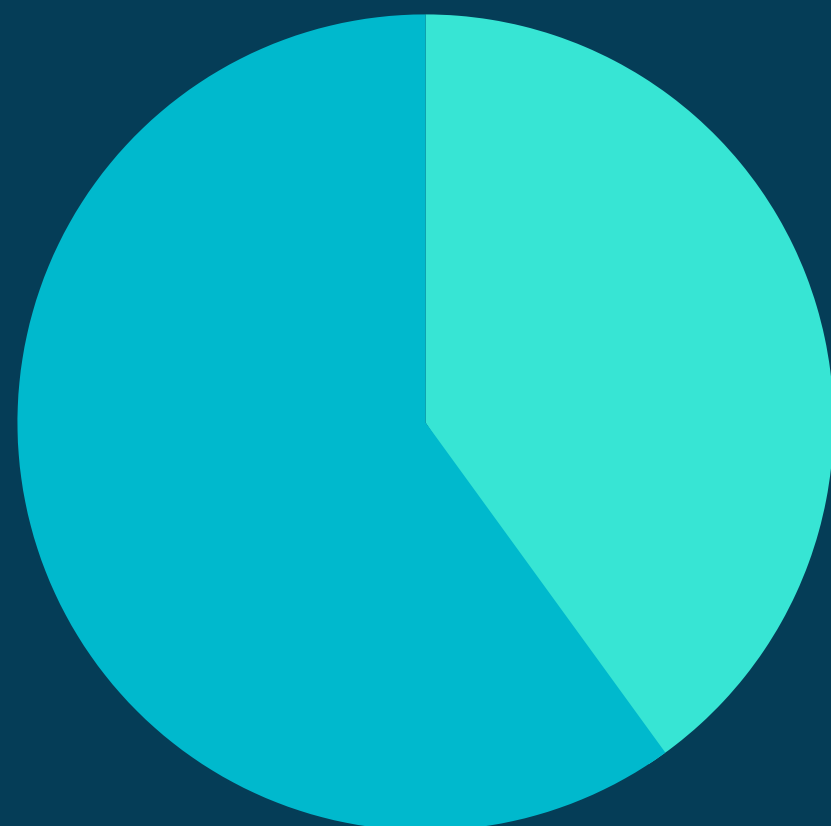


“THE GOLDEN HOUR INITIATIVE – IMPROVING THE CARE OF EXTREMELY PRETERM BABIES”.

Rosina Ho - Nurse Specialist

Michelle McHale - NICU Clinical Charge Nurse

L9 Theatre
60%

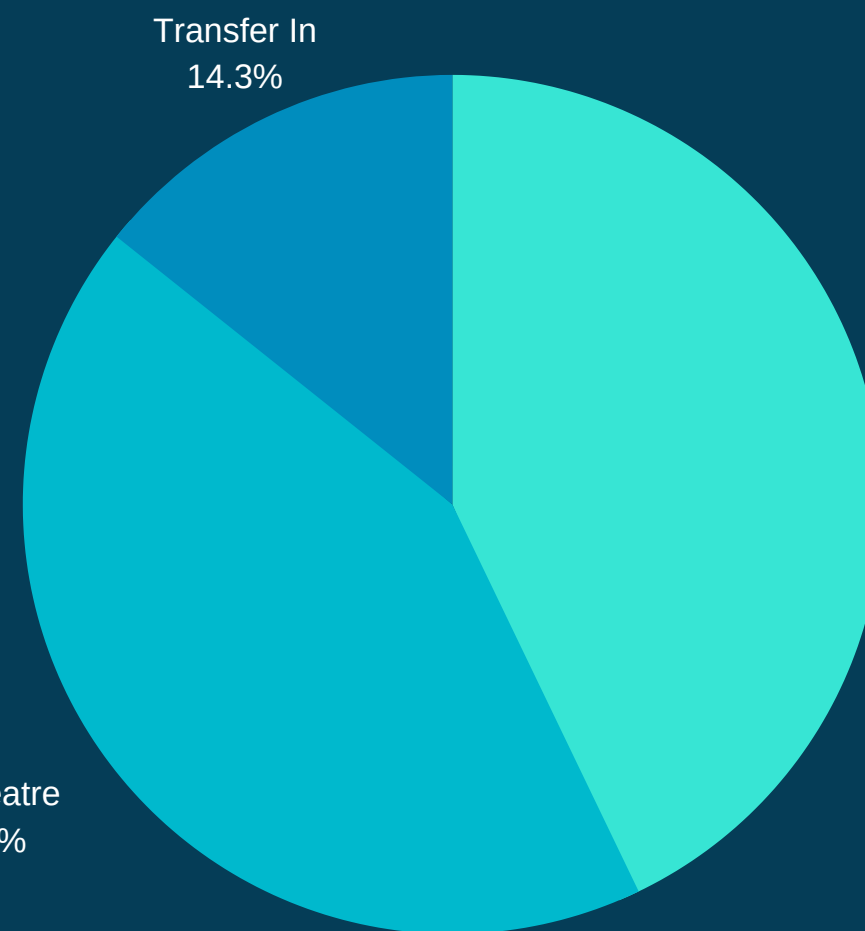


Birthing Unit
40%

JANUARY - MARCH

Total admissions = 13
38.5% Temp <36.5
Temp Range 33.4 -36.4
Gestation Range 23.5-26.1

L9 Theatre
42.9%



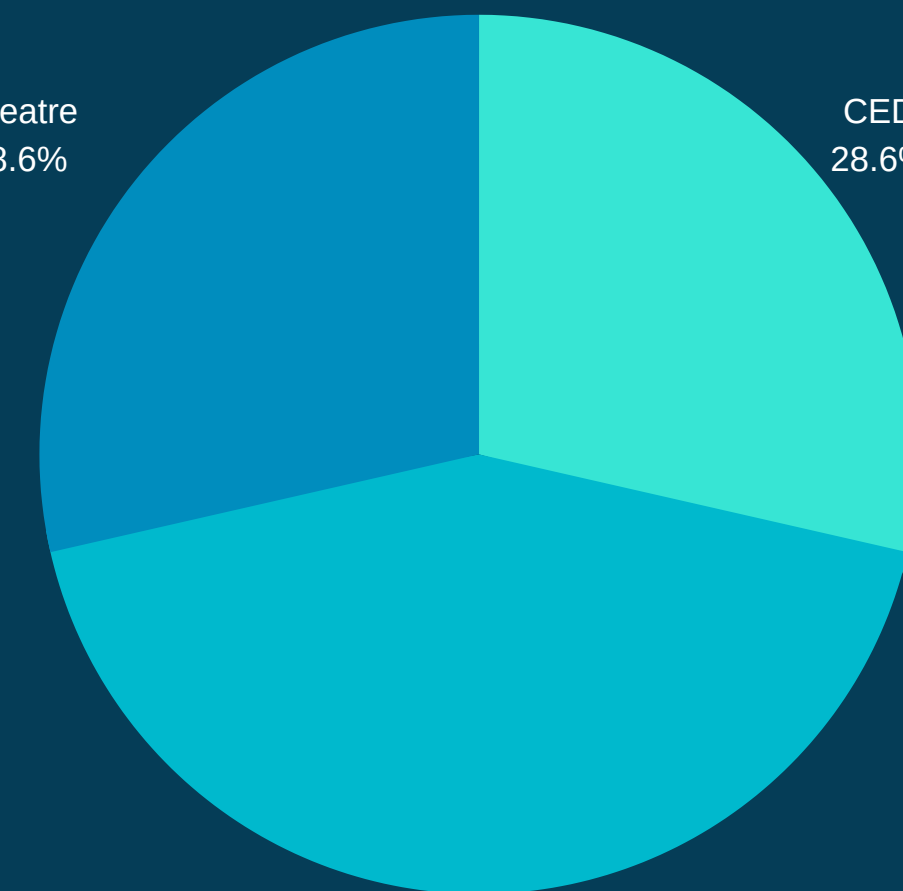
Birthing Unit
42.9%

Transfer In
14.3%

APRIL - JUNE

Total admissions 9
77.8% Temp <36.5
Temp Range 34.4 -36.2
Gestation Range 23-26.4

Theatre
28.6%



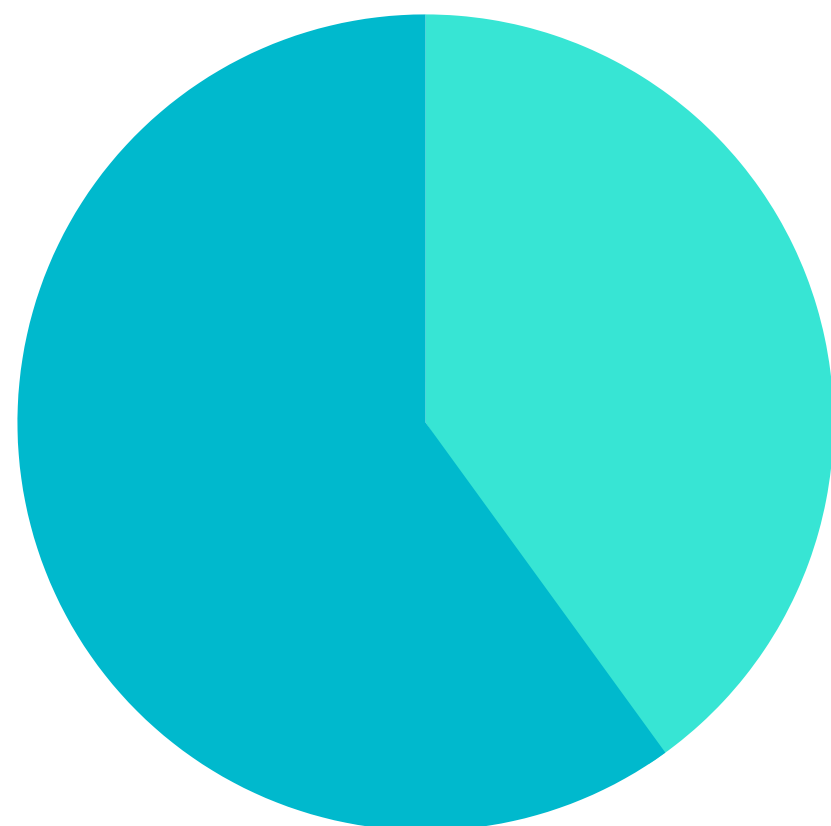
Birthing Unit
42.9%

JULY - SEPTEMBER

Total admissions 13
53.8% Temp <36.5
Temp Range 35.8-36.1
Gestation Range 24.3-24.4

Admission temperatures of infants <27weeks

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60%

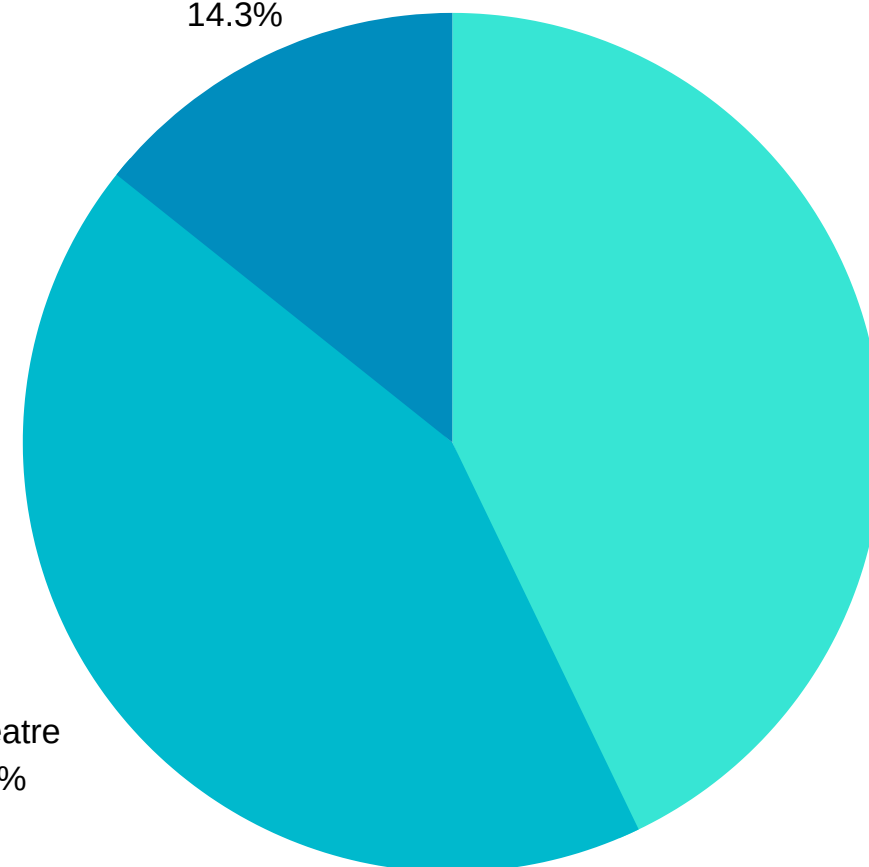


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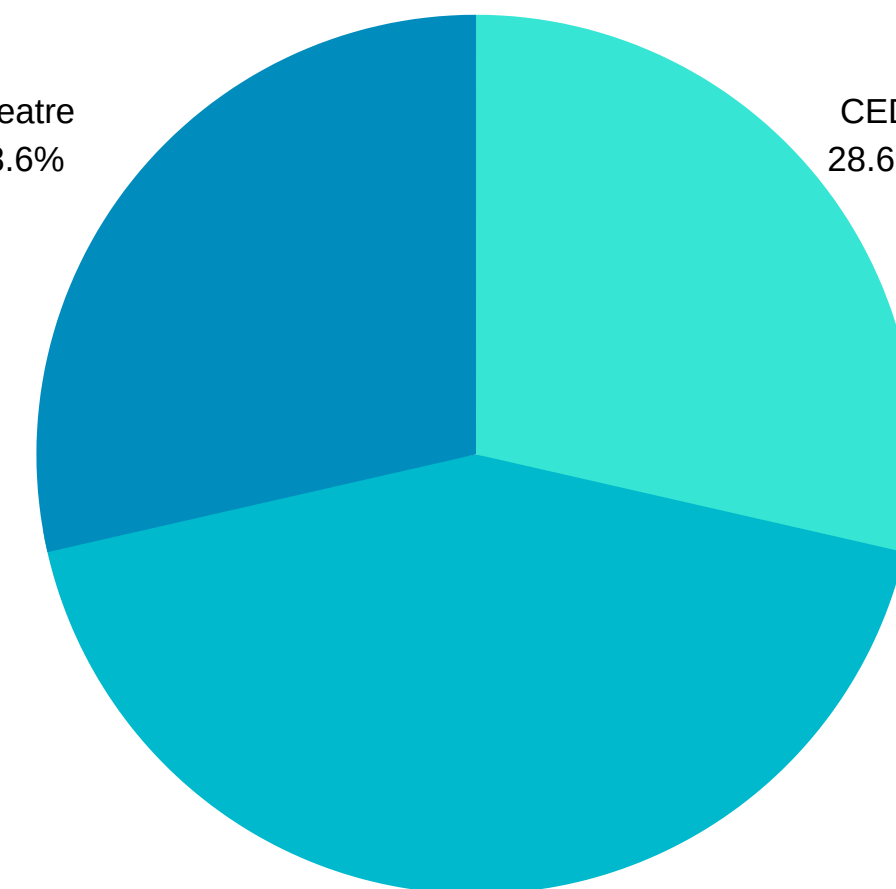
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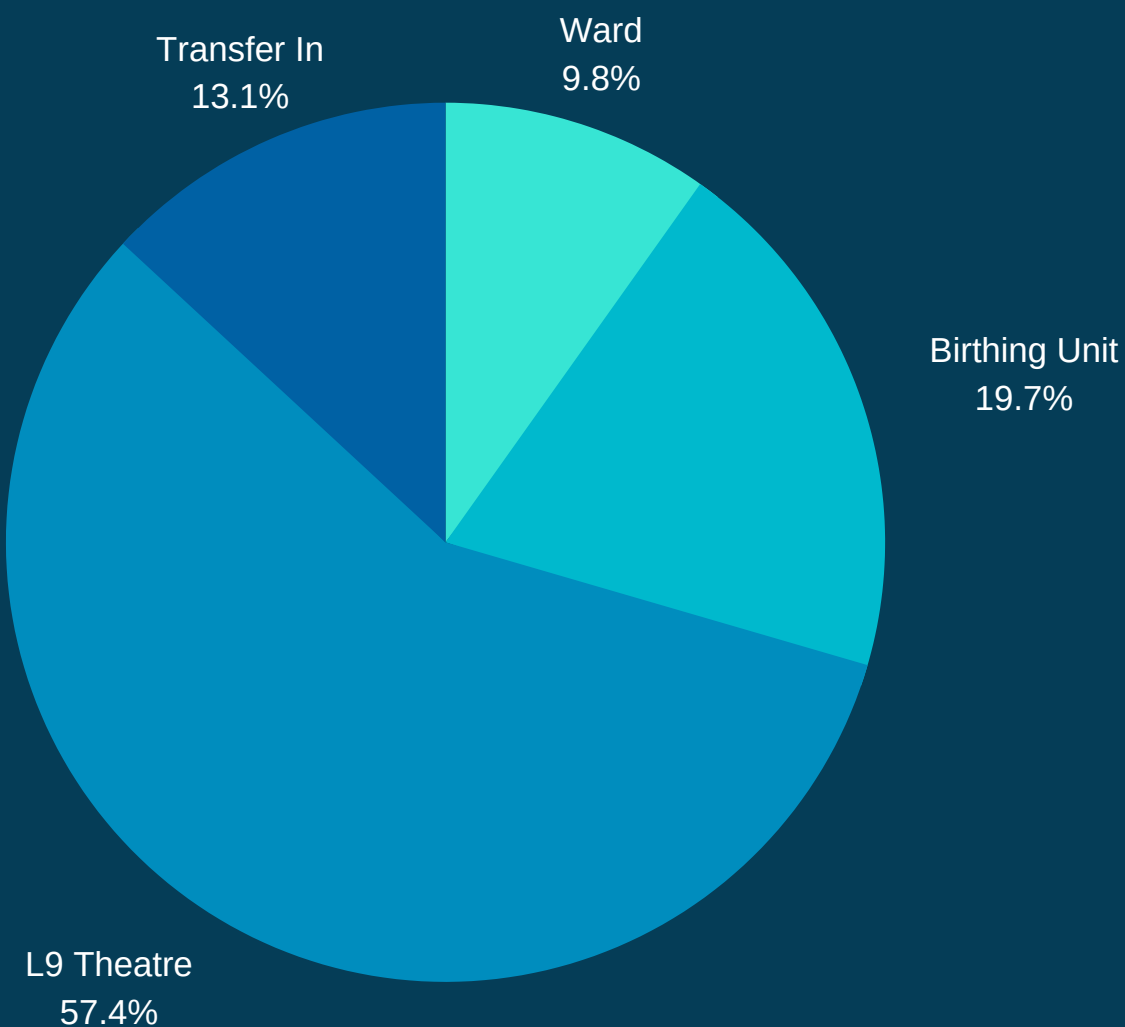


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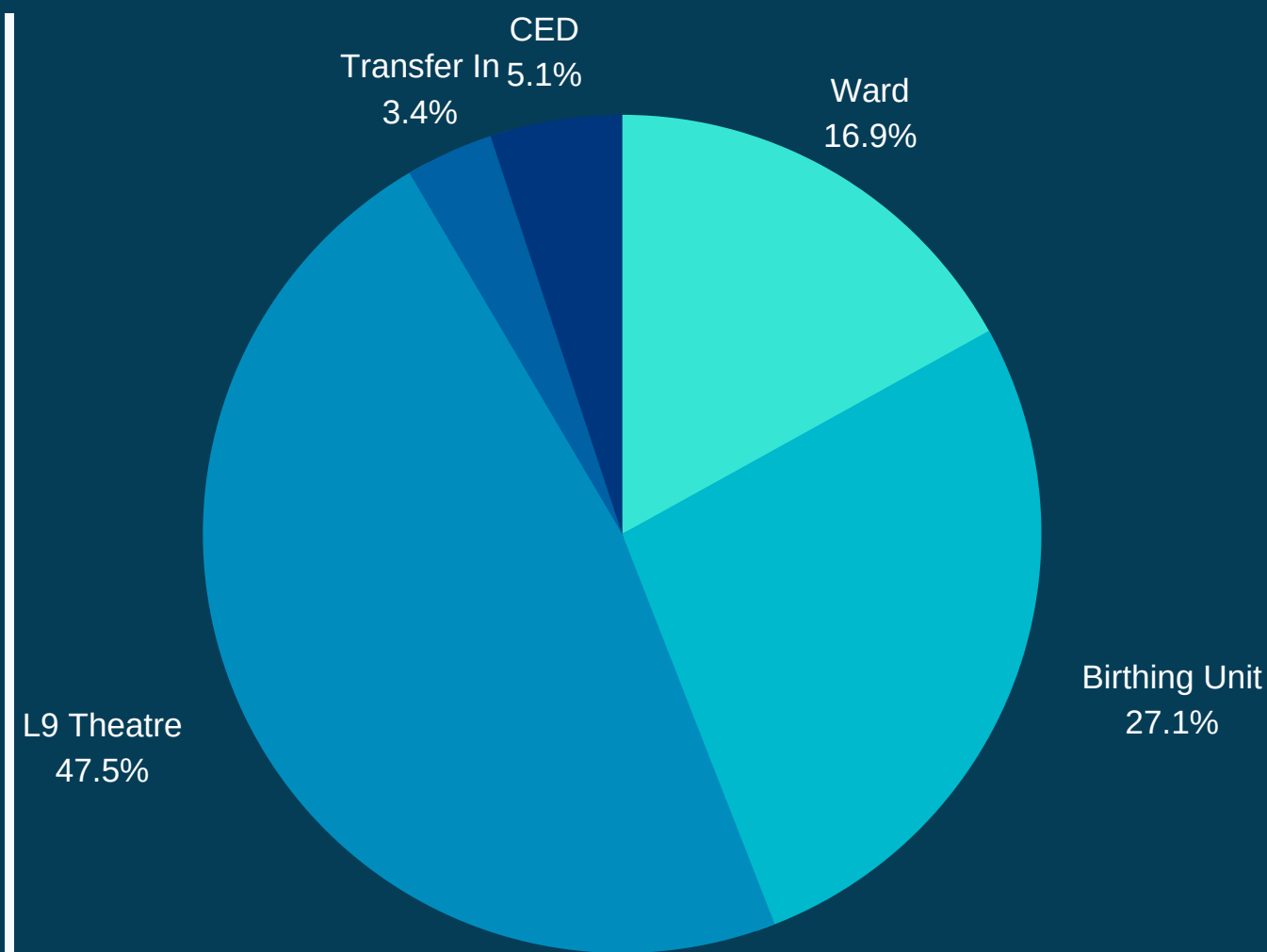
JANUARY - MARCH

Total admissions = 198

30.8% Temp <36.5

Temp Range 35.3-36.4

Gestation Range 27.3-41



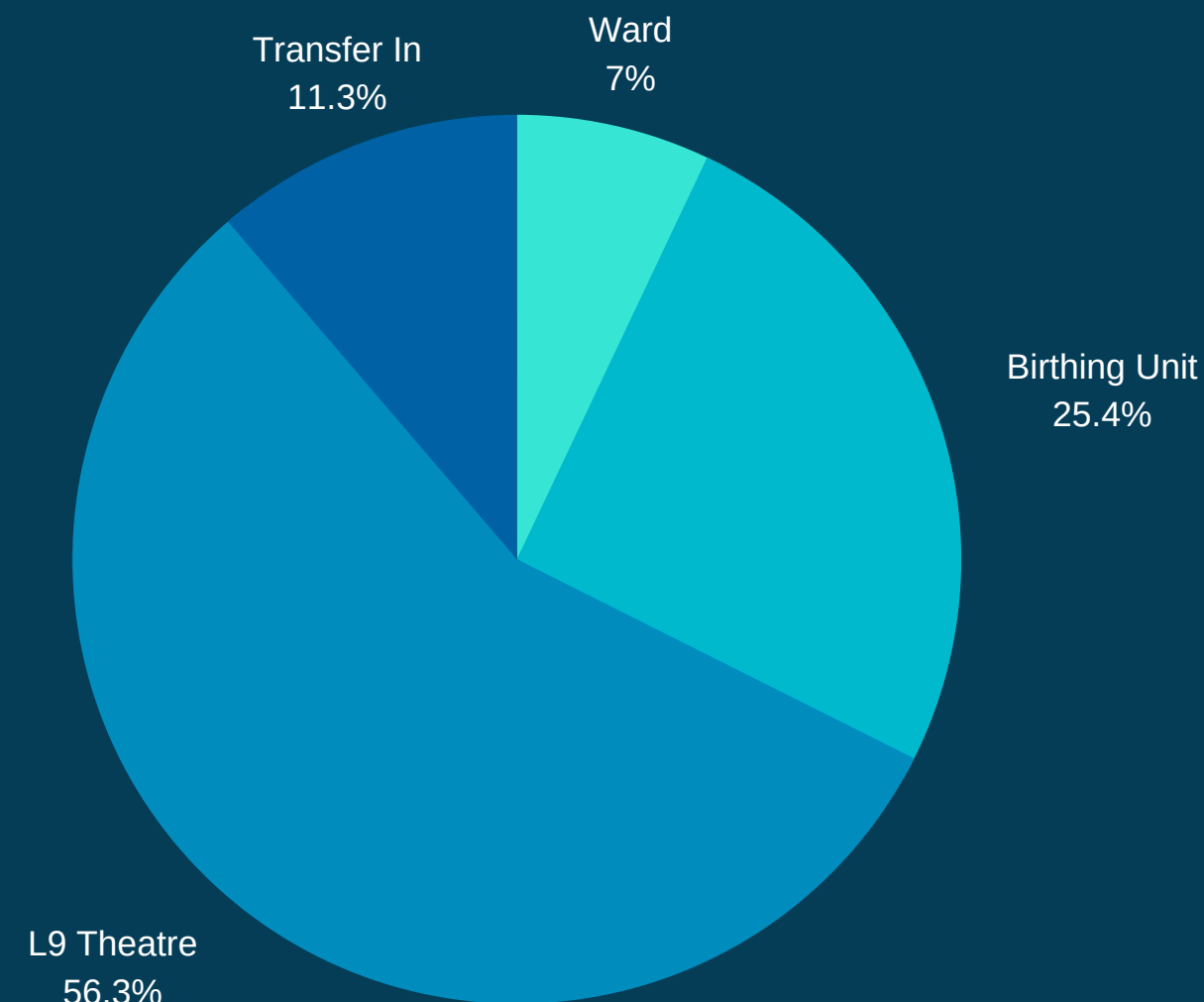
APRIL - JUNE

Total admissions = 188

31.4% Temp <36.5

Temp Range 34.1-36.4

Gestation Range 27.3-41.5



JULY - SEPTEMBER

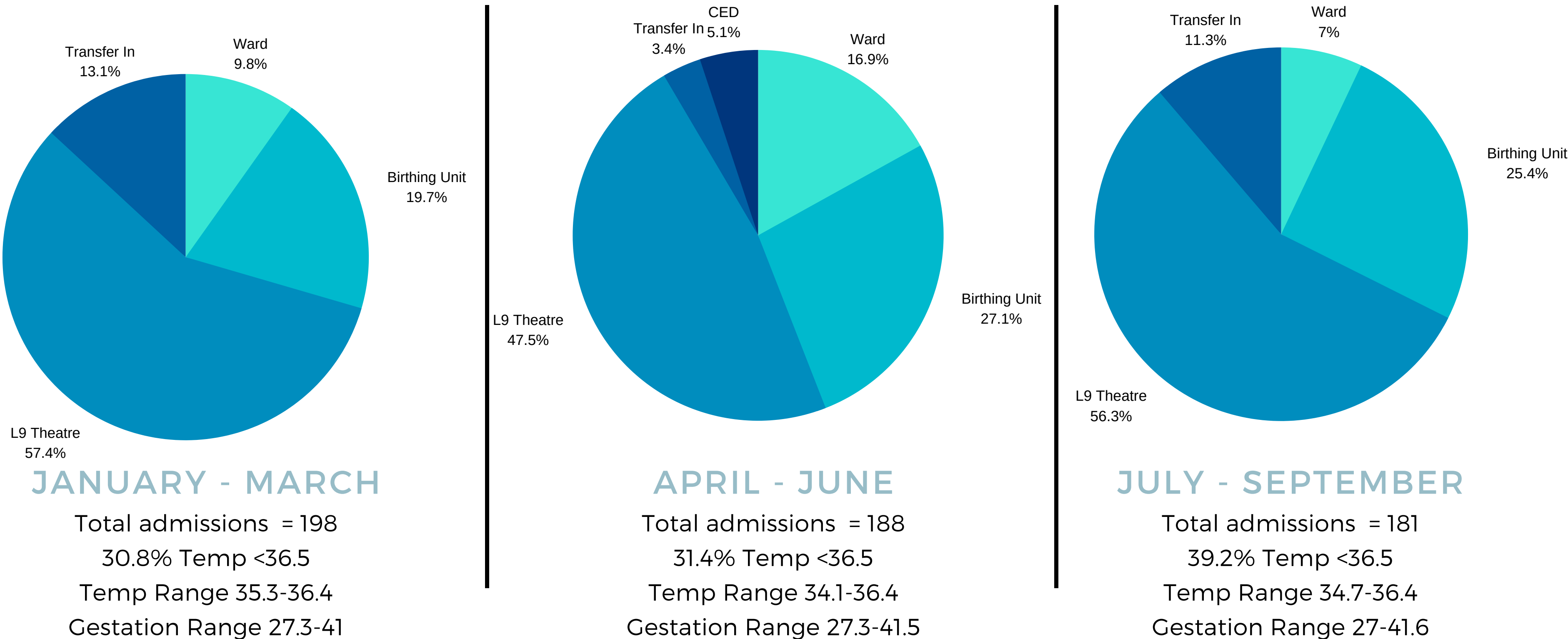
Total admissions = 181

39.2% Temp <36.5

Temp Range 34.7-36.4

Gestation Range 27-41.6

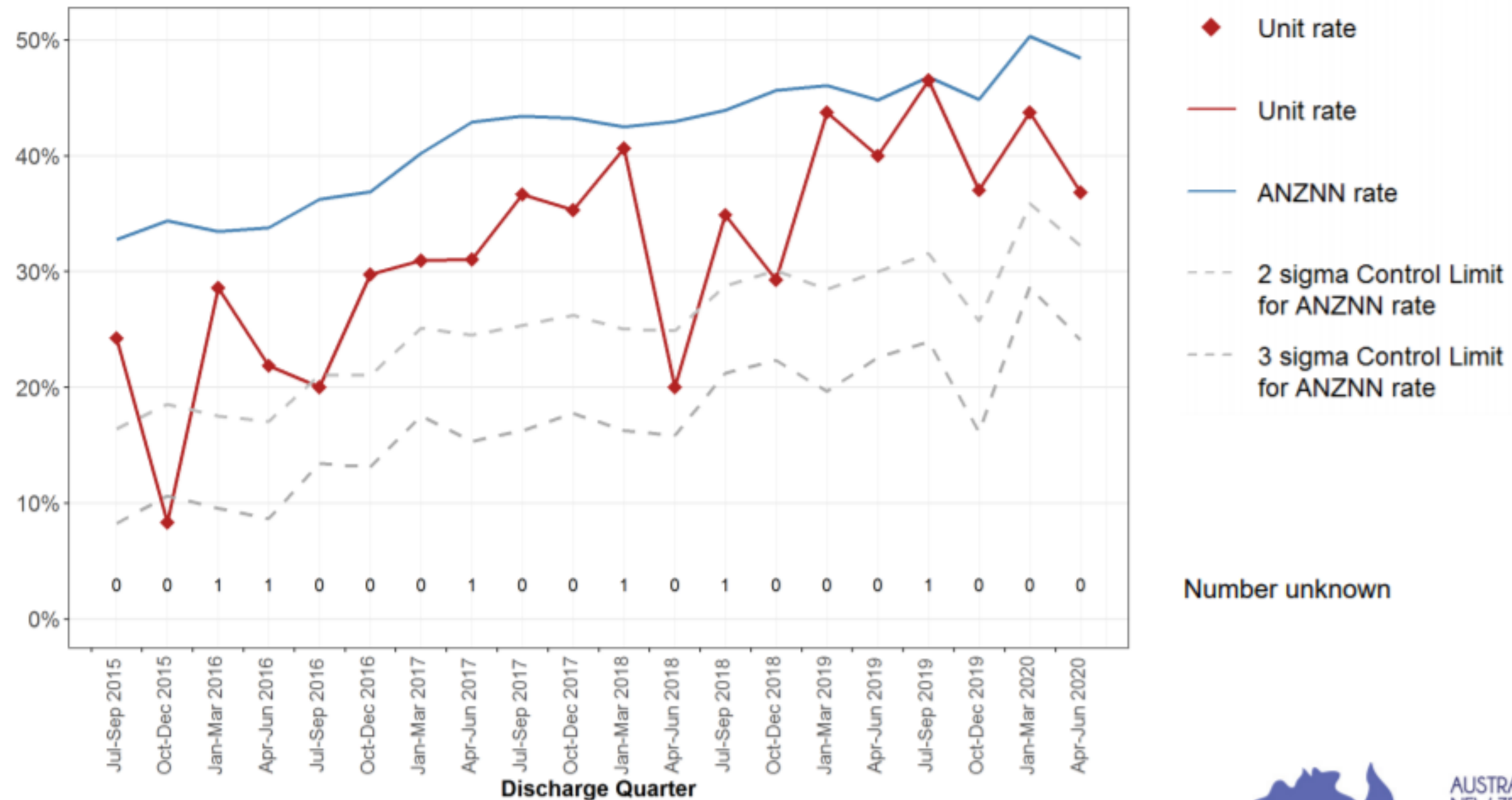
Admission temperatures of infants >27 weeks



Admission temperatures of infants >27 weeks

Admission temperature within target range* p-chart

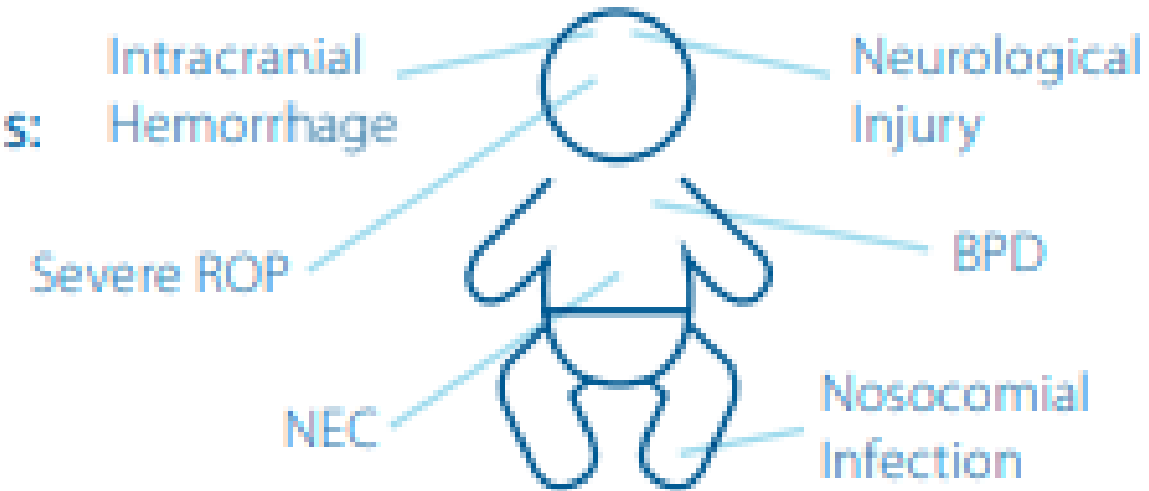
Babies born at <32 weeks gestation, who were inborn



*36.5°C ≤ admission temperature < 37.5°C

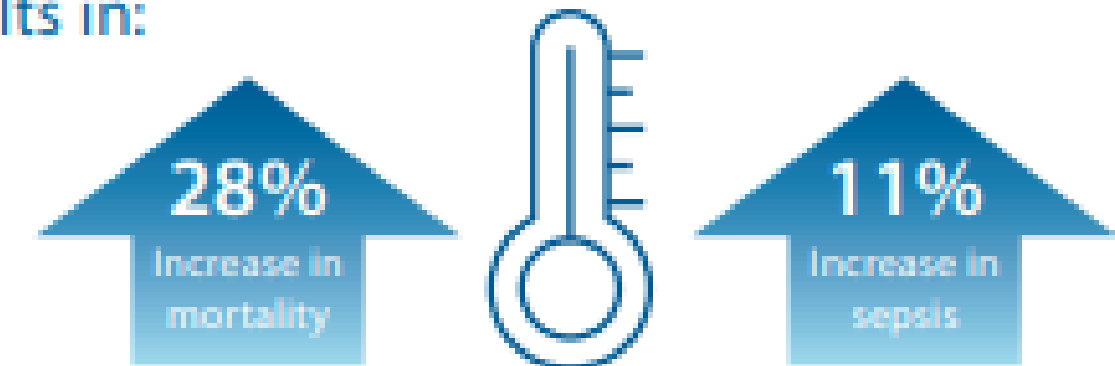


Cold, stressed or hypothermic babies potential complications:



Effects of Hypothermia

Every 1°C decrease under 36°C in neonatal temp results in:



Problem : Hypothermia On Admission

Definition: over 30% of all babies admitted to NICU have a temperature of $<36.5^{\circ}\text{C}$

Average 50% from Theatre, 20% from Birthing Unit, remainder from ward or external sources

Aim

Reduce the number of babies with admission temperature of <36.5 to $<10\%$ of all admissions

Key Drivers

Theatre/ Birthing Unit Temperature

Not using warm bedding

Appropriate use of neowrap

Deferred cord clamping

Not keeping incubator warm

Appropriate use of humidified neopuff

Intervention

Theatre/ Birthing Unit pre-warmed to 25°C

Use of warm bedding

Neowrap used for all babies <32 weeks/ $<1500\text{g}$

Use of neowrap or drying and wrapping during DCC

Incubator pre-warmed and plugged in throughout

Use of humidified neopuff for babies <28 weeks or 1000g

Barriers

Time during emergency
Non compliance/ education

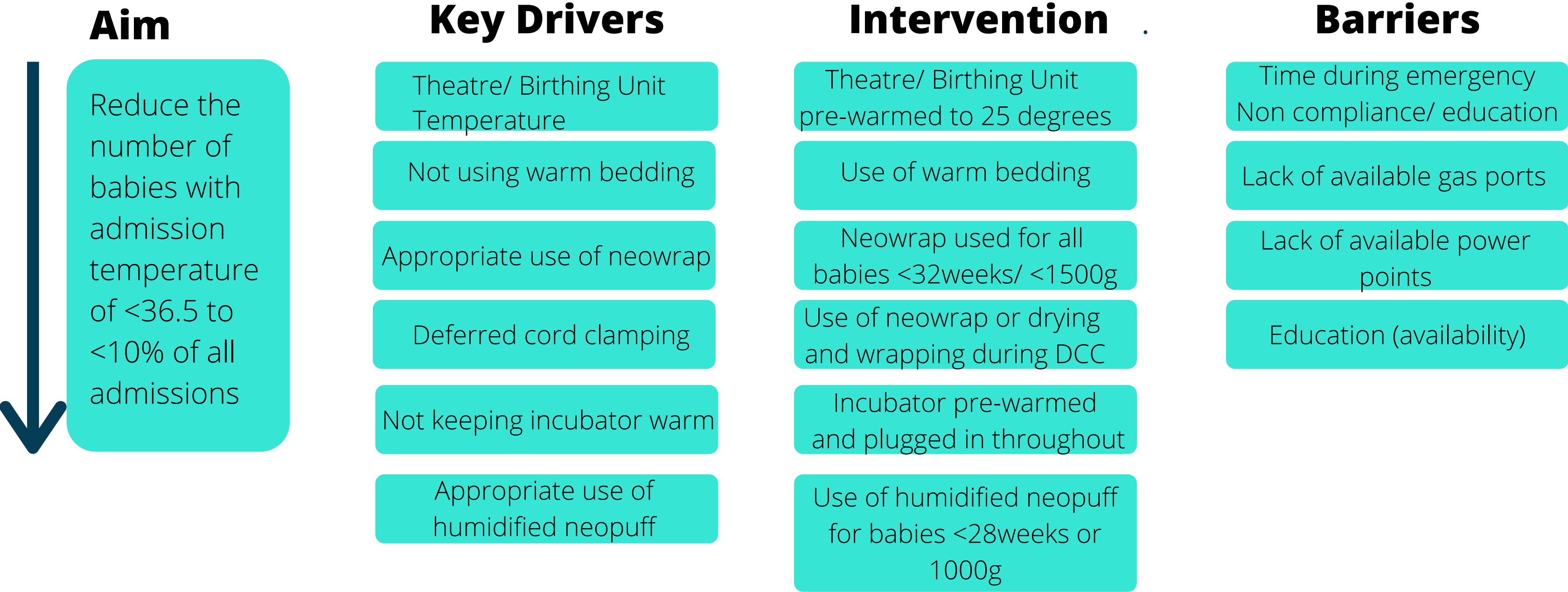
Lack of available gas ports

Lack of available power points

Education (availability)

Problem : Hypothermia On Admission

Definition: over 30% of all babies admitted to NICU have a temperature of <36.5C
Average 50% from Theatre, 20% from Birthing Unit, remainder from ward or external sources



Warm Chain

Communication. Teamwork. Thermoregulation

DELIVERY

- Birthing Suite management
- Routine thermal care
- Neowrap

STABILISATION

- Warmed, humidified respiratory gases
- Pre warming contact surfaces
- Leo incubator
- Wollen hat

ADMISSION TO NICU

- Umbilical lines insertion
- Parenteral nutrition
- X-rays

EDUCATION

- Simulation
- Mandatory study day
- Dissemination of information
- Spotlight education focus

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Flowchart

Pre-delivery. At delivery
Post delivery



GOLDEN HOUR FLOWCHART

Predelivery Planning and Prep

SMO/Senior Fellow	NP/NS/Registrar	RN1 (resource nurse)	RN2 (admission nurse)
Travel to hospital after hours	Request room temp 25°C/+5 Confirm temp set on arrival Introduce self Prepare airway adjuncts, including setting O ₂ blender to 30%.	Confirm room doors closed Plug in prewarmed incubator, humidifiers and gas source. Turn on and fill with water where necessary Attach CPAP prongs to circuit Lift incubator lid Ensure skin mode on set at 37°C Bring up apgar timer on screen	Prepare admission space including equipment for MIST, UVC/UAC, fluids, antibiotics and caffeine. Once able, assist resource nurse in delivery space.

Delivery space resuscitation & stabilisation: initial resuscitation

SMO/Senior Fellow	NP/NS/Registrar	RN1 (resource nurse)	RN2 (admission nurse)
Encourage/facilitate deferred cord clamping as indicated	Receive baby in waka lined with Neowrap, all prewarmed Place prewarmed woollen hat Wrap in Neowrap - left side first Assess tone, colour, breathing Decision at cord cutting re: initial respiratory support	Start apgar timer & vocalise 30 sec and 1 minute intervals Receive wrapped baby out of waka, and place on flat bed scale	Prepare scale with cleaned 1000ml bag of water during cord clamping to receive and weigh baby immediately
HANDS OFF FOR WEIGHT			

Delivery space resuscitation & stabilisation: continued resuscitation

SMO/Senior Fellow	NP/NS/Registrar	RN1 (resource nurse)	RN2 (admission nurse)
Guide stabilisation and monitor responses to stabilisation measures, including temperature management	Continue to closely monitor respiratory status, if required prepare intubation equipment	Apply bubble CPAP and assess effectiveness of breathing Titrate oxygen according to SpO ₂ target range Assist as airway assistant for intubation	Place SpO ₂ probe and posey wrap on right hand Place temp probe with whole gold heart left abdo/axilla and maintain integrity of wrap Ensure skin mode is on, radiant warmer is at 100% and temperature is increasing Turn on SpO ₂ monitor Assist with application of CPAP including hat and securement of tubing Prepare and assist with surfactant administration if required.

VIDEO



AUCKLAND
DISTRICT HEALTH BOARD
Te Toka Tumai



Welcome *Haere Mai* | Respect *Manaaki* | Together *Tūhono* | Aim High *Angamua*

Quality Improvement

- Waka
- Humidified neopuff
- Xray tray



Questions?

