

# “The Real Micropreemies of FMC NICU” 23 - 24 week GA Care Pathway

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On behalf of the Foothills Medical Centre NICU EPIQ Team

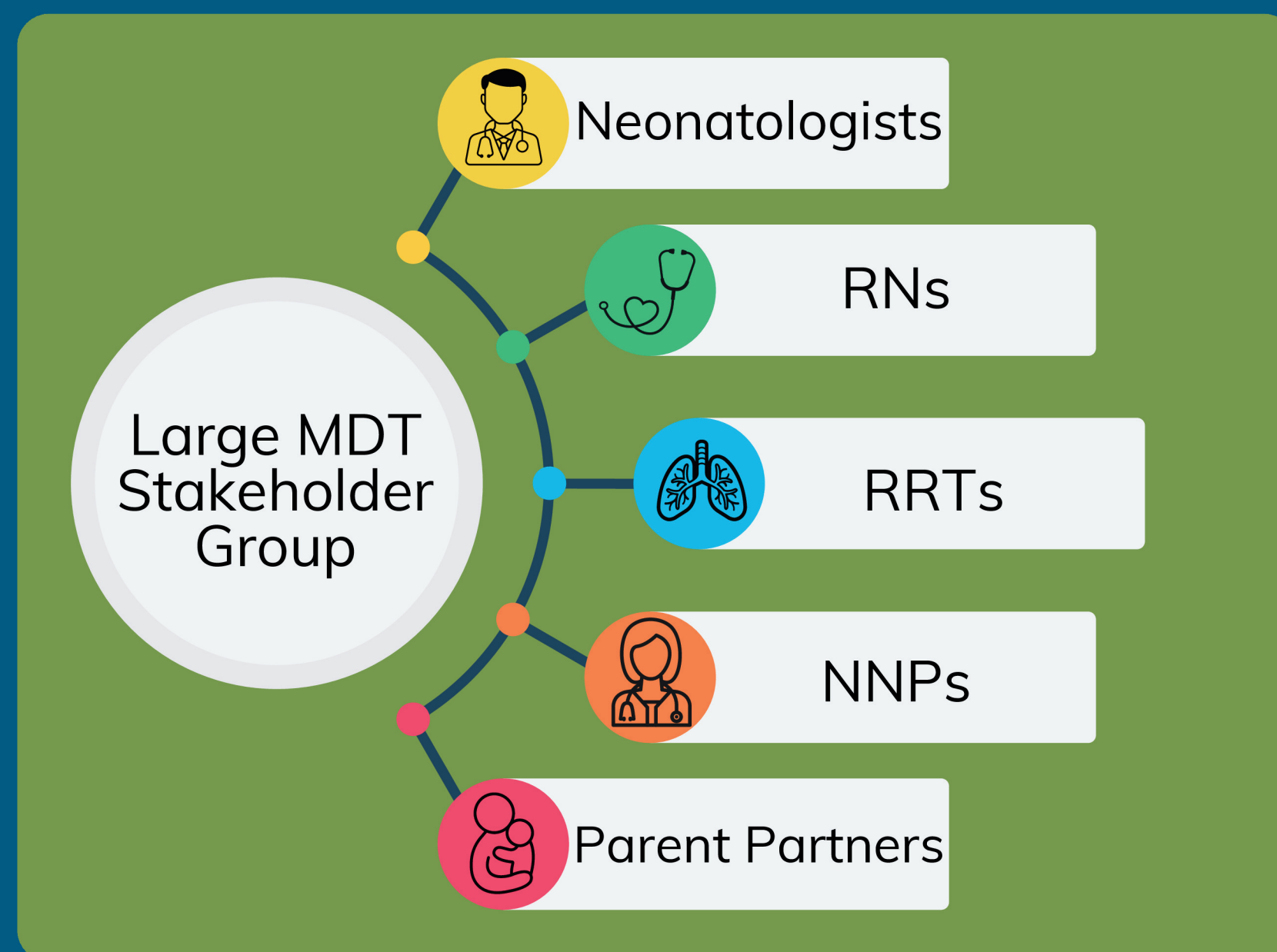
## Project Aims

Infants born at < 25 weeks gestation are at high risk for morbidity & mortality. We endeavored to create a standardized systems-based care pathway for these infants

### Major goals:

- Improving consistency of care
- Creating a shared approach and mental model for the interdisciplinary team
- Reducing morbidity and mortality in infants < 25 weeks

## Project Design



- 12 Subgroups
- 1 for each Care Pathway Element

- Subgroups:
- Literature Reviews
  - Initial Drafts

Each Element = SMART Goal & Indicators

Major Practice Points Condensed into 1 Reference Sheet

### September 2023

- Primary HJFV & HJFV management guidance roll-out

### January 2024

- Staff education and full care pathway roll-out
- Chart audit of each baby for outcomes and adherence
- Review of each case by FMC NICU EPIQ team

## Care Pathway Highlights

### Golden Hour

- Standardized admission process
- Emphasis on ensuring senior staff are utilized for intubation and line insertion

### Brain Health

- 72 hour critical window
- Selective use of prophylactic indomethacin

### Hemodynamics

- Specified time points for TNE
- Guidance for selecting vasoactive medications
- Guidance for PDA treatment

### Nutrition & Feeding

- Early feeding with mother's own milk when available
- Adherence to weight-based feeding tables
- Fortification added at 80 mL/kg/day

### Fluids & Electrolytes

- Starting TFI 80 mL/kg/day
- I&Os + TFI adjustments q6h in 1st week
- Baseline creatinine for all infants
- Guidance for TPN composition & adjustment

### Thermoregulation

- Use of plastic bag and gel mattress
- Guidance for settings & monitoring when using incubator & radiant warmer

### Pain & Developmental Care

- Promotion of skin to skin after 72 hours
- Maintenance of quiet dark environment
- Trial boluses prior to infusion when narcotics needed

### Lung Health

- Trial of primary CPAP for 24 weekers
- Primary HFJV in all 22, 23 & select 24 weekers
- Guidance for jet management

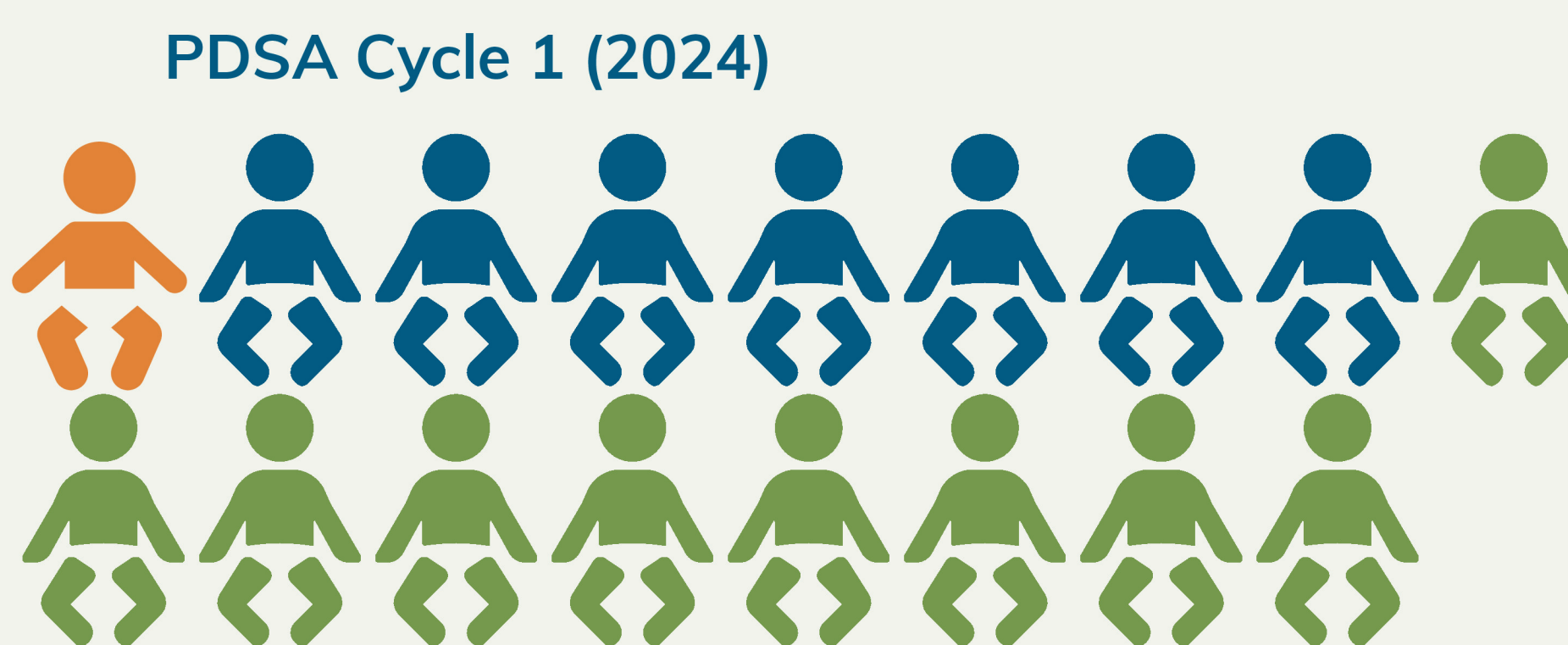
### Hematology

- Standard thresholds for transfusion of PRBCs and platelets

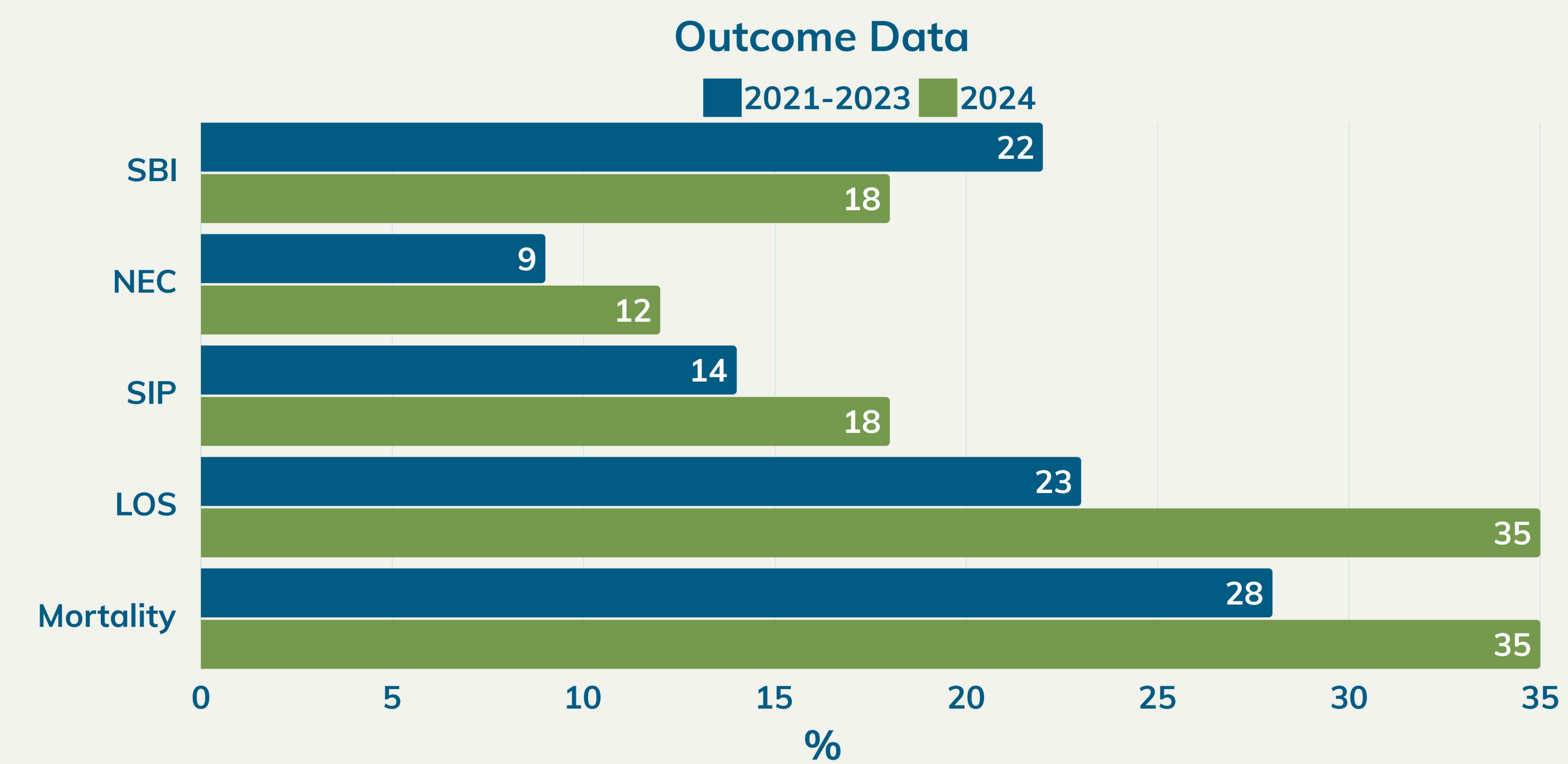
### Infection & Skin Care

- UAC & UVC on admission
- PICC DOL 3-7
- Remove lines at 120 mL/kg/day fortified feeds
- Avoid antibiotics longer than 5 days in culture negative sepsis
- Assessment of skin with each handling
- Avoid unnecessary monitors & adhesives

## Results



- 22 weeks - 1
- 23 weeks - 7
- 24 weeks - 9



Primary jet ventilation adhered to in all babies who qualified



Care Pathway Reference Card

## Learnings & Next Steps

### Key Findings

- Trend towards decreased severe brain injury
- Decreased ventilation days
- Increased mortality & AKI related to higher rates of NEC & LOS
- Increase in LOS likely reflective of unit-wide increase in LOS in 2024

### Learnings

- Changes took time to have full effect & for staff buy-in
- Consistency has improved as staff have become more familiar with the bundle & approach

### Next Steps - PDSA Cycle 2

- Continued focus on consistency & care pathway adherence
- Emphasis on FiCare with regularly scheduled family meetings
- Improved guidance to reduce incidence of hypothermia during routine handling
- Promotion of early skin-to-skin
- All intubated infants to HFJV as primary mode
- Educational initiatives to reduce LOS rates