



# Neonatal Initiatives

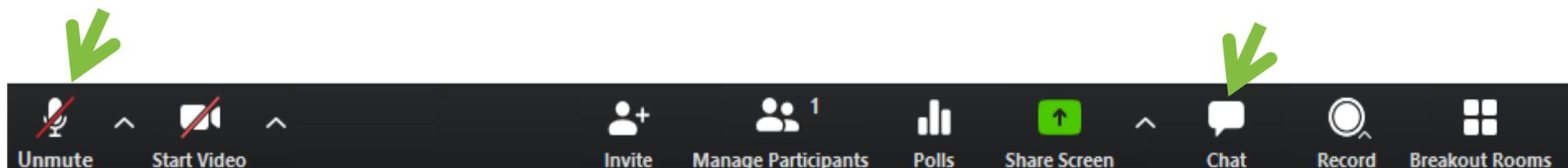
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Action Period Call  
March 27<sup>th</sup>, 2024  
12:00 – 1:00 PM CT

# Welcome

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- Please type your **name** and the **organization** you represent in the chat box and send to "Everyone."
- Please click on the three dots in the upper right corner of your Zoom image, click "Rename" and put your name and organization.
- Please also do for all those in the room with you viewing the webinar.
- Attendees are automatically muted to reduce background noise.
- You may enter questions/comments in the "chat" box during the presentation. We will have a Q&A session at the end.
- Slides will be available via email and at <http://www.alpqc.org/initiatives/nhp>
- **We will be recording this call to share, along with any slides.**



# Agenda

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Activity	Time
Welcome, Updates, & Reminders	12:00-12:10
Hospital Poll	12:10-12:15
Preventing Hypothermia	12:15-12:30
Tableau Visualization	12:30-12:45
Q&A	12:45-12:55
Reminders & Next Steps	12:55-1:00



# Updates



# Updates & Reminders

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- Baseline data for Neonatal Hypothermia Prevention Initiative is due March 31, 2024 (Dec-Feb)
  - Link sent out on February 14<sup>th</sup> and March 15<sup>th</sup>
  - Please let us know if you did not receive the links for the baseline surveys
- The ALPQC Quarterly Newsletter was released on March 15<sup>th</sup> via email and is also available on the [alpqc.org](http://alpqc.org) website

# Hospitals who have entered 100% of their Baseline Data

(as of 03/27/24)

1. St. Vincent's Hospital	9. Flowers Hospital
2. East Alabama Medical Center (x2)	10. Jackson Hospital
3. Madison Hospital	11. DCH Regional Medical Center (x2)
4. Russell Medical Center	12. Northport Medical Center (x2)
5. UAB (x2)	13. USA Children's & Women's Hospital
6. Medical Center Enterprise	14. Marshall Medical Center North
7. Gadsden Regional Medical Center	15. Baptist Medical Center East
8. USA Providence	



# Hospital Poll

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# Poll Questions

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- Does your hospital currently have a process to manage an infant after they become hypothermic?
  - Yes
  - No
  - I don't know
  
- Does your hospital use a checklist to prepare for deliveries?
  - Yes, for certain deliveries
  - Yes, for all deliveries
  - No
  - I don't know



# Poll Questions (cont.)

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- Does your hospital use either plastic wraps or warming mattresses at deliveries?
  - Yes, for infants <29 weeks' gestation
  - Yes, for infants <32 weeks' gestation
  - Yes, for infants <35 weeks' gestation
  - No, we don't use either
  - I don't know



# Preventing Hypothermia

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2024

January

February

March

April

May

June

July

August

Sep

October

Nov

Dec

Learning Session 1

Learning Session 2

Webinar 1:  
Why Hypothermia Matters, REDCap

Webinar 4:  
External Speaker

Webinar 5:  
Previous Initiatives

Webinar 8:  
TBD

Webinar 2:  
Preventing Hypothermia

Webinar 6:  
Expanding Our Focus

Webinar 9:  
TBD

Webinar 3:  
Baseline Data Review,  
Model for Improvement

Webinar 7:  
External Speaker

Initiative Agenda



## QUALITY IMPROVEMENT

# Implementation of a multidisciplinary guideline improves preterm infant admission temperatures

MW Harer<sup>1,4</sup>, B Vergales<sup>1</sup>, T Cady<sup>2</sup>, A Early<sup>2</sup>, C Chisholm<sup>3</sup> and JR Swanson<sup>1</sup>



- Location: University of Virginia
- Setting: 51 bed unit with ~200 <35 week admissions per year
- Population: All <35 week infants are admitted to NICU
- Observed 22 deliveries to identify major issues that were recurrent
- After identification of these drivers, develop thermoregulation guidelines
- Process measures: room temperature, use of mattress, use of plastic wrap, and adherence to guideline
- Temperature used: temperature on arrival to the NICU

## QUALITY IMPROVEMENT

# Implementation of a multidisciplinary guideline improves preterm infant admission temperatures

MW Harer<sup>1,4</sup>, B Vergales<sup>1</sup>, T Cady<sup>2</sup>, A Early<sup>2</sup>, C Chisholm<sup>3</sup> and JR Swanson<sup>1</sup>



**Table 2.** Observations and plan to address the problems

<i>Observation</i>	<i>Plan</i>
Wide range of room temperatures at delivery No uniform use of EM or PB	Goal operating room temperature > 22.8 °C (73 °F) Guideline of when to use EM and PB <ul style="list-style-type: none"><li>• EM for all babies &lt; 35 weeks</li><li>• PB for all babies &lt; 32 weeks</li></ul>
No axillary temperatures taken in the delivery room	Take an axillary temperature at 10 min of age and every 10 min subsequently until arrival in the NICU
Different transport methods	Develop uniform method of transporting different gestational age groups <ul style="list-style-type: none"><li>• Transport &lt; 28 week babies with NICU incubator and shuttle</li><li>• Transport &gt; 28 week babies with transport-specific incubator</li></ul>

Abbreviations: EM, exothermic mattress; NICU, Neonatal Intensive Care Unit; PB, polyurethane bag.

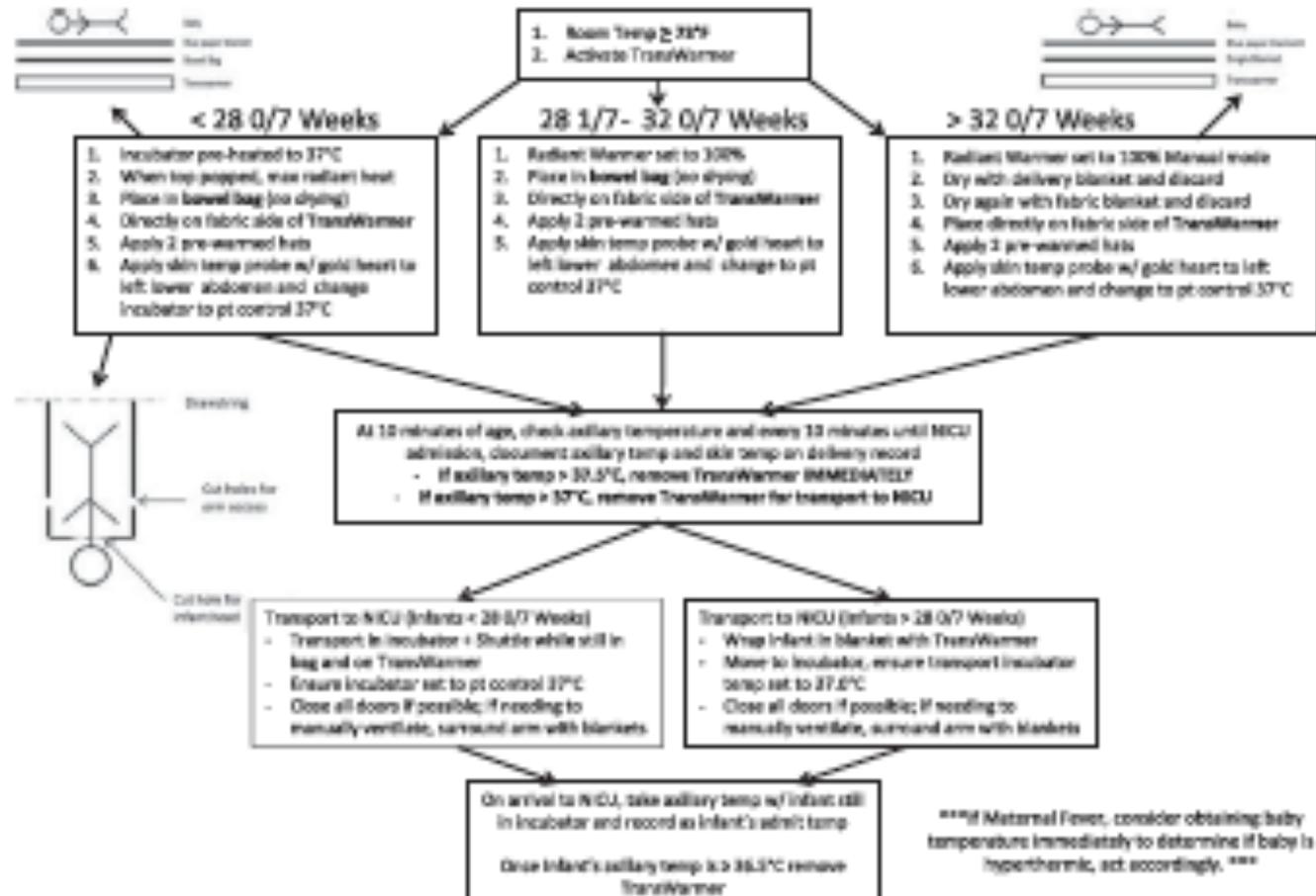
## QUALITY IMPROVEMENT

# Implementation of a multidisciplinary guideline improves preterm infant admission temperatures

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### Delivery Room Thermoregulation Guideline for Infants < 35 Weeks



## QUALITY IMPROVEMENT

# Implementation of a multidisciplinary guideline improves preterm infant admission temperatures

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Population	Guideline
<28 weeks	<ul style="list-style-type: none"><li>• Incubator preheated to 37°C</li><li>• Place in bowel bag</li><li>• Directly on fabric side of warming mattress</li><li>• 2 pre warmed hats</li><li>• Apply skin temp probe to abdomen</li></ul>
28— 32 weeks	<ul style="list-style-type: none"><li>• Radiant warmer set to 100%</li><li>• Place in bowel bag</li><li>• Directly on fabric side of warming mattress</li><li>• 2 pre warmed hats</li><li>• Apply skin temp probe to abdomen</li></ul>
32 – 35 weeks	<ul style="list-style-type: none"><li>• Radiant warmer set to 100%</li><li>• Dry with delivery towel and discard</li><li>• Directly on fabric side of warming mattress</li><li>• 2 pre warmed hats</li><li>• Apply skin temp probe to abdomen</li></ul>

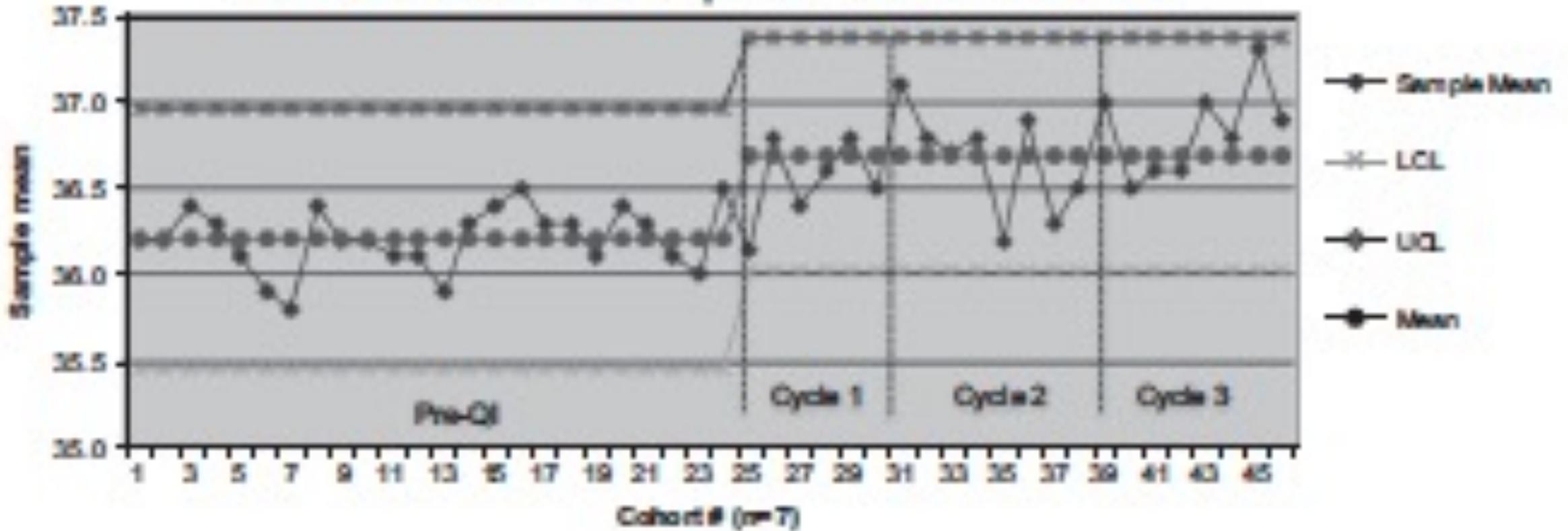
## QUALITY IMPROVEMENT

# Implementation of a multidisciplinary guideline improves preterm infant admission temperatures

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X-bar Chart for Admission Temperatures in Infants < 35 weeks



# A Quality Improvement Intervention to Decrease Hypothermia in the Delivery Room Using a Checklist

*Alexandra Vinci, MD, FAAP\*†; Shahidul Islam, MPH, PStat®\*†; Lyn Quintos-Alegheband, MD\*†; Nazeeh Hanna, MD\*†; Amrita Nayak, MD\*†*



- Location: NYU Winthrop Hospital
- Setting: Level IV, 45 bed NICU with 700 admissions per year
- Population: <32 weeks' gestation (100 born annually)
- Baseline: 50% of infants <32w hypothermic
- Process measures: intervention of a checklist, tracking list deficiencies over time
- Outcomes: Hypothermia main outcome with hyperthermia as balancing measure

# A Quality Improvement Intervention to Decrease Hypothermia in the Delivery Room Using a Checklist

Alexandra Vinci, MD, FAAP\*†; Shahidul Islam, MPH, PStat®\*†; Lyn Quintos-Alegheband, MD\*†; Nazeeh Hanna, MD\*†; Amrita Nayak, MD\*†



**Table 1. Delivery Room Checklist to Prevent Hypothermia**

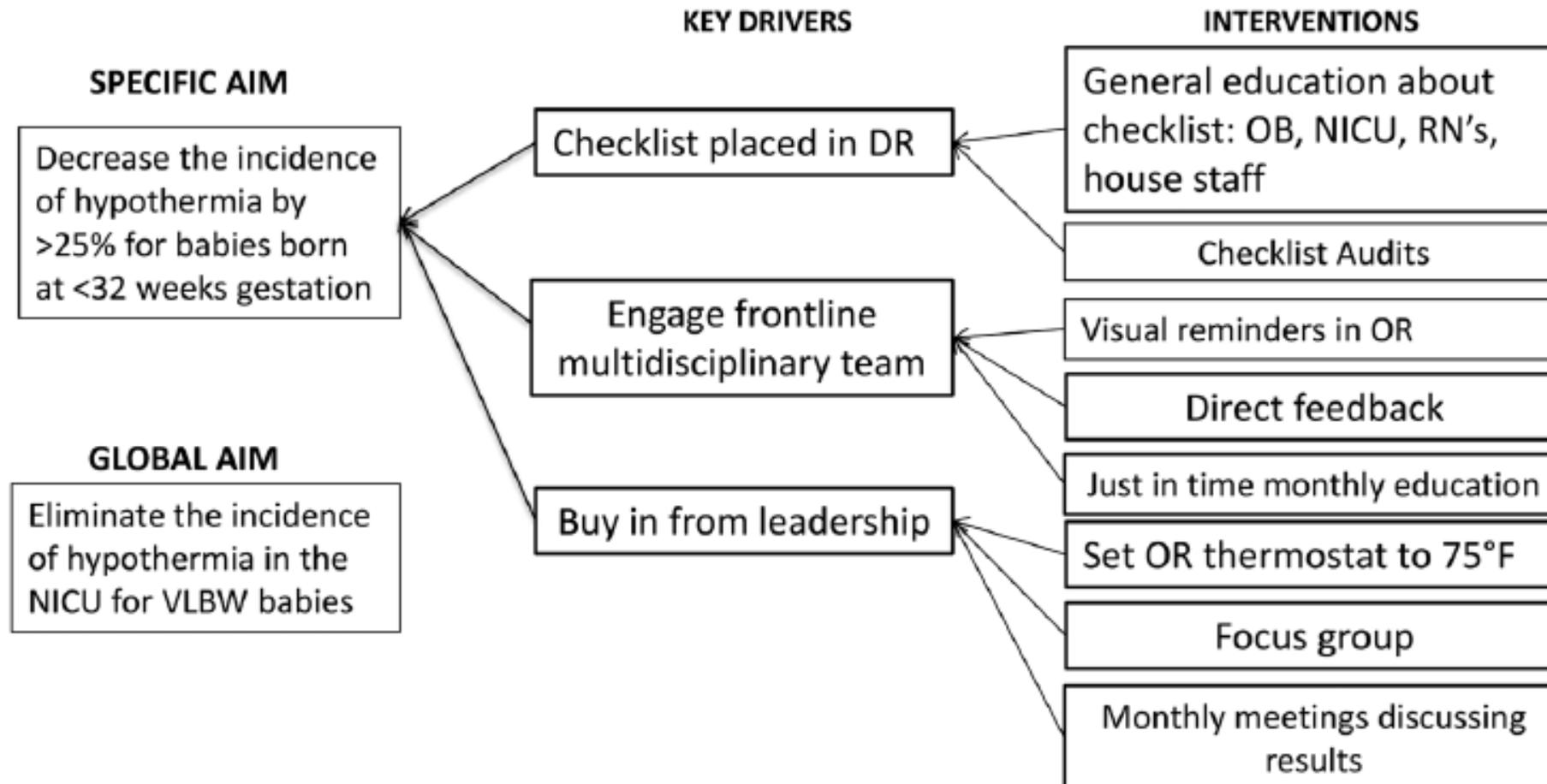
<b>Premature Infants &lt;32wk GA* Delivery Room Checklist</b>			
<b>Patient Name:</b>		<b>MR#</b>	<b>Date:</b>
	Before delivery:		
1	NICU charge nurse and respiratory therapy aware of pending delivery/admission	YES	NO
2	OR temperature set at 75°F	YES	NO
3	OR temperature at time of delivery	Temperature:	
4	Infant warmer turned on	YES	NO
5	Warm blankets under radiant warmer	YES	NO
6	Gel pad placed under infant	YES	NO
7	Polyethylene bag on warm blankets	YES	NO
8	Temperature probes plugged into warmer	YES	NO
9	Transport incubator turned on	YES	NO
	After delivery:		
10	Rectal temperature within 30 minutes of birth	Temperature:	

GA = gestational age

# A Quality Improvement Intervention to Decrease Hypothermia in the Delivery Room Using a Checklist



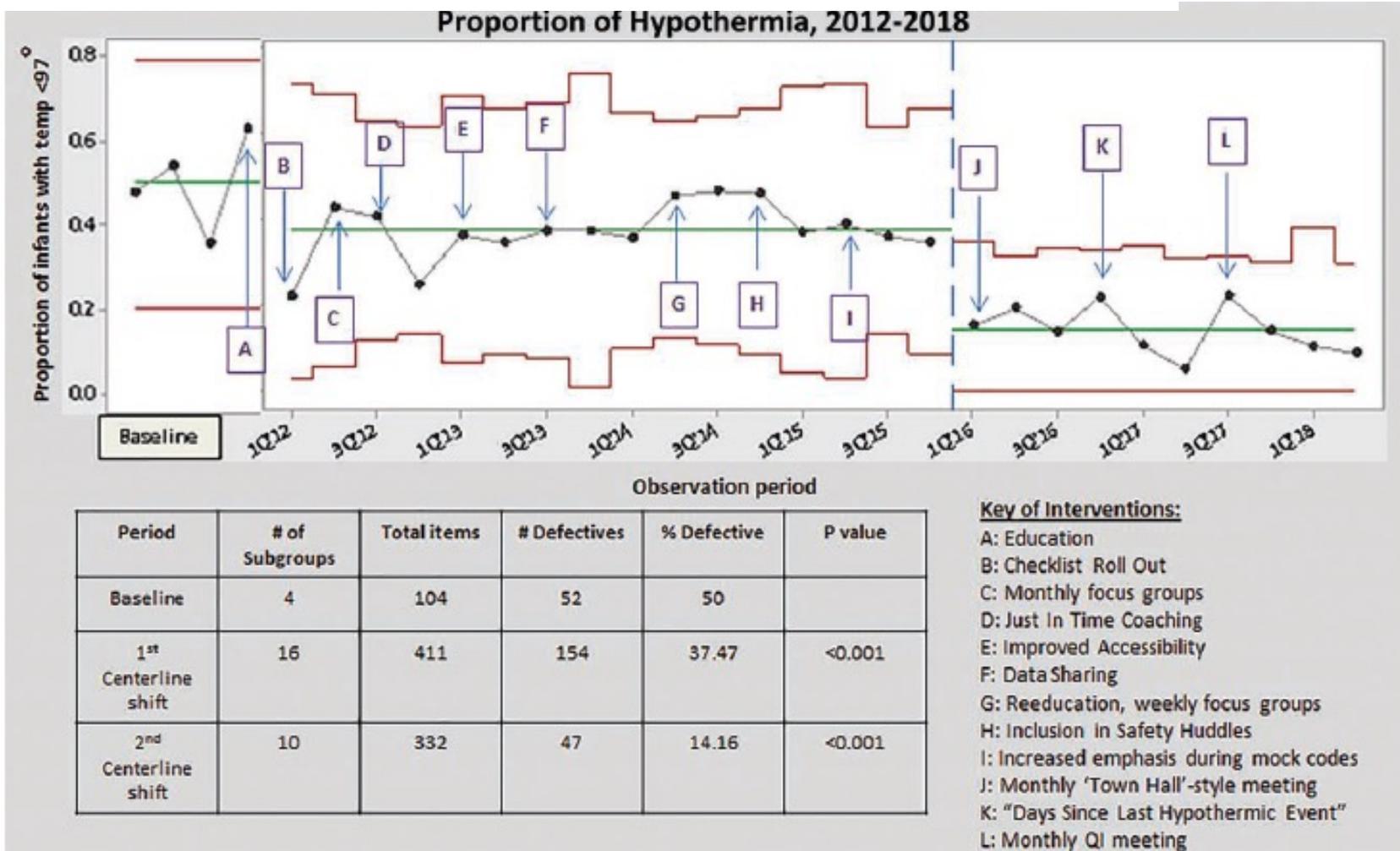
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# A Quality Improvement Intervention to Decrease Hypothermia in the Delivery Room Using a Checklist



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# A multimodal quality improvement approach to promote normothermia in very preterm infants

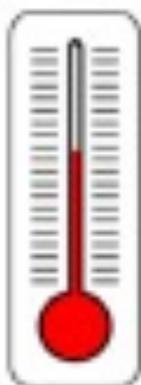
Aneurin Young<sup>1</sup> | Fameesh Azeez<sup>2</sup> | Santan Pawalu Godad<sup>2</sup> | Preethish Shetty<sup>3</sup> |  
Alok Sharma<sup>2</sup> →



- Location: tertiary NICU in Southern England
- Population: infants born at <30 weeks' gestation
- Phase I: simulation of T-ABC (temperature, airway, breathing, circulation)
- Phase II: role assignment, periodic axillary temperature (at resuscitation, upon NICU arrival, upon transfer to isolette), hypothermia interventions
- Phase III: dedicated member to monitoring temperature

# A multimodal quality improvement approach to promote normothermia in very preterm infants

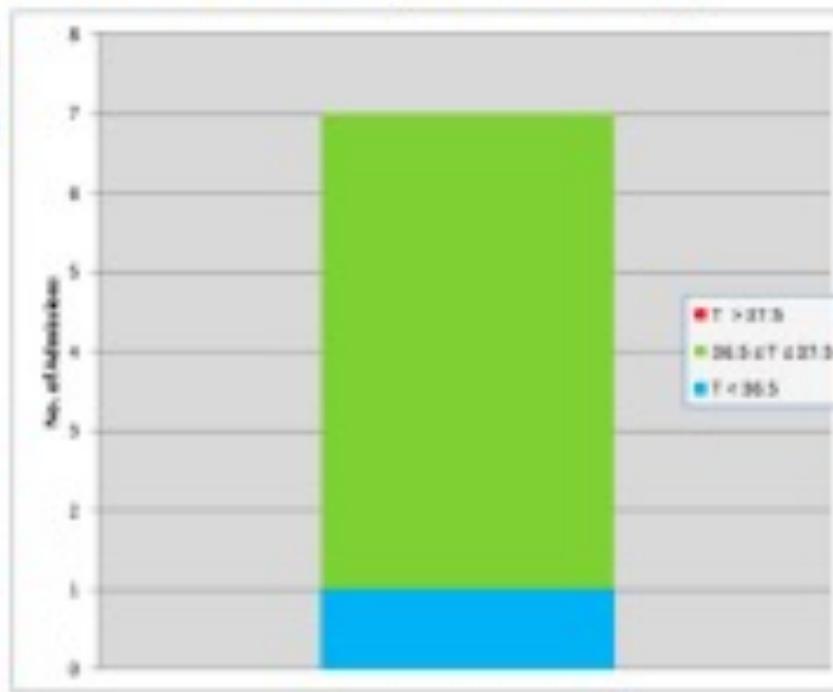
Aneurin Young<sup>1</sup> | Fameesh Azeez<sup>2</sup> | Santan Pawalu Godad<sup>2</sup> | Preethish Shetty<sup>3</sup> | Alok Sharma<sup>2</sup>



## TEMPERATURE ON ADMISSION

Admissions December 2017 (<31wk only)

Temperature Range	No. of Admissions	%
T > 37.5	0	0%
36.5 ≤ T ≤ 37.5	6	60%
T < 36.5	2	20%
<b>Total Admissions &lt;31wk (others, first episode only)</b>	<b>7</b>	

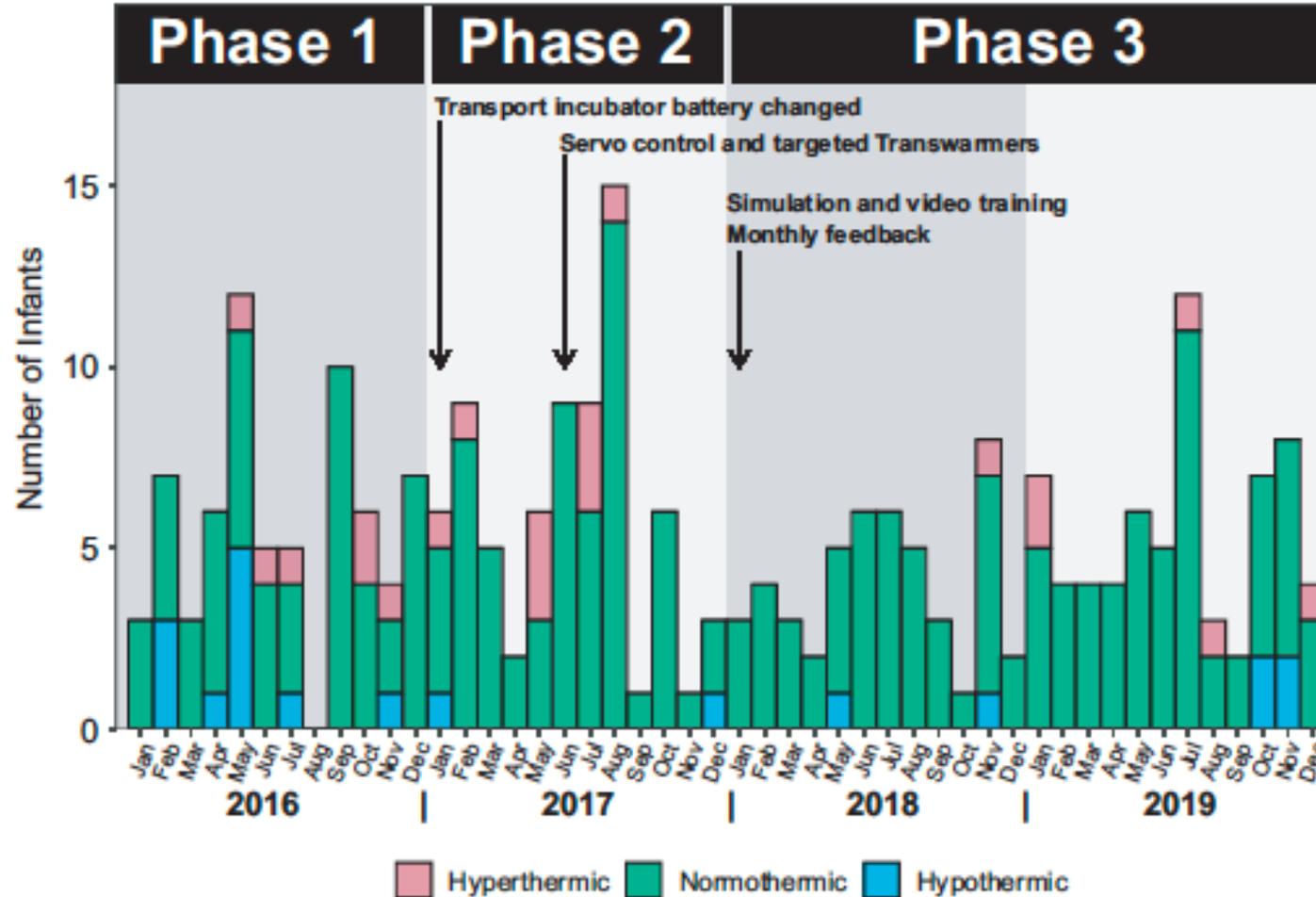


We are displaying data for temperature on admission every month, to show how we are performing and improving over time.

# A multimodal quality improvement approach to promote normothermia in very preterm infants



Aneurin Young<sup>1</sup> | Fameesh Azeez<sup>2</sup> | Santan Pawalu Godad<sup>2</sup> | Preethish Shetty<sup>3</sup> | Alok Sharma<sup>2</sup>





# Hypothermia Tableau Visualization

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Revert Filters

Hide Filters

Measure Names

- All-Hospitals
- Your-Hospital

Hospital: No Hospital

Race: (All)

Birth Wt: (All)

Date: (All)

GA: (All)

Levels: (All)

Hospitals: (All)

Navigation Tabs

Raw Temp

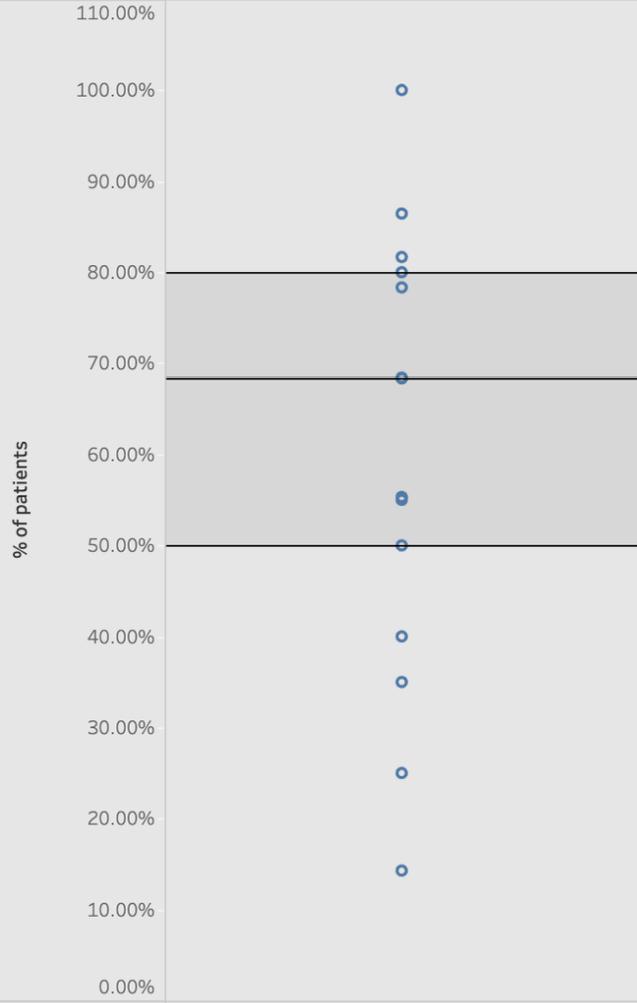
Control Charts

Race/Ethnicity Data

Main Page



Normothermic ( $\geq 36.5$  &  $< 37.5$  C)



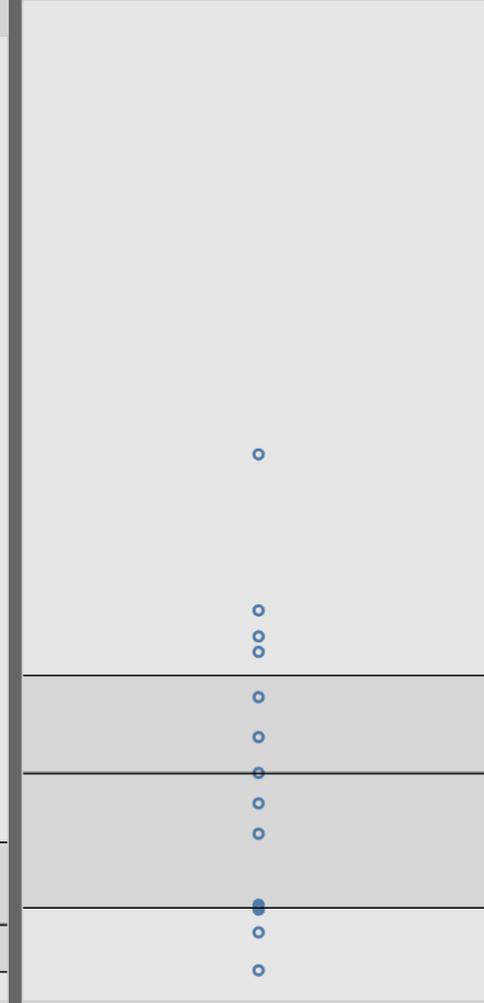
Normothermic ( $\geq 36.5$  &  $< 37.5$  C)

Moderate to Severe Hypothermia ( $< 35.9$  C)



Moderate to Severe Hypothermia ( $< 35.9$  C)

Mild Hypothermia ( $\geq 35.9$  &  $< 36.5$  C)



Mild Hypothermia ( $\geq 35.9$  &  $< 36.5$  C)

Hyperthermia ( $\geq 37.5$  C)



Hyperthermia ( $\geq 37.5$  C)

Revert Filters

Hide Filters

Measure Names

All-Hospitals

Your-Hospital

Hospital

Race

(All)

Birth Wt

(All)

Date

(All)

GA

(All)

Levels

(All)

Hospitals

(All)

Navigation Tabs

Raw Temp

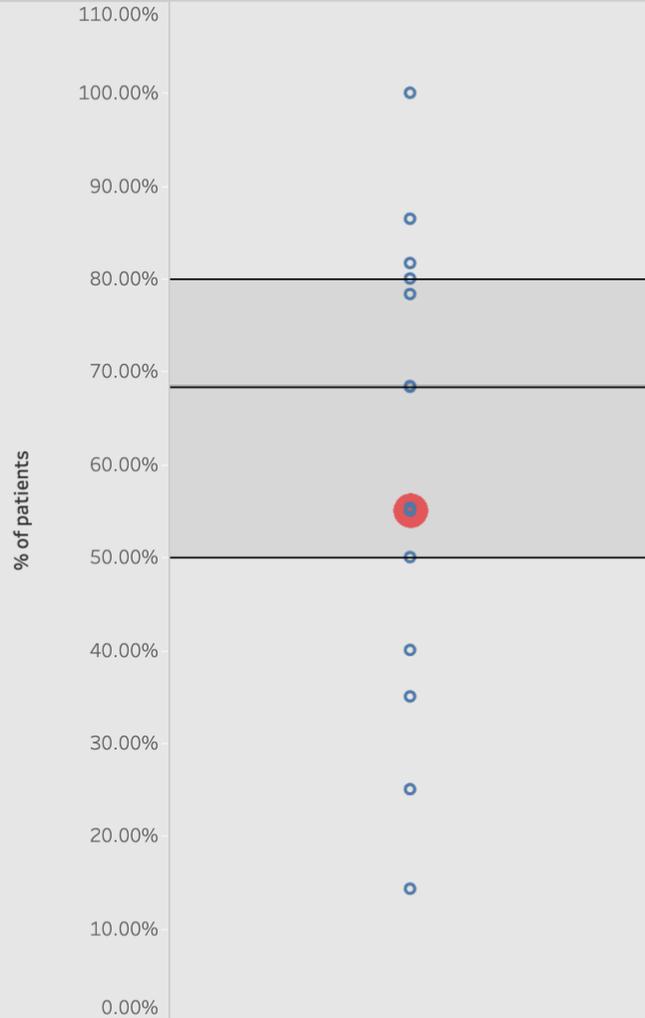
Control Charts

Race/Ethnicity Data

Main Page

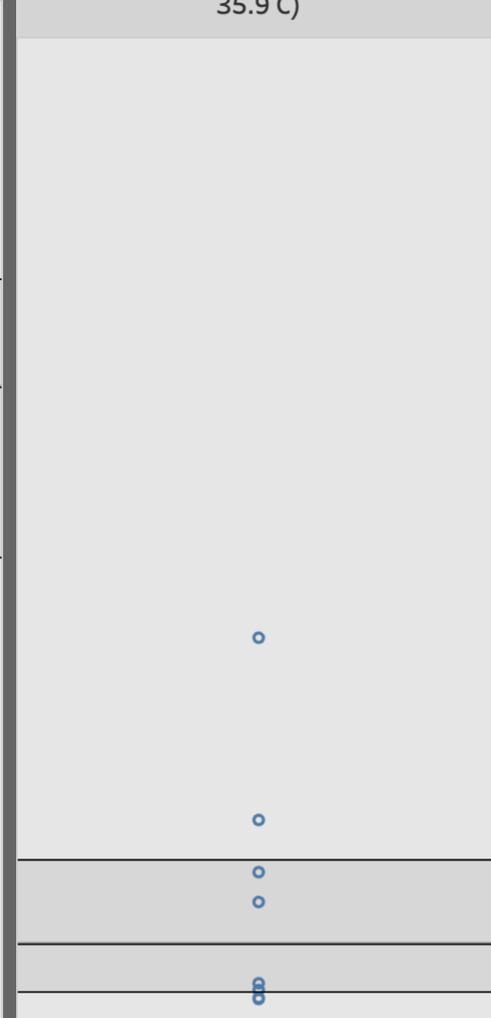


Normothermic ( $\geq 36.5$  &  $< 37.5$  C)



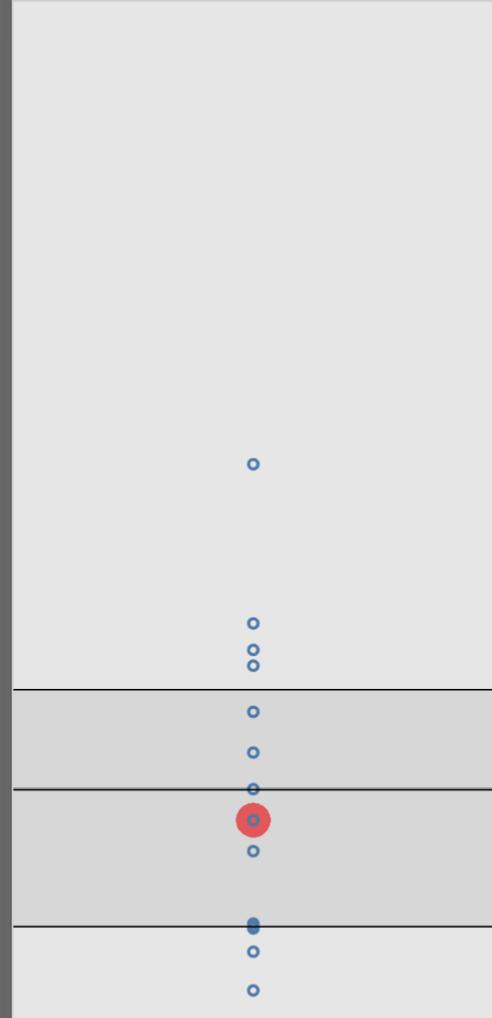
Normothermic  
( $\geq 36.5$  &  $< 37.5$  C)

Moderate to Severe Hypothermia ( $< 35.9$  C)



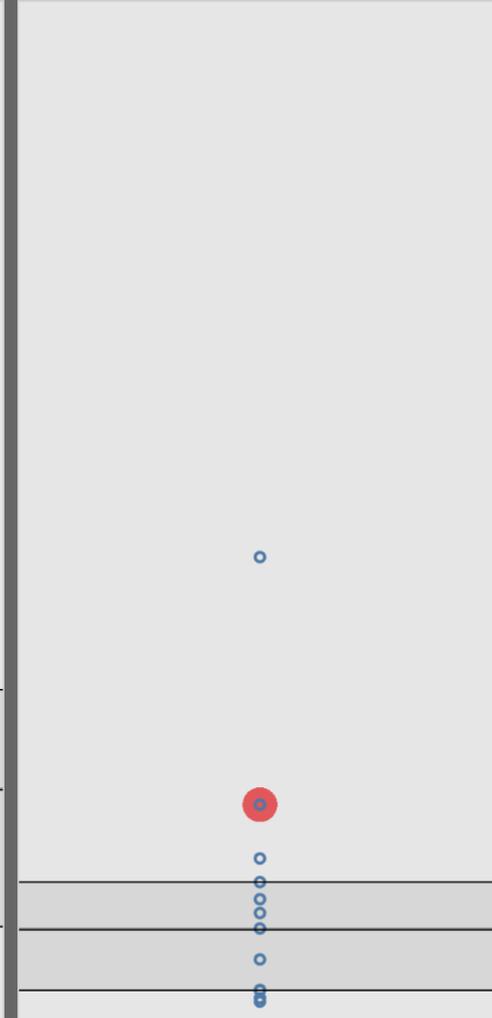
Moderate to Severe Hypothermia  
( $< 35.9$  C)

Mild Hypothermia ( $\geq 35.9$  &  $< 36.5$  C)



Mild Hypothermia  
( $\geq 35.9$  &  $< 36.5$  C)

Hyperthermia ( $\geq 37.5$  C)



Hyperthermia  
( $\geq 37.5$  C)

Revert Filters

Hide Filters

Measure Names

- All-Hospitals
- Your-Hospital

Hospital

Race

Birth Wt

Date

GA

Levels

Hospitals

Navigation Tabs

Raw Temp

Control Charts

Race/Ethnicity Data

Main Page



Normothermic ( $\geq 36.5$  &  $< 37.5$  C)

110.00%

100.00%

90.00%

80.00%

60.00%

50.00%

40.00%

30.00%

20.00%

10.00%

0.00%

% of patients

32 – 35w

Normothermic  
( $\geq 36.5$  &  $< 37.5$  C)

Moderate to Severe Hypothermia ( $< 35.9$  C)

Moderate to Severe Hypothermia  
( $< 35.9$  C)

Mild Hypothermia ( $\geq 35.9$  &  $< 36.5$  C)

Mild Hypothermia  
( $\geq 35.9$  &  $< 36.5$  C)

Hyperthermia ( $\geq 37.5$  C)

Hyperthermia  
( $\geq 37.5$  C)

32 – 35w

Revert Filters

Hide Filters

Legends

- Lower Control Limit
- Upper Control Limit
- Your Hospital
- All Hospitals

Hospital

Outcomes

Thermias

Race

Birth Wt

GA

Date

Your Hospital

Hospitals

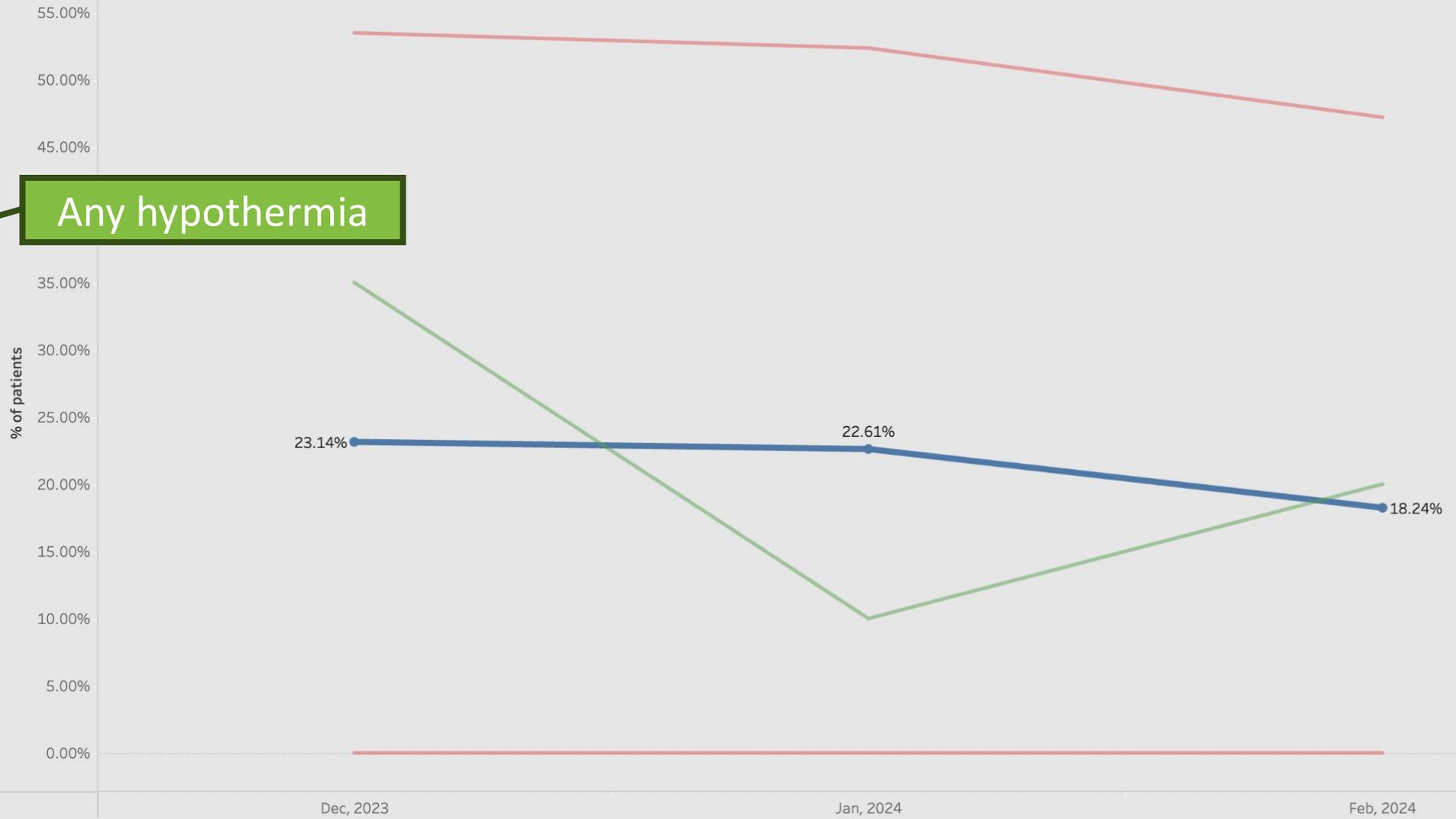
Control Charts

Race/Ethnicity Data

Main Page



Control Charts: All Hospitals Vs. Your Hospital



Any hypothermia

Revert Filters

Hide Filters

Legends

- Lower Control Limit
- Upper Control Limit
- Your Hospital
- All Hospitals

Hospital

Outcomes Mod-Sev Hypot...

Thermias (Multiple values)

Race (All)

Birth Wt (All)

GA (All)

Date (Multiple values)

Your Hospital (All)

Hospitals (All)

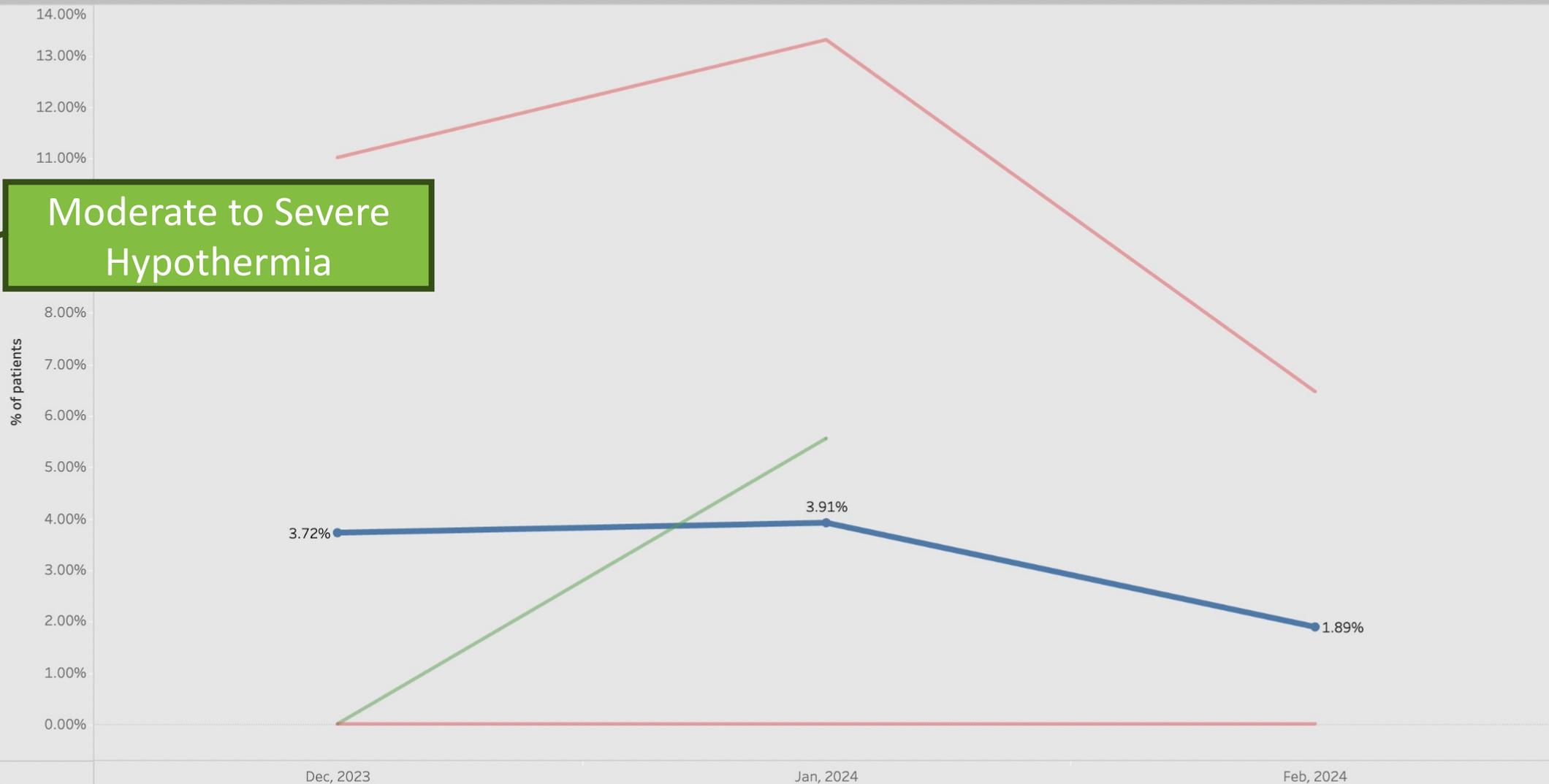
Control Charts

Race/Ethnicity Data

Main Page



Control Charts: All Hospitals Vs. Your Hospital



Moderate to Severe Hypothermia

Revert Filters

Hide Filters

Legends

- Lower Control Limit
- Upper Control Limit
- Your Hospital

All Hospitals

Hospital

Outcomes All measures

Thermias (Multiple values)

Race (Multiple values)

Birth Wt (All)

GA GA >=32 & <35

Date (Multiple values)

Your Hospital (All)

Hospitals (All)

Control Charts

Race/Ethnicity Data

Main Page



Control Charts: All Hospitals Vs. Your Hospital

Moderate to Severe Hypothermia  
32-35w Infants



Revert Filters

Show Filters

Thermias Legends

- Normothermic (>= 36.5 ...)
- Mild Hypothermia (>= 3...
- Hyperthermia (>= 37.5 C)

Races

- Hispanic,White
- Multi Racial
- Native American
- Unknown

Navigation Tabs

Raw Temp

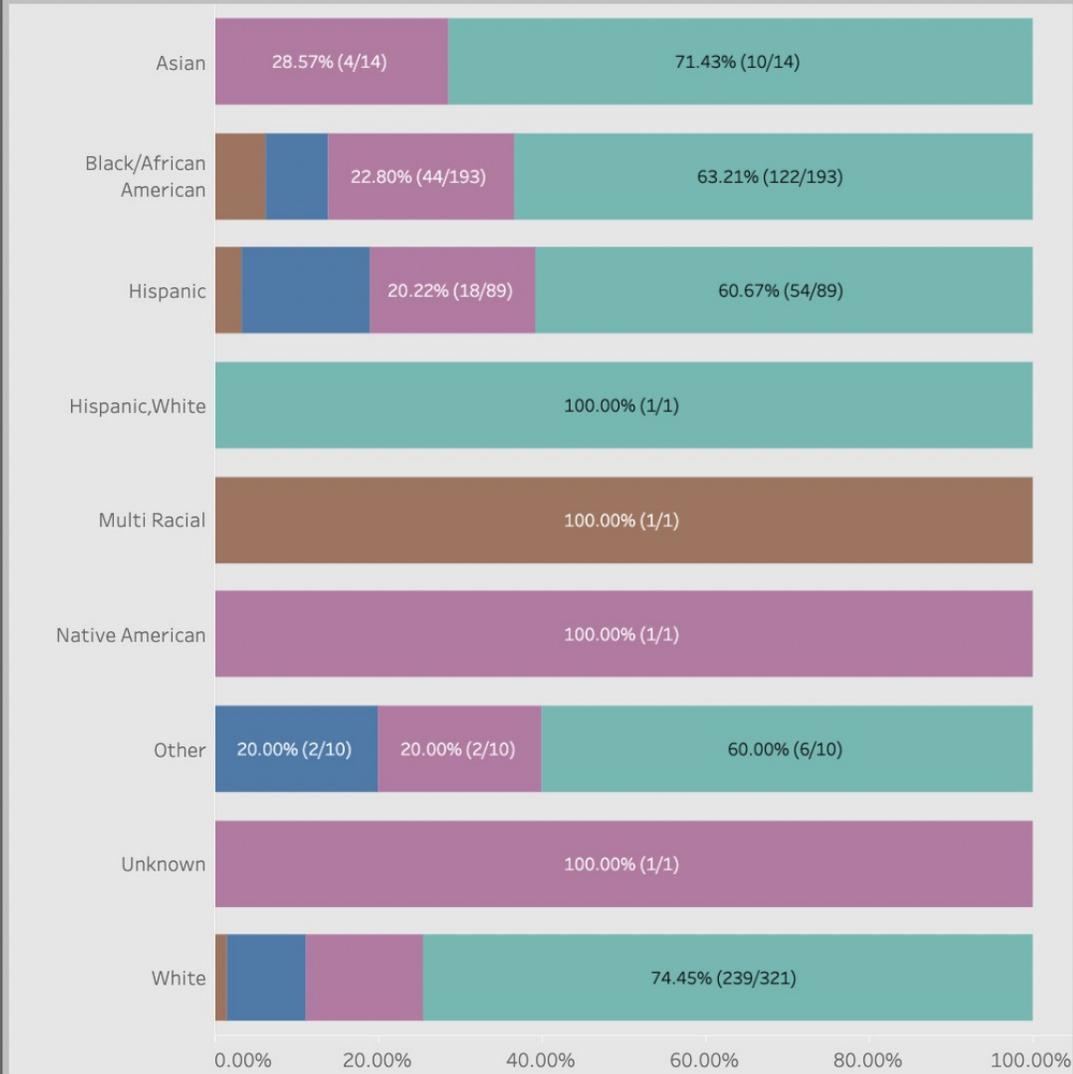
Control Charts

Race/Ethnicity Data

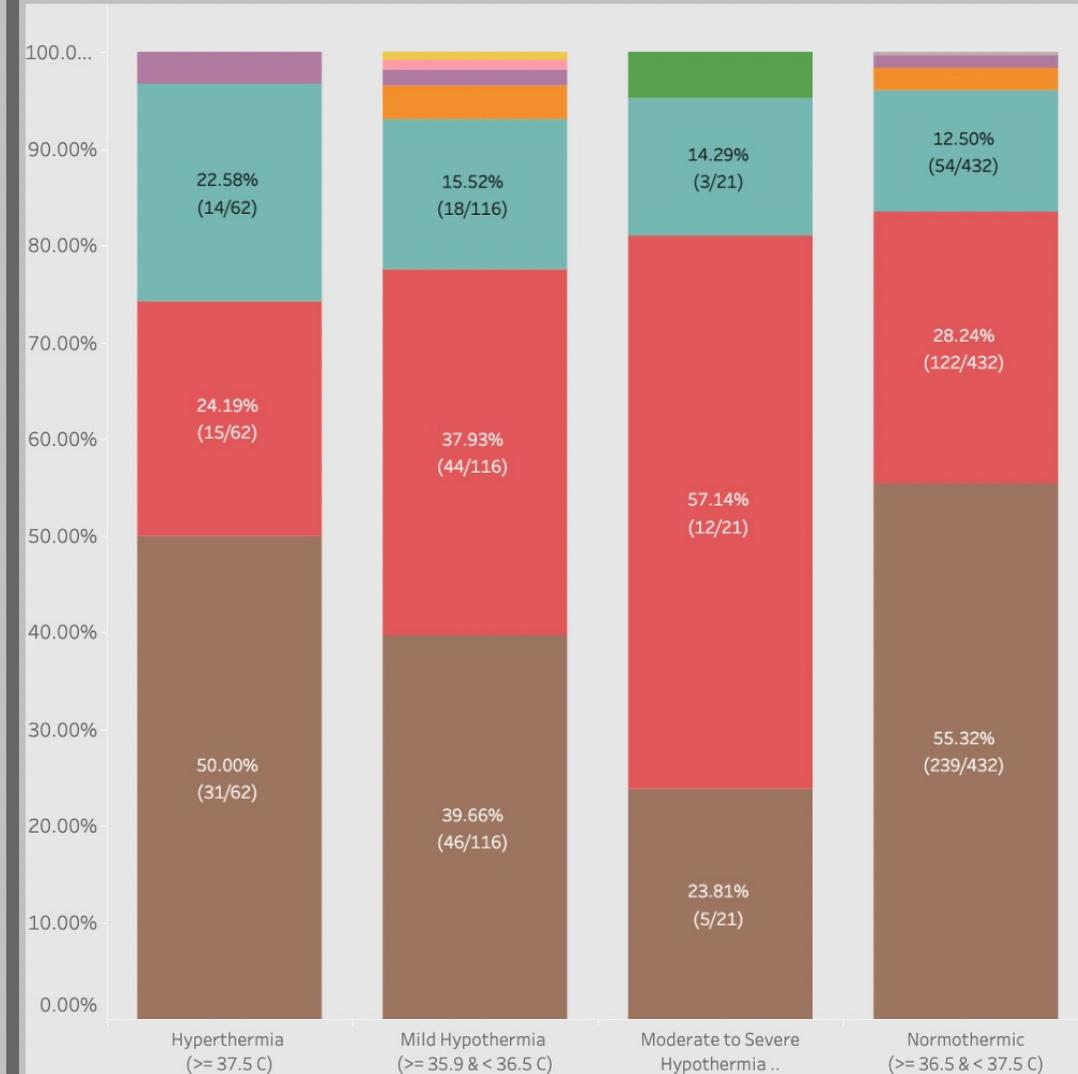
Main Page



Race O2 Thermia Counts %



O2 Thermia Race Counts %





# Golden Hour Tableau Visualization

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Revert Filters

Hide Filters

Legends

- All Hospitals
- Your Hospital

Hospital

Date (All)

Race (All)

Birth Wt (All)

GA (All)

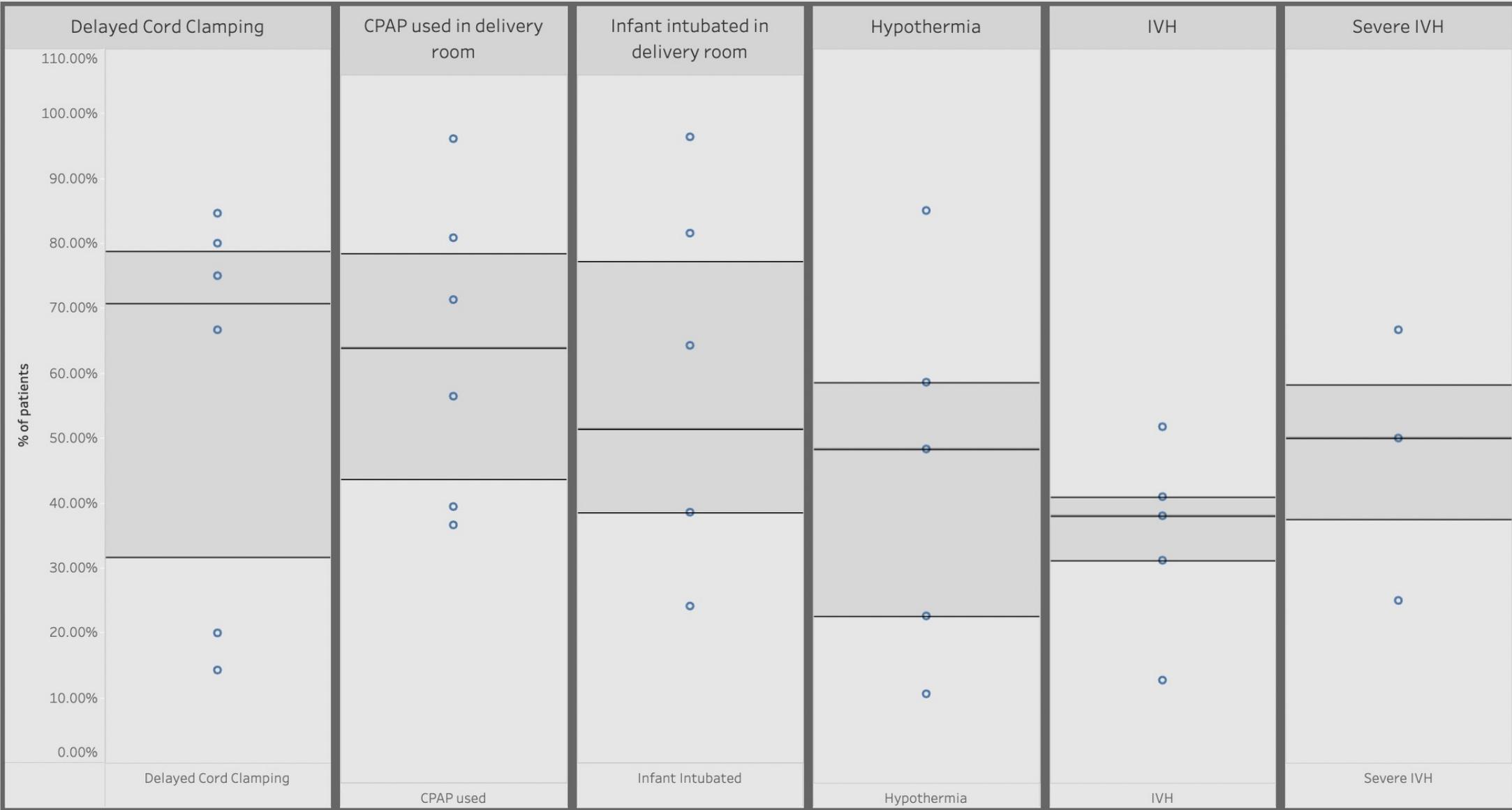
Hospitals (All)

Temp page

Control Charts

Race/Ethnicity Data

Main Page



Revert Filters

Hide Filters

Legends

- All Hospitals
- Your Hospital

Hospital

Date (All)

Race (All)

Birth Wt (All)

GA (All)

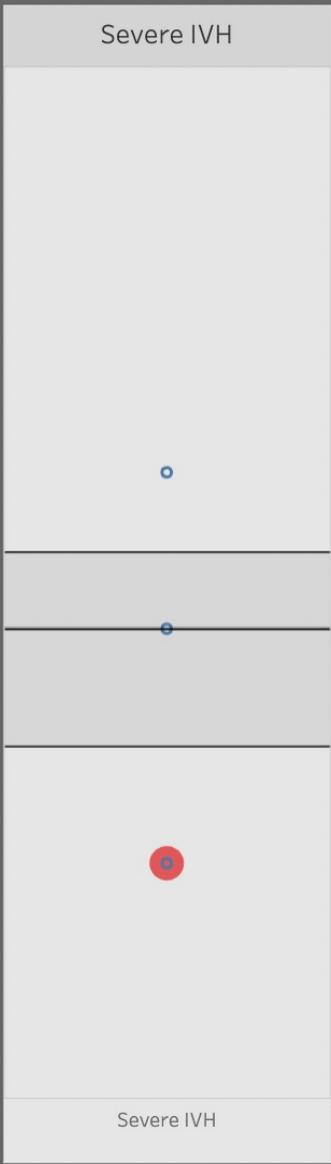
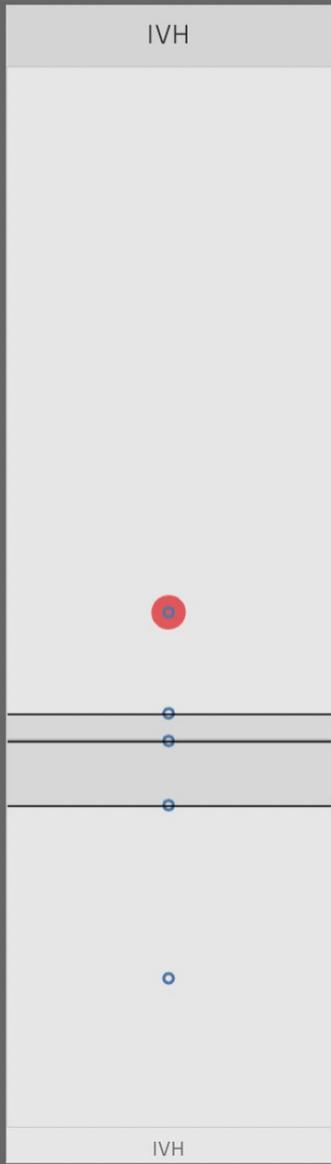
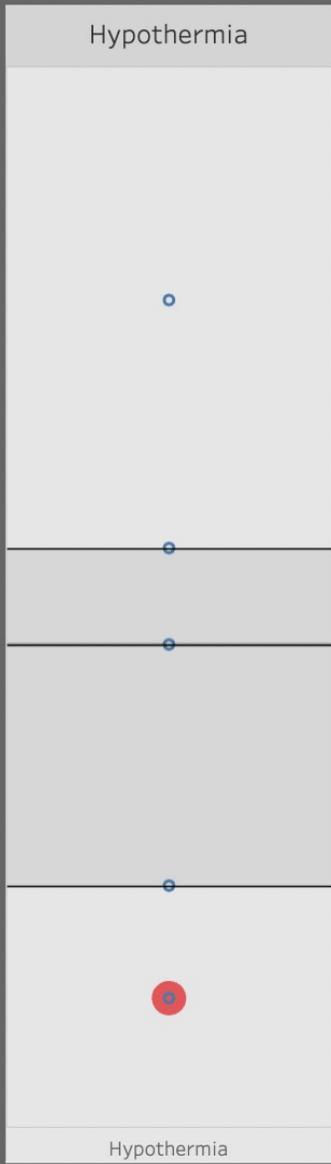
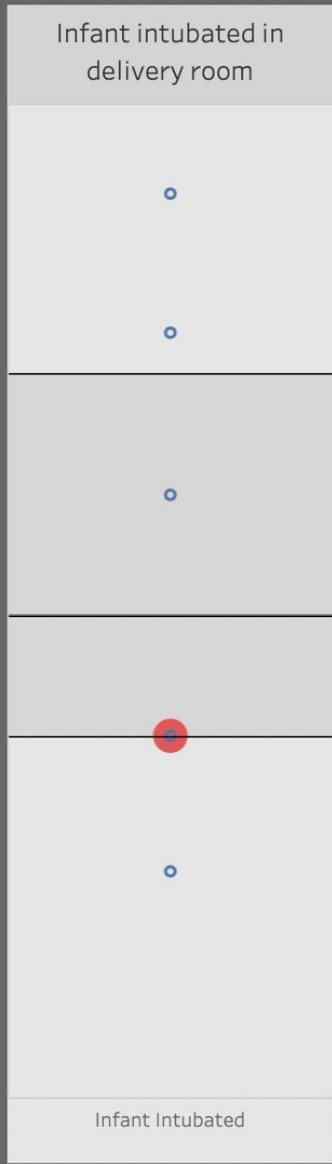
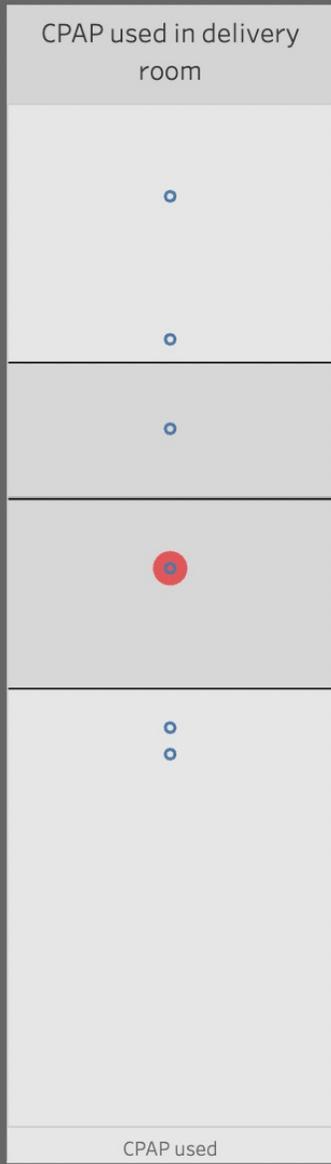
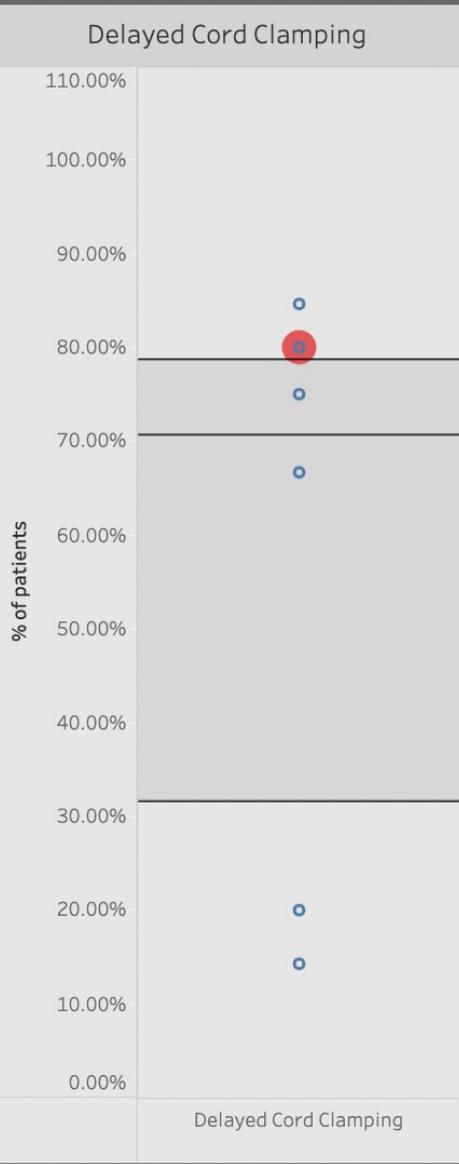
Hospitals (All)

Temp page

Control Charts

Race/Ethnicity Data

Main Page



Revert Filters

Hide Filters

Legends

- All Hospitals
- Your Hospital

Hospital

Date

(All)

Race

(All)

Birth Wt

(All)

GA

(Multiple values)

Hospitals

(All)

Temp page

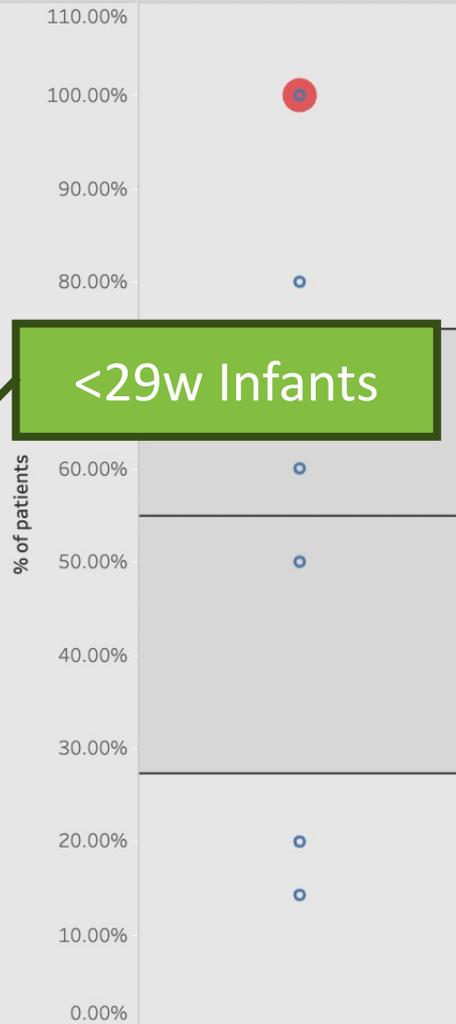
Control Charts

Race/Ethnicity Data

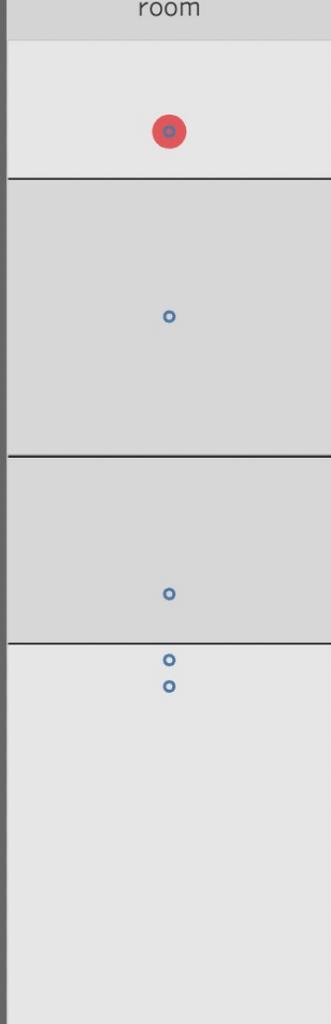
Main Page



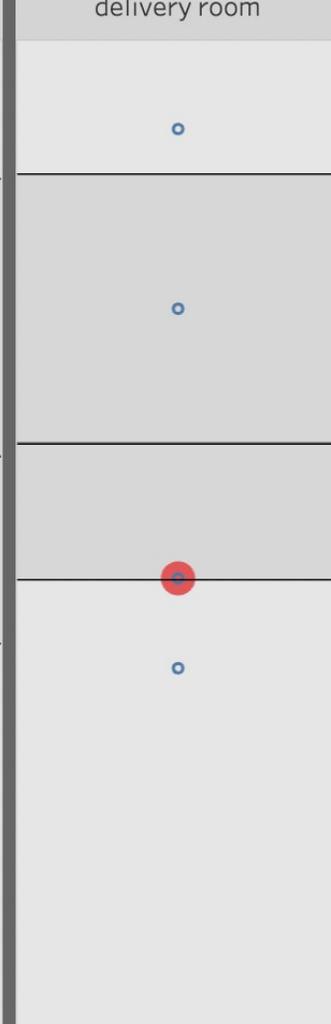
### Delayed Cord Clamping



### CPAP used in delivery room



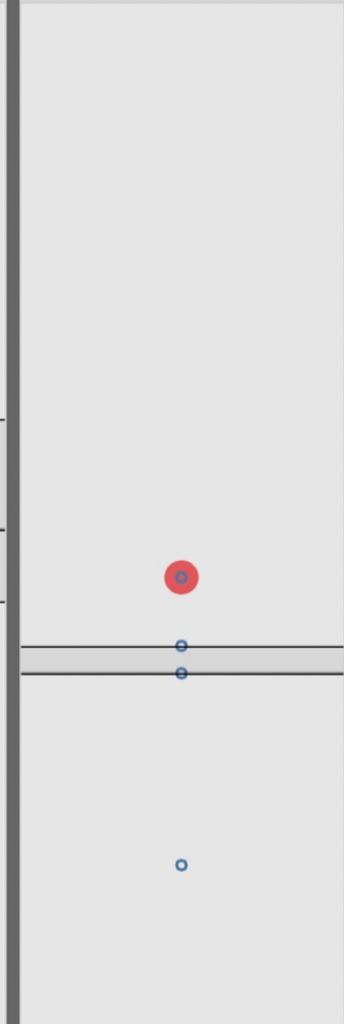
### Infant intubated in delivery room



### Hypothermia



### IVH



### Severe IVH



<29w Infants

Revert Filters

Hide Filters

Measure Names

All-Hospitals

Your-Hospital

Hospital

Birth Wt

(All)

GA

(All)

Date

(All)

Race

(All)

Hospitals

(All)

Temp page

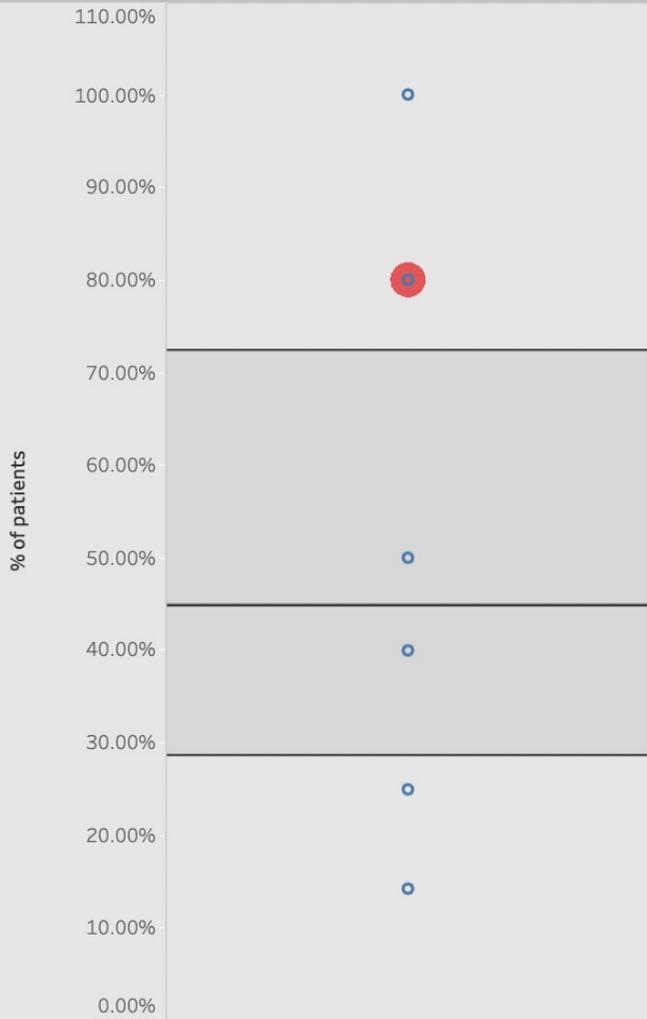
Control Charts

Race/Ethnicity Data

Main Page



Normothermic ( $\geq 36.5$  &  $< 37.5$  C)



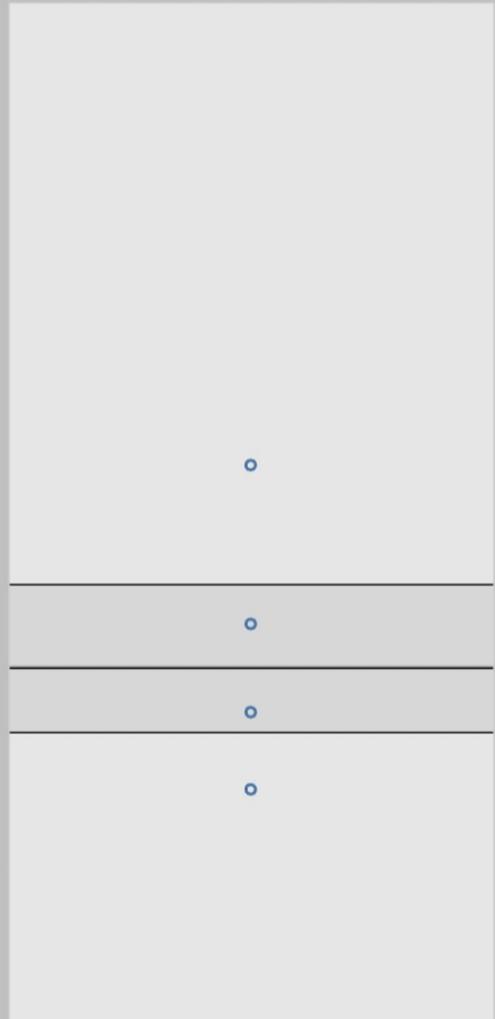
Normothermic  
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Moderate to Severe Hypothermia ( $< 35.9$  C)



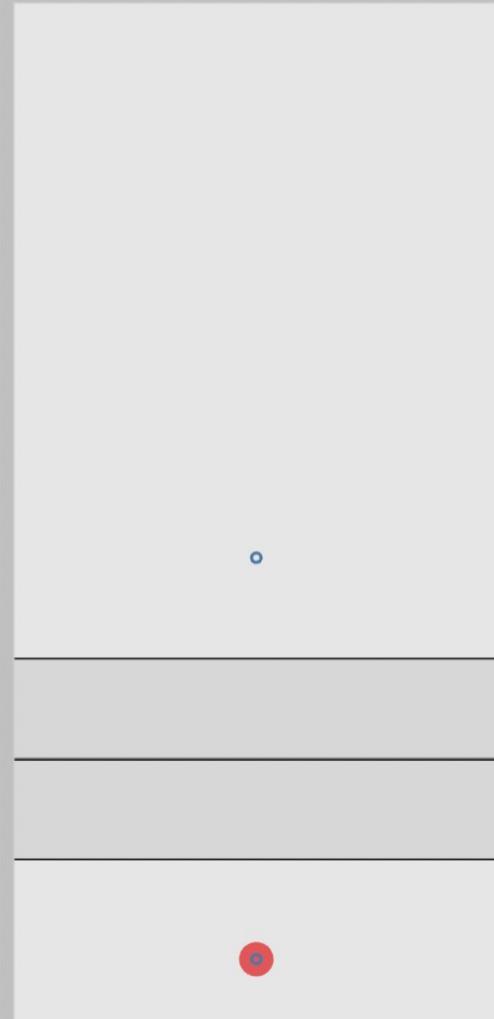
Moderate to Severe Hypothermia  
( $< 35.9$  C)

Mild Hypothermia ( $\geq 35.9$  &  $< 36.5$  C)



Mild Hypothermia  
( $\geq 35.9$  &  $< 36.5$  C)

Hyperthermia ( $\geq 37.5$  C)



Hyperthermia  
( $\geq 37.5$  C)

Revert Filters

Hide Filters

Legends

- Lower Control Limit
- Upper Control Limit
- Your Hospital

All Hospitals

Hospital

Outcomes 03. DCC

Thermias (Multiple values)

Race (All)

Birth Wt (All)

GA (Multiple values)

Date (Multiple values)

Your Hospital (All)

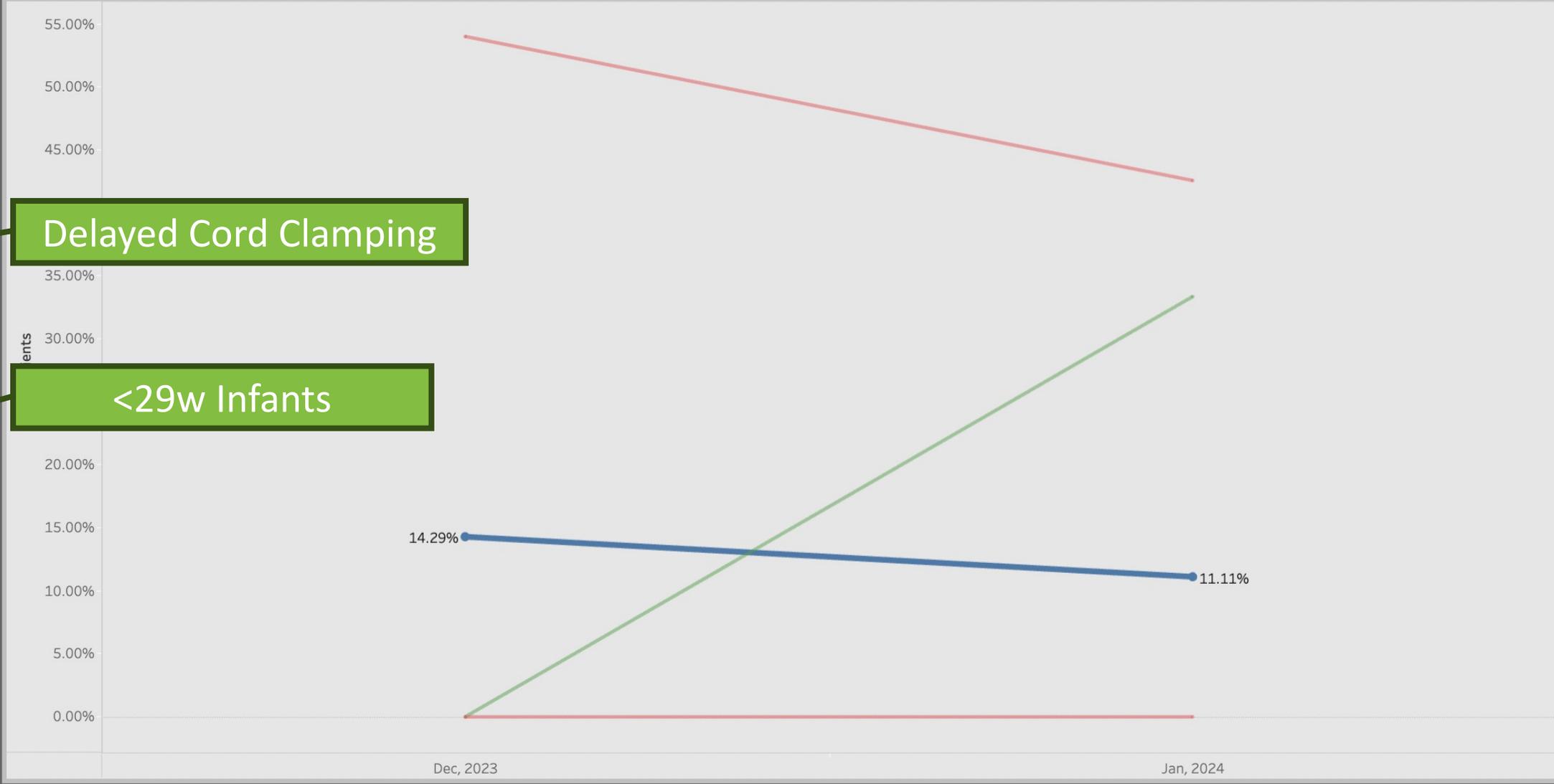
Hospitals (All)

Race/Ethnicity Data

Main Page



Control Charts: All Hospitals Vs. Your Hospital



Delayed Cord Clamping

<29w Infants



# Tableau Access

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- Once the Tableau dashboard is active:
  - Each hospital team will receive an email asking them to set up an Xias account ID
  - This ID will allow you access to your specific hospital's data dashboard
- The Tableau visualizations for each hospital will be discussed in the monthly 1:1 calls to address findings and observations unique to your hospital

# Q&A

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Please feel free to **unmute** and ask questions

You may also enter comments or questions in the “chat” box



# Reminders

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- Remember to register for monthly Action Period Calls via Zoom
  - Action Period calls will take place on the 4<sup>th</sup> Wednesday of every month at 12pm
- Next NOWS Sustainability reporting will be due April 30<sup>th</sup>
  - Reporting period: Jan-Mar 2024
- Monthly data for March will be also be due April 30<sup>th</sup> for NHP
  - Link to survey to be sent on April 15<sup>th</sup>

# Stay Connected!

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**Website:**

**<http://www.alpqc.org>**

**Email:**

**[info@alpqc.org](mailto:info@alpqc.org)**

**Twitter (X): @alpqc**

**<https://twitter.com/alpqc>**

# Next Meeting

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**Wednesday, April 24<sup>th</sup> at 12pm**

# Thank you!

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**Thank you for all your hard work!!**  
**We will see you next month!**