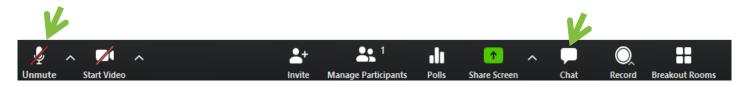


Neonatal Initiatives

Action Period Call May 22nd, 2024 12:00 – 1:00 PM CT

Welcome

- 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 <u>automatically</u> 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

Activity:	Time:
Welcome, Updates, & Reminders	12:00-12:05
External Speaker: Dr. Amrita Nayak	12:05-12:35
NHP March Data Review	12:35-12:45
Q&A	12:45-12:50
Reminders & Next Steps	12:50-12:55
NOWS Sustainability Data Review	12:55-1:00





Updates

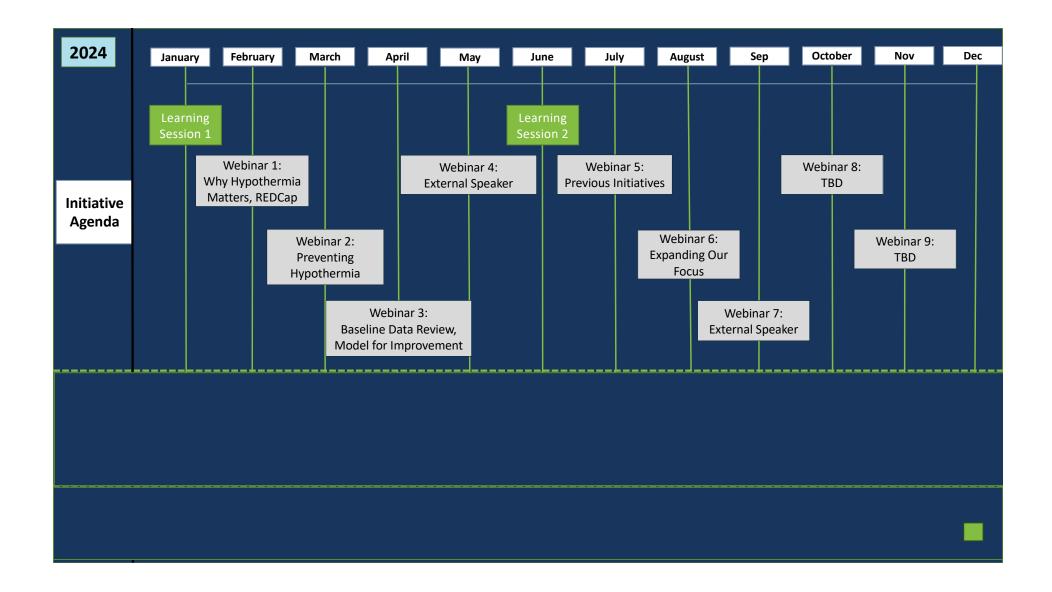
Updates & Reminders



- Monthly (April) NHP data will be due May 31st
 - Links to survey sent on May 15th
 - Please let us know if you did not receive links and we will send them out ASAP
- Tableau access should be live for all hospital teams
 - If you have not received a link to access Tableau, please reach out to Caitlin (<u>caitlinl@uab.edu</u>) and we will get one sent out ASAP
- Quarterly Honor Roll starting in July
 - Points calculated based on April, May, and June data collection and participation in Action Period and 1:1 calls

Hospitals who have entered 100% of their Monthly Data for April (as of 05/22/24)

1. East Alabama Medical Center (x2)	2. USA Children's and Women's Hospital
3. Madison Hospital	4. Marshall Medical North
5. Gadsden Regional Medical Center	6. Baptist Medical Center East
7. Huntsville Hospital for Women & Children (x2)	8. Jackson Hospital
9. Russell Medical Center	10. Baptist Medical Center South
11. Medical Center Enterprise	12. Brookwood Medical Center





External Speaker: Dr. Amrita Nayak

Improving the success rate of maintaining normothermia in the delivery room: a Quality Improvement project

Amrita Nayak MD FAAP CHSE

New York University Langone Health System – Long Island Hospital

NYU Grossman Long Island School of Medicine



I have no relevant financial relationships to disclose



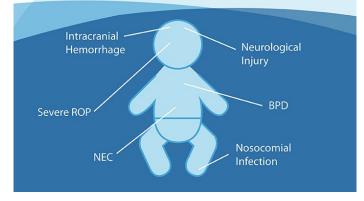
Background

- Premature babies are at increased risk of hypothermia, core body temperature <97°F due to evaporative heat loss, decreased heat production and delivery room environment.
- Cold delivery room environment may contribute and lead to complications.
- At birth, infants are covered in fluid and prone to evaporative heat loss, resulting in hypothermia.
- Term infants transition well after drying under the radiant warmer but very low birth weight infants (VLBW) cannot thermoregulate well due to minimal subcutaneous fat and immature nervous system.
- Hypothermia in VLBW infants results in many complications such as hypoglycemia, neurological impairment and longer hospital stay.
- One study demonstrated an increase in mortality of 28% with every decrease of 1°C in core body temperature.

TYPES OF NEONATAL HEAT LOSS



Potential complications for cold, stressed or hypothermic babies



Objectives

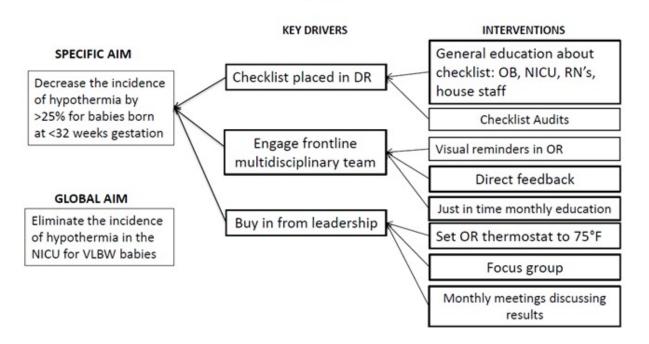
- In a retrospective chart review among our NICU admissions in 2011, 48% of infants less than 1500 gm had admission temperatures less than 36°C compared to the 25% in the Vermont Oxford Network.(National database)
- The objective of this study was to reduce hypothermia in VLBW infants by 25% in 2012.



Key Driver Diagram

Key Driver Diagram

A Quality Improvement Initiative to Improve Rates of Normothermia in the Delivery Room



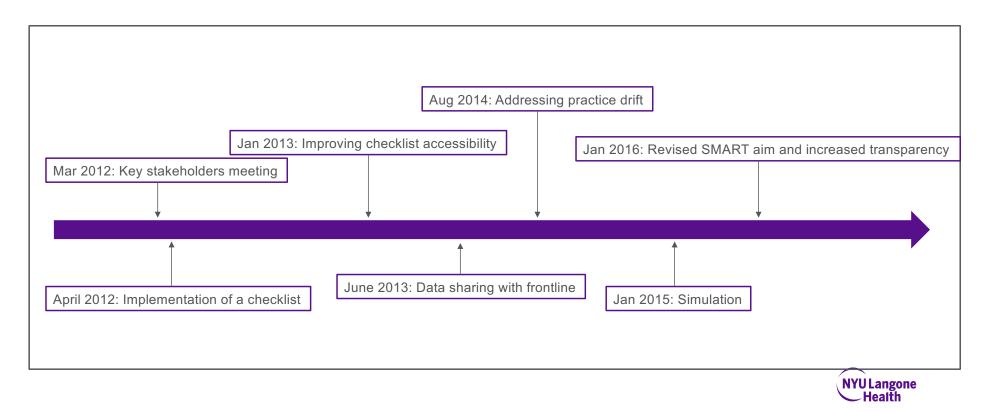


Checklist

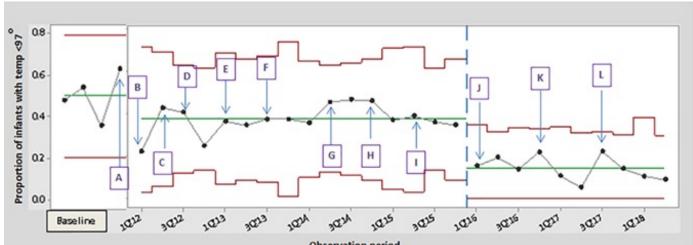
	Premature Infants <32 weeks GA Delivery Room Checklist									
Patie	ent Name:	MR#	Date:							
	Before Delivery:									
1	NICU Charge Nurse and Respiratory Therapy	YES	NO							
	aware of pending delivery/admission									
2	OR Temperature set at 75°F	YES	NO							
3	OR Temperature at time of delivery 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:								



Time line of interventions



Results



Observati	
	are bearing

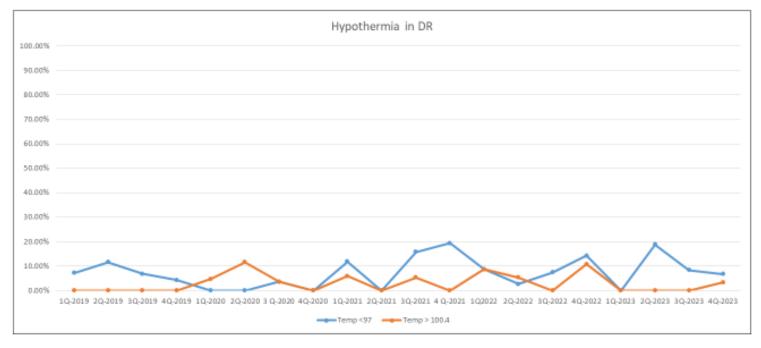
Period	# of Subgroups	Total items	# Defectives	% Defective	P value	
Baseline	4	104	52	50		
1st 16 Centerline shift 2nd 10 Centerline shift		411	154	37.47	<0.001	
		332	47	14.16		

Key of Interventions:

- A: Education
- B: Checklist Roll Out
- C: Monthly focus groups
- D: Just In Time Coaching
- E: Improved Accessibility
- F: Data Sharing
- G: Reeducation, weekly focus groups
- H: Inclusion in Safety Huddles
- I: Increased emphasis during mock codes
- J: Monthly 'Town Hall'-style meeting
- K: "Days Since Last Hypothermic Event"
- L: Monthly QI meeting



Through the years....



VON data

	VON 2022	2014	2015	2016	2017	2018	201 9	2020	2021	2022	2023	2024
Temp< 36	12.6	38.6	33.8	22.2	10.1	11.1	7.9	5.9	5.1	10.4	10.3	12.6
Temp> 37.5	6.5	3.4	2.8	6.2	9.1	6.5	14. 6	16.2	17.9	23.4	6.9	6.5





① Start presenting to display the audience questions on this slide.



How many feel that there is push back from the L and D in terms of OR temp

(i) Start presenting to display the poll results on this slide.



Buy in from leadership

① Start presenting to display the poll results on this slide.



Is there a point QI person to contact if there is a hypothermic infant in the NICU on admission

① Start presenting to display the poll results on this slide.



Is there a PSI placed every time there is a hypothermic infant?

(i) Start presenting to display the poll results on this slide.

Conclusions

- Collaboration between the OB and NICU teams was very important to make this project successful.
- Compliance with the checklist was essential to evaluate the gap in maintaining normothermia
- Buy in from engineering to set the room temp at 75 F for any preterm delivery < 32 weeks.
- Timely huddles with interdisciplinary groups to hardwire the protocol
- ACA for every baby who is hypothermic till the incidence decreases
- Re-education at regular intervals



Future Directions

- We have extended our success in delivery room thermoregulation through the years to include post op management, well baby nursery, recovery room and ED.
- We use checklists and protocols to decrease hypothermia system wide in the neonatal population.



resource-deprived regions."

Checklists have long been adopted for use by the aviation industry to ensure safety.

Checklists serve as useful tools in healthcare for reducing medical errors that lead

al¹² in the intensive care unit at John Hopkins Hospital demonstrated that checklists decreased the incidence

of central line-associated infection as well as improved

patient care and communication. The World Health patient care and communication. Ine world Health Organization incorporated this concept in 2006 into their Surgical Safety Checklist and Guidelines for Safe Surgery. 17 The Safety Checklist significantly reduced mo-bidity and mortality in a multicenter study. 18 In addition to

reducing medical error and near misses, checklists ensure adherence to updated clinical practice guidelines. 55,36

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

Alexandra Vinci, MD, FAAP*†; Shabidul Islam, MPH, PStat®*†; Lyn Quintos-Alegheband, MD*†; Nazeeh Hanna, MD*†; Annita Navak, MD*†

Abstract introduction Premium behind and increased risk of hypothermia, core body temperature -GPT. Delivery norm environment may contribute and less that correlations. The describe was to window hypothermia in bables -G2 weeks of gestation in the ableviery contributes and less of the complex of the contribution of the contr

INTRODUCTION

Hypothermia is a complication of prema-turity that results in increased morbidity and mortality. It may lead to unwanted outcomes, such as hypoglycemia, acido-sis, neurological deficits, intraventricular

outcomes, such as hypoghycemia, acido-sis, neurological deficits, intraventricular hemorrhage, and longer hospital stays. 1-0 One study demonstrated an increase in mortality of 28% with every decrease of 1°C in core body temperature. 1°P remature newborns are susceptible to hypothermia for various reasons. Gestational

PEDIATIO PROPERTY SAFETY Against a para and birth weight are inversely related to its development. Expoporative hear loss, a leasure periodic property of the property of the

publication March 20, 2018; Accepted October 30, 2018.

A Quality Improvement Initiative to Improve Perioperative Hypothermia Rates in the NICU **Utilizing Checklists**

Morcos Hanna, DO*; Zeyar Htun, DO†; Shahidul Islam, DrPH, MPH‡; Nazeeb Hanna, MD*; Ulka Kothari, MD*; Amrita Nayak, MD*

INSTRACT

adoption of the record of the reco

INTRODUCTION
Infants admixed to the neonatal intensive care unit (NICU), particularly low-birth-weight infants, have a limited capacity to intermoregulate and are at risk for developing hypothermia. These infants are also prone to rapid heat loss due to internal factors such as high body-artica-earen to weight ratio, i reduced glycogen and fat

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metabolic acidosis. These newborns are also at risk for phypolypecinia because of the increased glucose consump-tion necessary for heat production.¹ Perioperatively, the consequences of hypothermia include patient discomfort, platted dysfunction, coag-lupoptis,¹¹ and increased peripheral vasoconstriction associated with a higher risk of wound inference of the research sould winestigating the impact eption.¹¹⁴ One research sould winestigating the impact eption-production of the production of the producti

Vinci A, Islam S, Quintos-Alegheband L, Hanna N, Nayak A. A Quality Improvement Intervention to Decrease Hypothermia in the Delivery Room Using a Checklist. Pediatr Qual Saf. 2018 Dec 6;3(6):e125. doi: 10.1097/pq9.0000000000125. PMID: 31334457; PMCID: PMC6581478.

Hanna M, Htun Z, Islam S, Hanna N, Kothari U, Nayak A. A Quality Improvement Initiative to Improve Perioperative Hypothermia Rates in the NICU Utilizing Checklists. Pediatr Qual Saf. 2020 Sep 2;5(5):e367. doi: 10.1097/pq9.00000000000367. PMID: 33062906; PMCID: PMC7470004.

Joseph N, Dror T, Takhalova E, Kamity R, Kothari U, Connelly A, Hanna N, Nayak A. A quality improvement initiative to reduce hypothermia in a Baby-Friendly nursery - our story of algorithms, K-cards, and Key cards. J Perinatol. 2021 Jul; 41(7):1760-1768. doi: 10.1038/s41372-021-01073-y. Epub 2021 May 13. PMID: 33986475.

Journal of Perinatology https://doi.org/10.1038/s41372-021-01073-y



A quality improvement initiative to reduce hypothermia in a Baby-Friendly nursery - our story of algorithms, K-cards, and Key cards

Noel Joseph¹ · Tal Dror 02 · Eva Takhalova · Ranjith Kamity 02 · Ulka Kothari · Alena Connelly · Nazeeh Hanna

Received: 16 November 2020 / Revised: 26 March 2021 / Accepted: 26 April 2021 © The Author(s), under exclusive licence to Springer Nature America, Inc. 2021

Asstract

Baby-Friendly hospitals encourage rooming-in newborns with mothers. In our institution, we noticed increased incidence of hypothermia following Baby-Friendly designation. We aimed to reduce the incidence of hypothermia in the mother-baby-amit to <15% and to decrease the rate of isolated hypothermia admissions to the neontatal intensive care unit (NICU) by 25% over two years.

Methods After a retrospective review of newborns ≥35 weeks gestation in the mother-baby-unit with hypothermia, we meteors. Acter a ferroagencie review of neuronis 25 vector, gentation in the inother-leady-lint with psynchronia, we form the properties of the properties o

Newborns are susceptible to hypothermia (temperature < 97.7 °F) due to their large surface area to body weight ratio, reduced glycogen and fat stores, immaturity of compensatory mechanisms and environmental factors that promote heat loss [1]. Upon exposure to a hypothermia-inducing stressor in the infant, compensatory mechanisms increase the metabolic rate to maintain normothermia. During this process, infants utilize reserve substrates, such as carbohydrates, which predispose them to become hypoglycemic. Oxygen

These authors contributed equally: Noel Joseph, Tal Dror Supplementary information The online version contains supplementary material available at https://doi.org/10.1038/s41372-

Department of Pediatrics, Le Bonheur Children's Hospital, Memphis, TN, USA

Department of Pediatrics, NYU Langone Hospital-Long Island, Minrola, NY, USA

Friendly units on hypothermia rates in the newborn. In

demand also increases, leading to metabolic acidosis and respiratory distress [2]. These infants are also at risk for poor respiratory districts [2] these minima are also at this to poor feeding. Hypothermia can also be a risk factor or clinical sign of sepsis in the neonate and as a result these infants are often admitted to the Neonatal Intensive Care Unit (NICU) from the Mother-Baby Unit (MBU) for evaluation and management of suspected sepsis, thereby increasing the

emotional stress among parents during this time [3].

Frequent skin-to-skin contact (SSC) has been proven to requent skin-to-skin contact (58-L) has been proven to reduce hypothermia in the newborn. In a randomized con-trolled trial by Nimbalker et al. 2014, newborns weighing >1800 g who were not exposed to SSC had 8.0 times the risk of hypothermia (95% CI 1.94–32.99) compared to risk of hypothermia (95% C.1 1594–52.99) compared to those who were exposed to SSC [4]. Early SSC has also been shown to improve breastfeeding outcomes [5]. Early SSC is one of the ten key steps in the Baby-Friendly Hospital Initiative (BFH) launched by the World Health Organization (WHO) and United Nations Childrens' Fund in 1991 to promote exclusive breastfeeding [6]. This in 1991 to promote exclusive breastreeding [6]. Inis initiative involves rooming newborn infants with their mothers full-time, thereby encouraging frequent SSC and potentially reducing the incidence of hypothermia. Currently, there is limited data on the impact of Baby-





thank?





CEUs for today's presentation

To receive CEUs for attending today's presentation by Dr. Nayak, please use the QR code below to fill out the survey:



<u>Qualtrics Survey | Qualtrics Experience Management</u>

Poll Questions



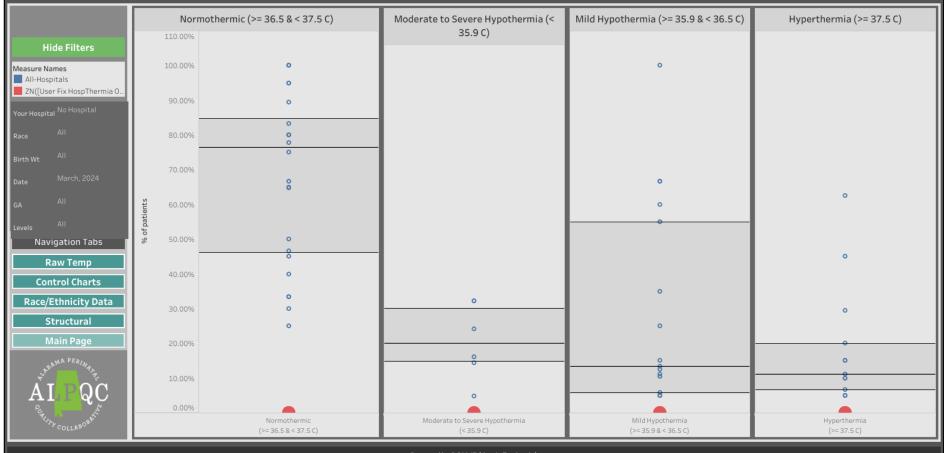
- 1. I have accessed our hospital dashboard and shared it with my hospital team
 - A. Yes
 - B. No
- 2. If you have NOT accessed your hospital dashboard, are you aware of how to do so?
 - A. Yes
 - B. No
 - C. N/A



March Data Review Levels 1 and 2

ALPQC NHP

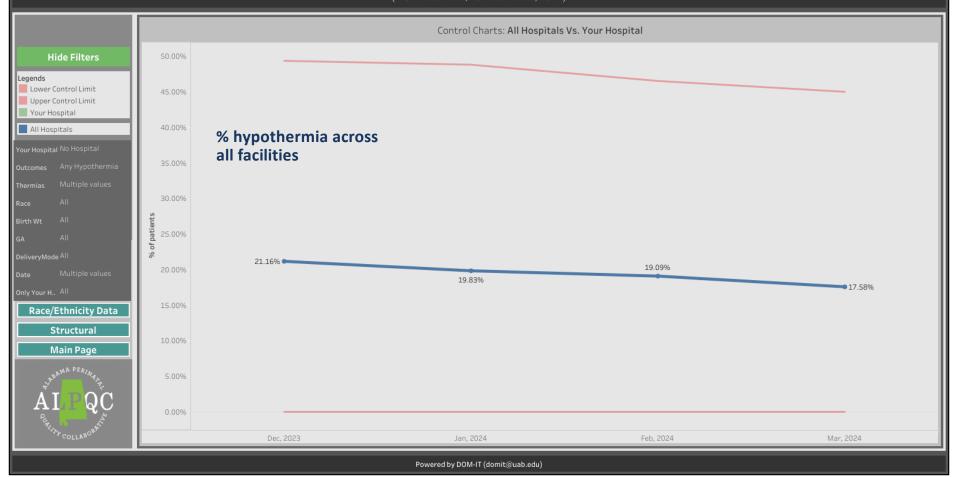
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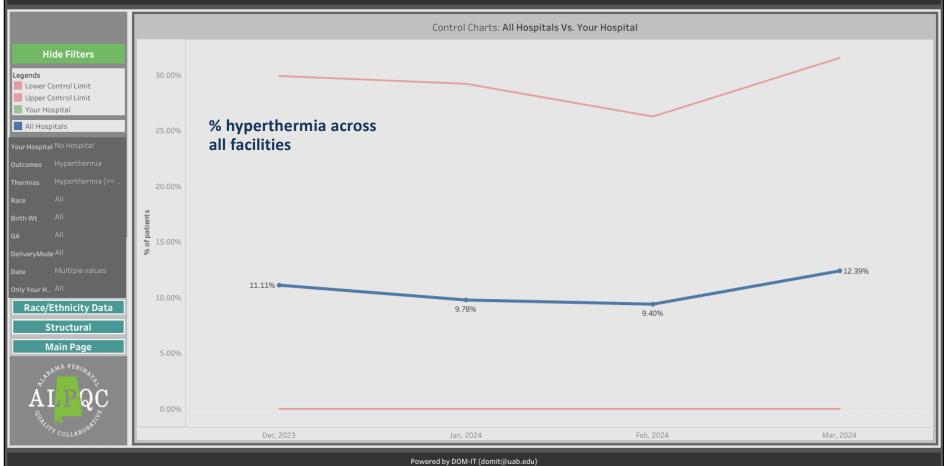
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(From December, 2023 to March, 2024)





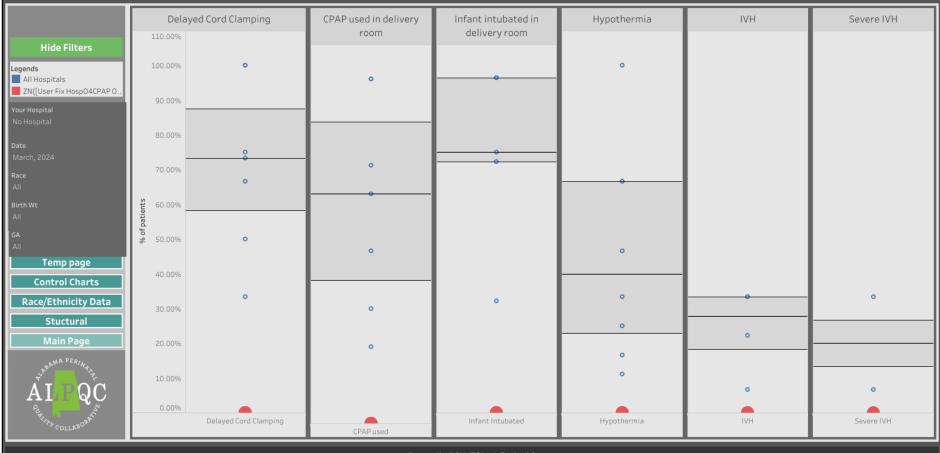




March Data Review Levels 3 and 4

ALPQC NHP (Golden Hours)

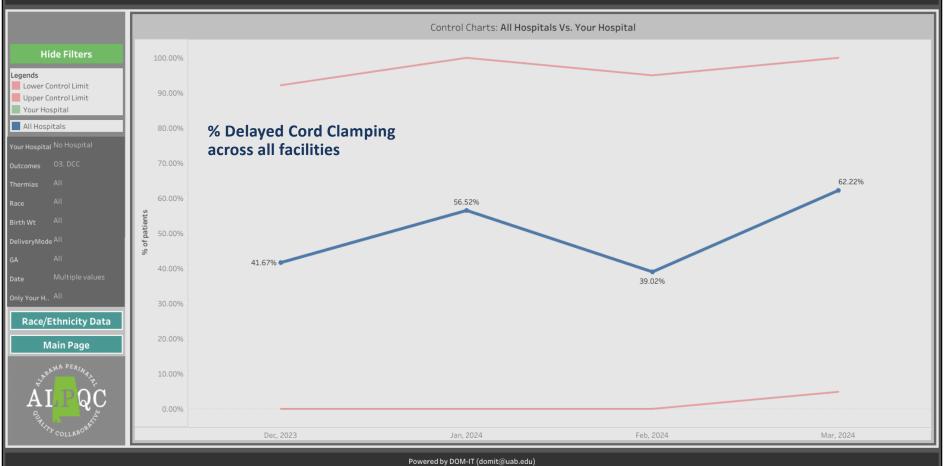
(From December, 2023 to March, 2024)



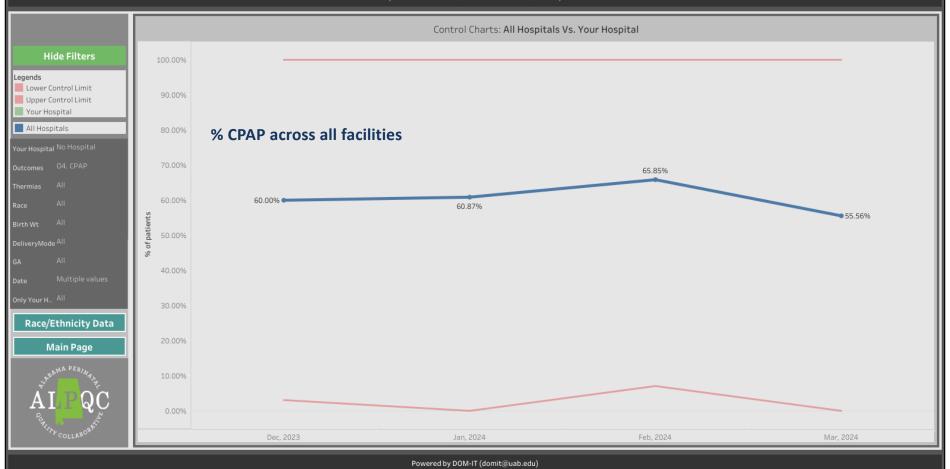
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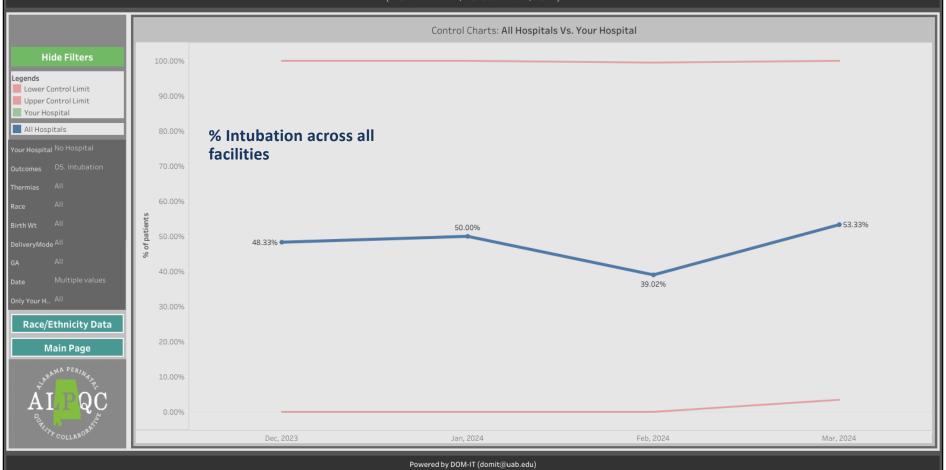
ALPQC NHP (Golden Hours)

(From December, 2023 to March, 2024)

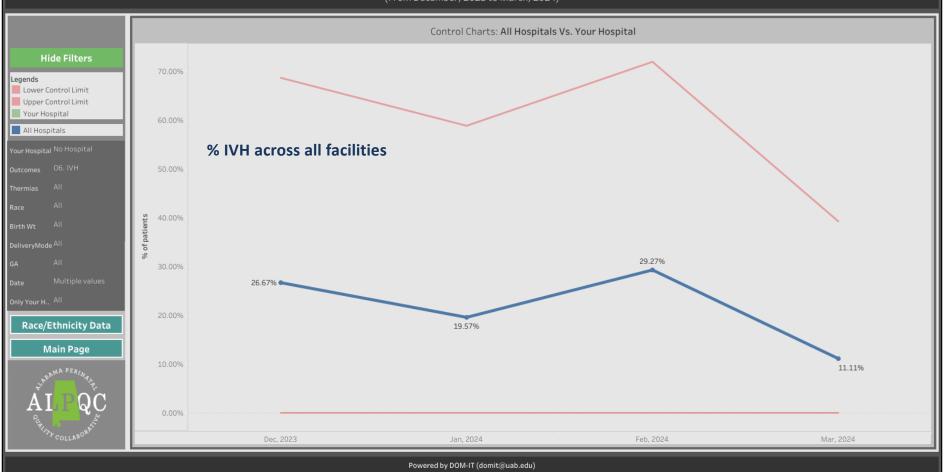




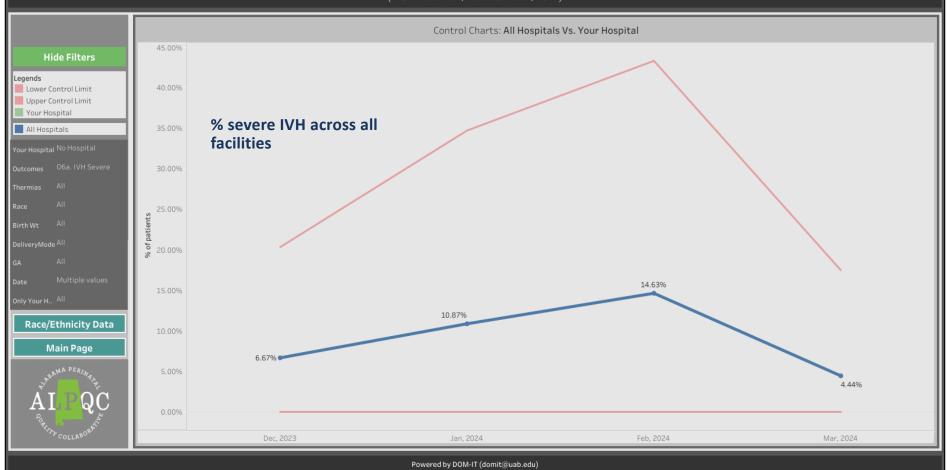


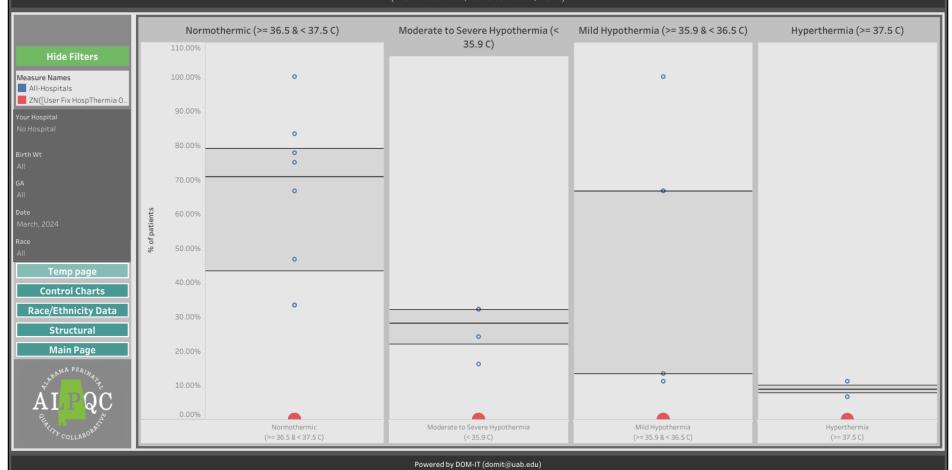


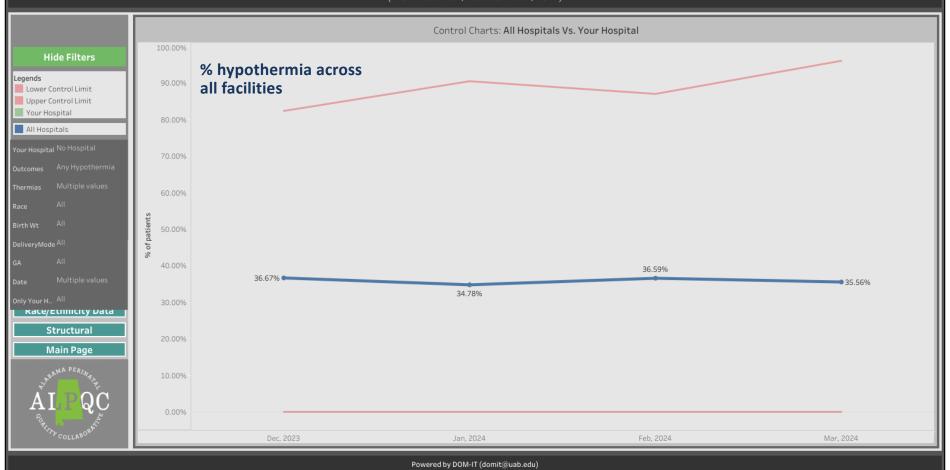


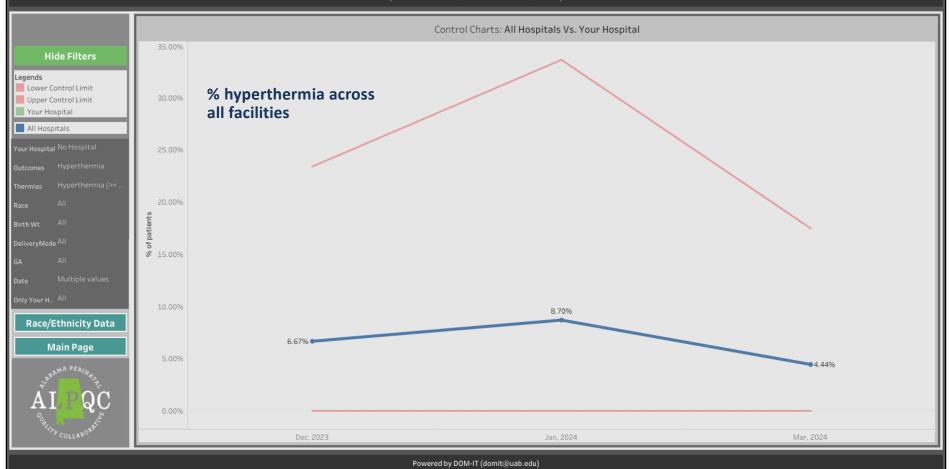


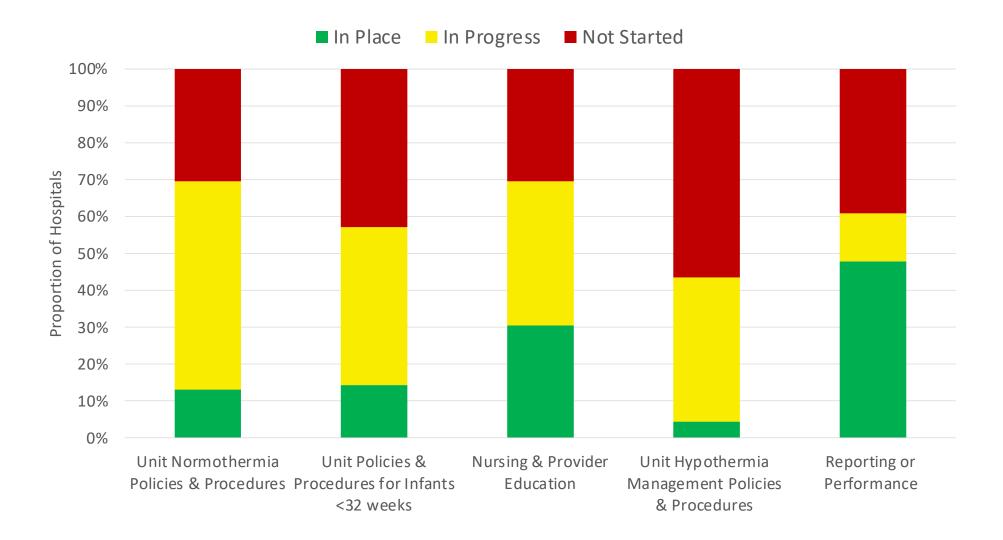














Please feel free to **unmute** and ask questions

You may also enter comments or questions in the "chat" box

Reminders



- Monthly (April) NHP data will be due May 31st
 - Links to survey sent on May 15th
 - Please let us know if you did not receive links and we will send them out ASAP
- Hospital Shares are encouraged!
 - A great way to celebrate your successes or share your challenges
 - Fosters collaboration and builds relationships
 - Please sign up to share by emailing info@alpqc.org. We look forward to hearing from everyone!

Stay Connected!



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X (Twitter): @alpqc

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Next Meeting



Wednesday, June 26th at 12pm



CEUs for today's presentation

To receive CEUs for attending today's presentation by Dr. Nayak, please use the QR code below to fill out the survey:



Action Period Call Survey

<u>Qualtrics Survey | Qualtrics Experience Management</u>



NOWS Sustainability Data Review

ALPQC NOWS Sustainability Data

Measures	Initiative Average (April '22-Oct '23)	Sustainability Phase (Oct '23-Mar '24)
1 – Referred to addiction services (%yes)	39.29%	78.89%
2 – Narcan Counselling Documented (%yes)	35.53%	46.67%
3 – Days old at Discharge- Length of stay (days)	12.79	12.06
4 –Collaborative Discharge Plan completed (%yes)	89.88%	93.33%

^{*}Missing Sustainability Reporting from 4 Hospitals

Thank you!



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