

2023 AIM OB Emergency Readiness COL  
Session #4

Innovation in Technology Assisted Care



Monday, May 15, 2023  
1:00 – 2:30PM EST



## ALLIANCE FOR INNOVATION ON MATERNAL HEALTH

The Alliance for Innovation on Maternal Health is a national, cross-sector commitment designed to support best practices that **make birth safer, improve maternal health outcomes, and save lives.**

You can find more information at  
[saferbirth.org](https://saferbirth.org).

This program is supported by a cooperative agreement with the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number UC4MC28042, Alliance for Innovation on Maternal Health. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.



# Before We Get Started

- ▶ You are **muted** upon entry to the call.
- ▶ **You will have the ability to unmute** yourself during Q&A times.
- ▶ We encourage participants to **remain muted** to reduce background noise.
- ▶ If you are experiencing technical difficulties, please chat an AIM staff member or **email [aim@acog.org](mailto:aim@acog.org)**

**This presentation will be recorded.**

**Both the slides and recording will be available on the AIM Website and shared in the follow-up newsletter.**



# Agenda

- 1 Welcome
- 2 Upcoming Sessions Information
- 3 Speaker Presentation: Timothy Fisher, Patricia Lanter, Kevin Curtis, Michelle Tyler
- 4 Questions
- 5 Closing



# Upcoming Educational Offerings

Register at [saferbirth.org](https://saferbirth.org) under Resources > Events

## Educational Offering #5

Responding to Hypertensive  
Obstetric Emergencies in Non-  
Obstetric Settings


June 13, 2023  
2:00PM-3:30PM  
(EST)

## Educational Offering #6

Safe Transfer: Key Considerations  
and Best Practices

June 28, 2023  
2:00PM-3:30PM  
(EST)

# EDUCATIONAL OPPORTUNITY



Registration is open!

JOIN US FOR THE  
First Annual  
OBLSTM™ VIRTUAL CONFERENCE

Presenting  
**EMERGING TOPICS ON  
MATERNAL CARDIAC ARREST**

Friday, June 2, 2023  
10 – 6pm EST

**REGISTER NOW!!**

<https://uconnuecs.cventevents.com/OBLS23>

**Friday, June 2, 2023  
10 AM - 6 PM EST**

- Registration now open
- Recorded session will be available following live conference

**This conference will explore emerging topics, trends and treatments of maternal medical emergencies and maternal cardiac arrest.**

**Target Audience:** healthcare professionals from pre-hospital and hospital-based sectors across the US that care for reproductive-age women

**Cost:** Free unless you are interested in receiving CE (physicians, nurses, paramedics & EMTS)



# **Innovations in Technology Assisted Care**

**Kevin Curtis, MD, MS (Emergency Medicine)**

**Tim Fisher, MD, MS (Ob/Gyn)**

**Patricia Lanter, MD, MS (Emergency Medicine)**

**Michelle Tyler, MD (Neonatology)**

**May 15<sup>th</sup>, 2023**



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# Disclosures

- None of the faculty have relevant financial disclosures
- We will reference the AAFP's Basic Life Support in Obstetrics curriculum during the session, with acknowledgements for IP and copyrighted material
- We are all employed faculty at Dartmouth Health/The Geisel School of Medicine at Dartmouth



GEISEL  
— SCHOOL OF —  
MEDICINE  
AT DARTMOUTH



# Session Objectives

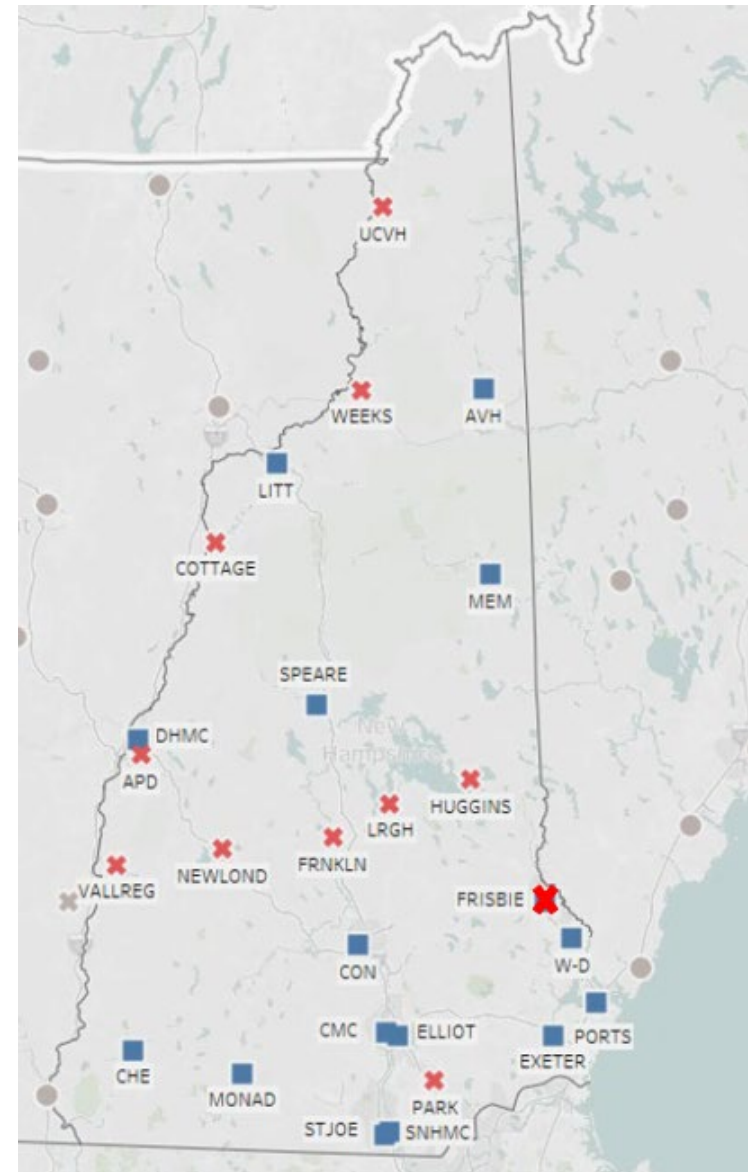
- Explore approaches to remote care and consultation pathways
- Discuss best practices using these resources to address obstetrical and neonatal emergencies in non-obstetric settings
- Share resources, ideas, and experiences across a variety of geographical and clinical care delivery environments

# Session Overview

- Background:
  - Current state of maternal-child health hospital based services in Northern New England
  - Programs to support rural ED's and EMS professionals
- TeleED program: Opportunities for training and service enhancement
- Group activity...
- What about the baby? TeleICN

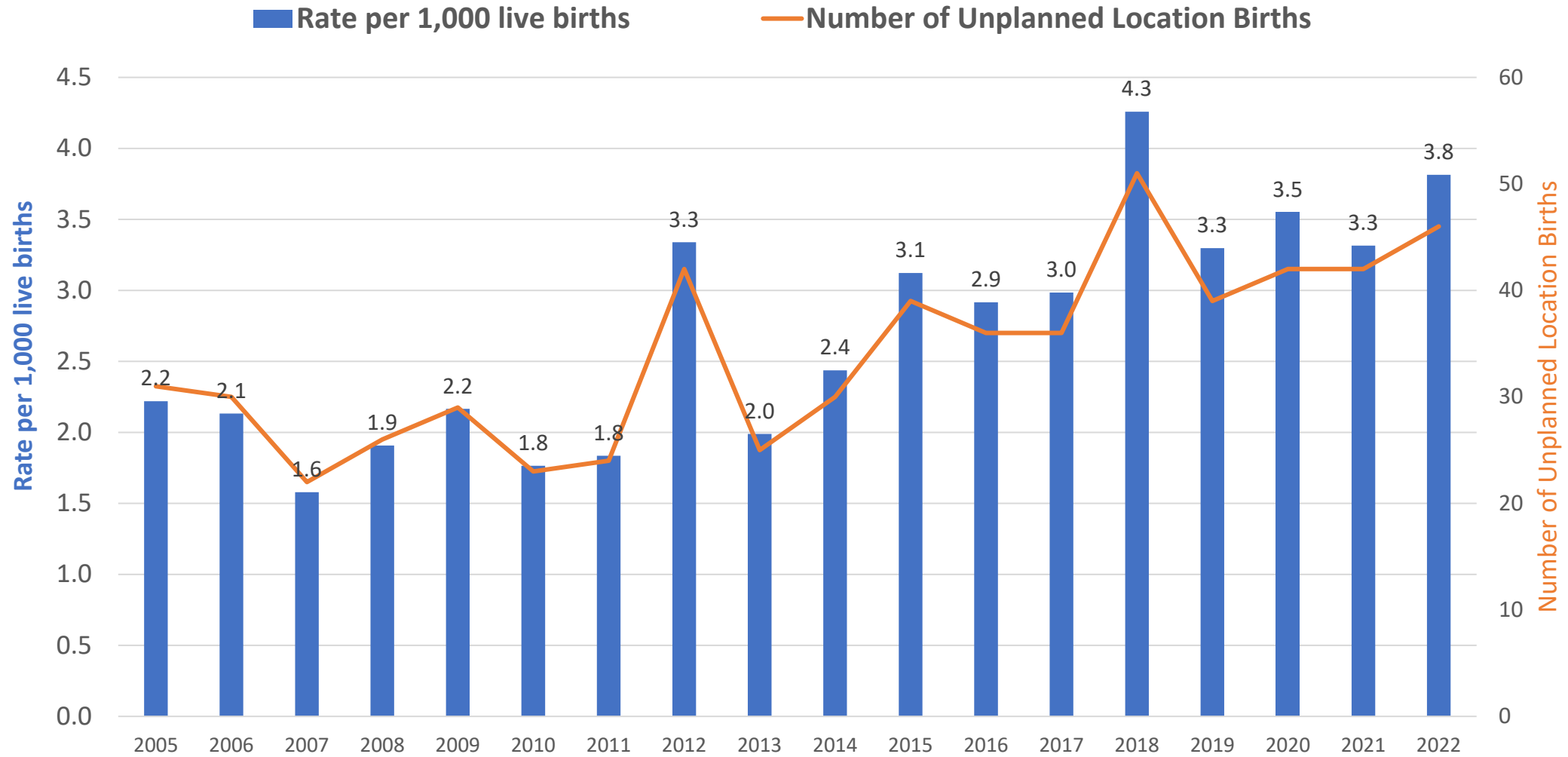
# Background

- Since 2000, 11 of New Hampshire's 27 hospital labor and delivery units have closed (4 since 2018)
- 10 are located in HRSA-designated rural service areas



David.Laflamme@unh.edu  
Carolyn.K.Nyamasege@affiliate.dhhs.nh.gov

# Unplanned Location† Births Occurring in New Hampshire

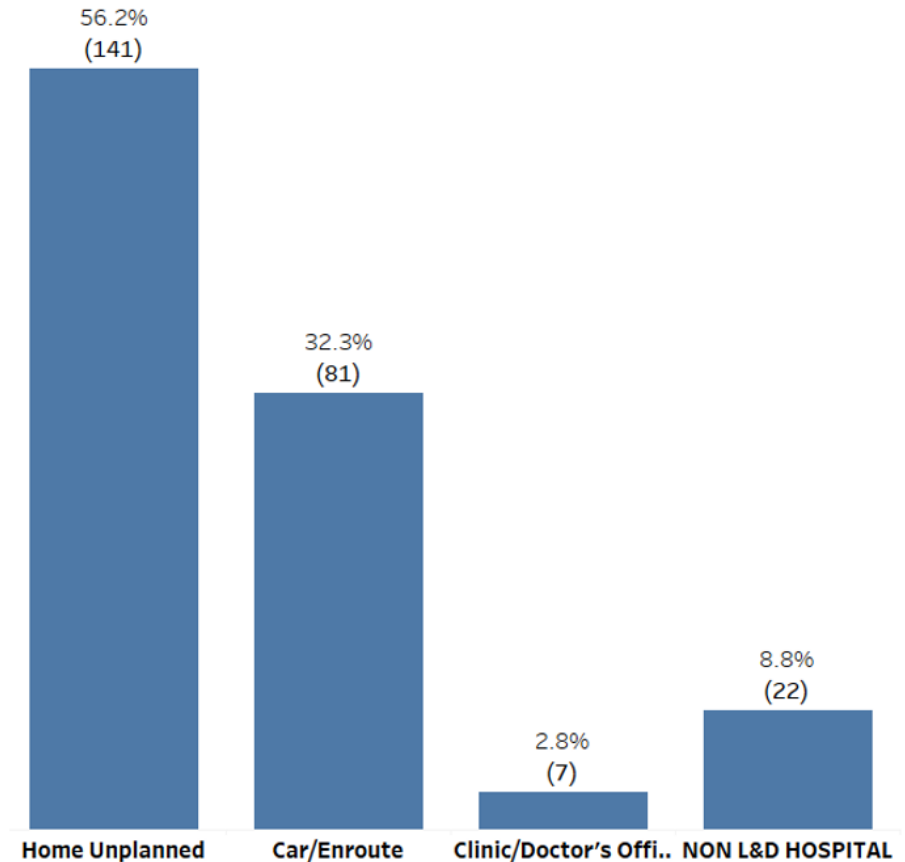


†Unplanned Location: Home-Unplanned, Enroute, Clinic/Doc Office, Non-L&D Hospital

# Background

- Where do people go when in labor?
- Who is there to help them?

Child Place of Birth Aggregates: (2016-2021)



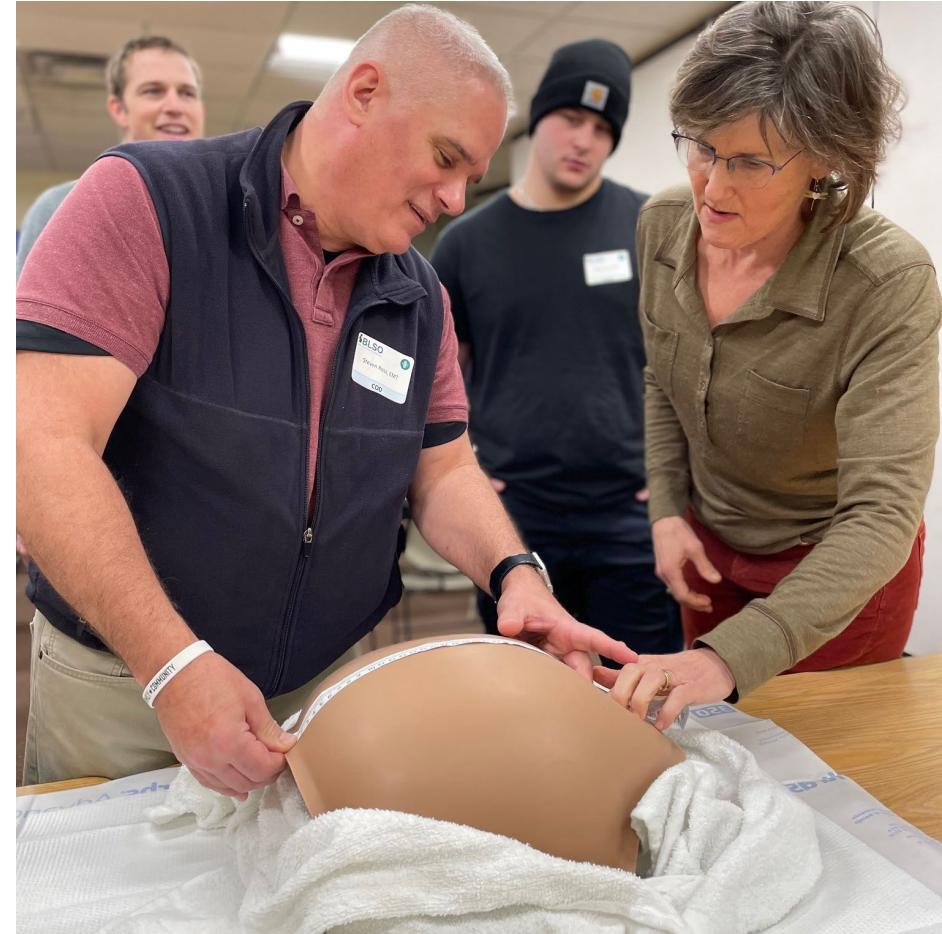
# STONE project

- **S**imulation **T**raining for **O**bstetrical and **N**eonatal **E**mergencies
- One year congressional appropriations/HRSA funding (Senator Jean Shaheen, D-NH)
- Two components
  - Simulation training
  - TeleICN implementation

# STONE project

## AAFP BLSO curriculum

- Normal labor
- Breech, twins, cord prolapse
- Shoulder dystocia
- Emergent prenatal assessment
- Maternal resuscitation/PPH
- Hypertensive disorders
- Preterm labor
- Neonatal resuscitation



# STONE project

Multidisciplinary  
instructors

- Obstetrician
- Emergency Physician
- Neonatologist
- State EMS educator
- Simulation experts





# STONE project

Participants (n=77 to date)

- EMS providers
- Basic EMT to Paramedic
- ED RNs, APPs, MDs
- House supervisors

Universally well received

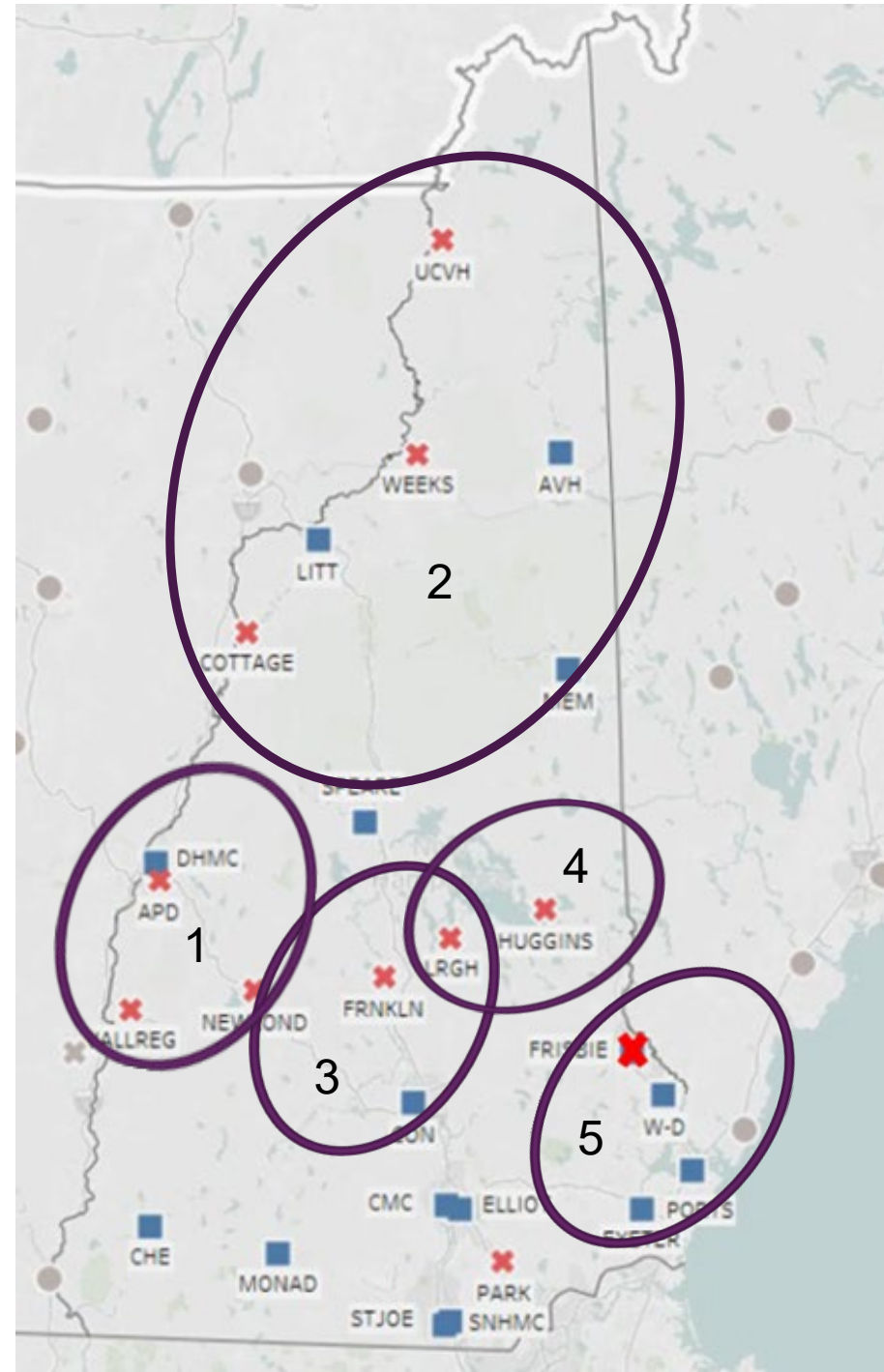
A lot of trepidation with L&D closures



# STONE project

10 courses targeting 5 geographical areas:

- Upper CT river valley
- North Country
- Mid state
- Lakes region
- Seacoast



# STONE project

Realization

Many of these smaller hospitals have

Tele-ED

Tele-ICN





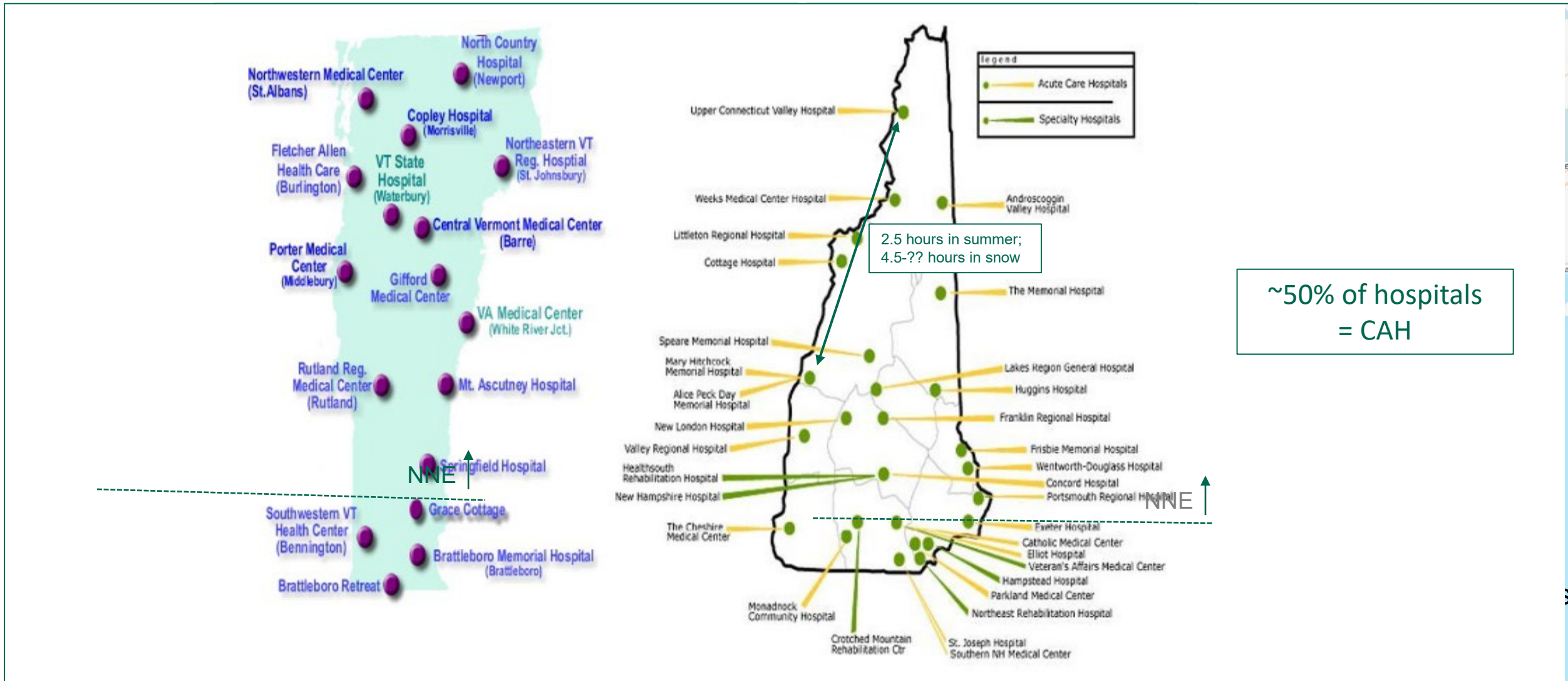
# Dartmouth Health Connected Care Center for Telehealth

**Kevin M. Curtis, MD, MS**

Medical Director, Connected Care and Center for Telehealth  
Dartmouth Health  
Associate Professor of Emergency Medicine,  
The Geisel School of Medicine at Dartmouth



# Where are we and our patients?



# Capacity



- DHMC Transfer Center:
  - >1000 transfer requests/month
- Inpatient Bed Capacity each morning:
  - Hospital Medicine: full 100% of time
  - ICUs and other: full frequently

# Dartmouth Health Connected Care



*Mission: To help deliver outstanding care to our region independent of patient location*

*Focus: Rural health care*

*2° Goal: To keep care local*



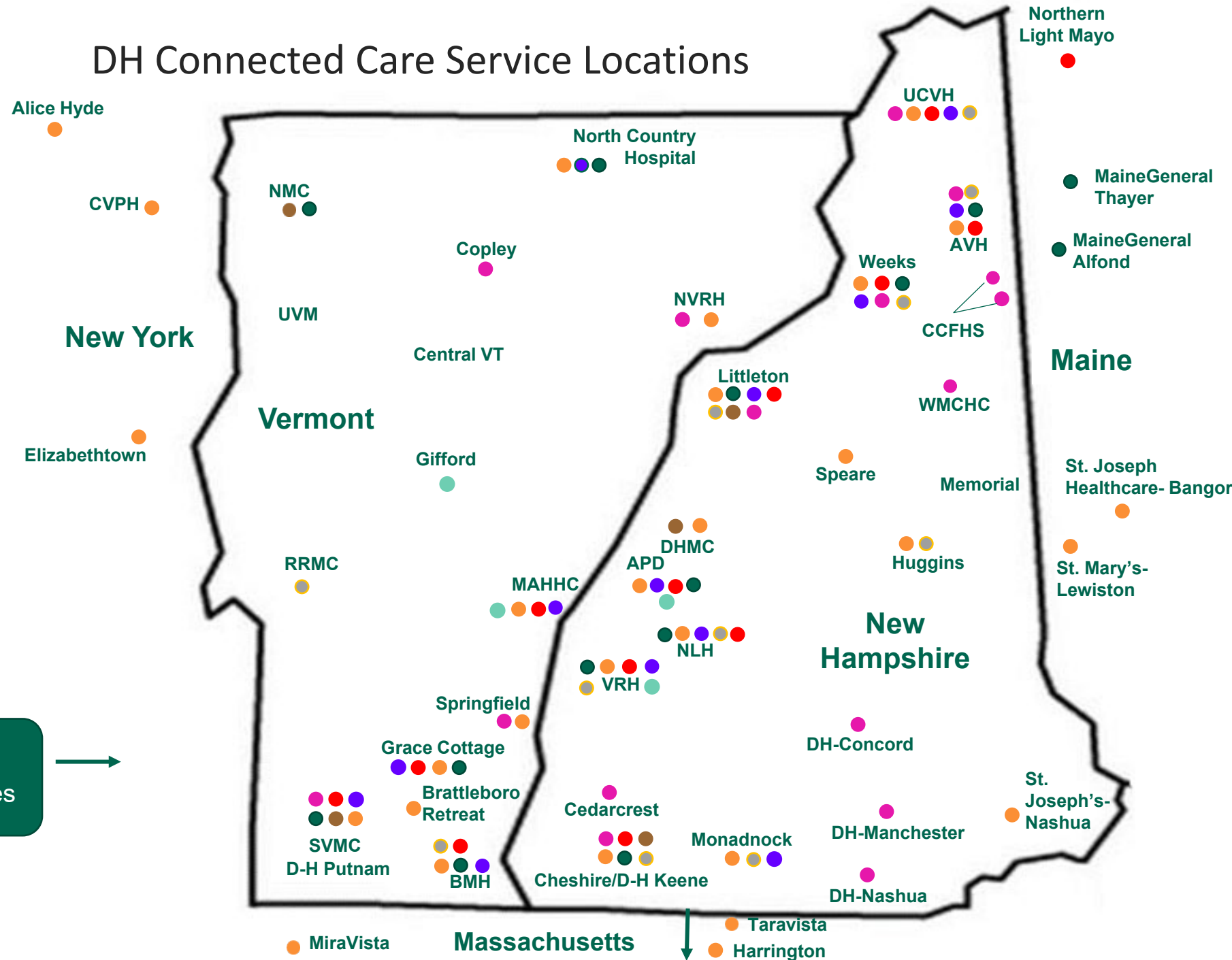
## DH Telehealth Services

- Emergency
- Neurology
- ICU
- ICN
- Outpatient Virtual Visits
- Pharmacy
- Psychiatry
- Virtual Urgent Care
- Central Monitoring



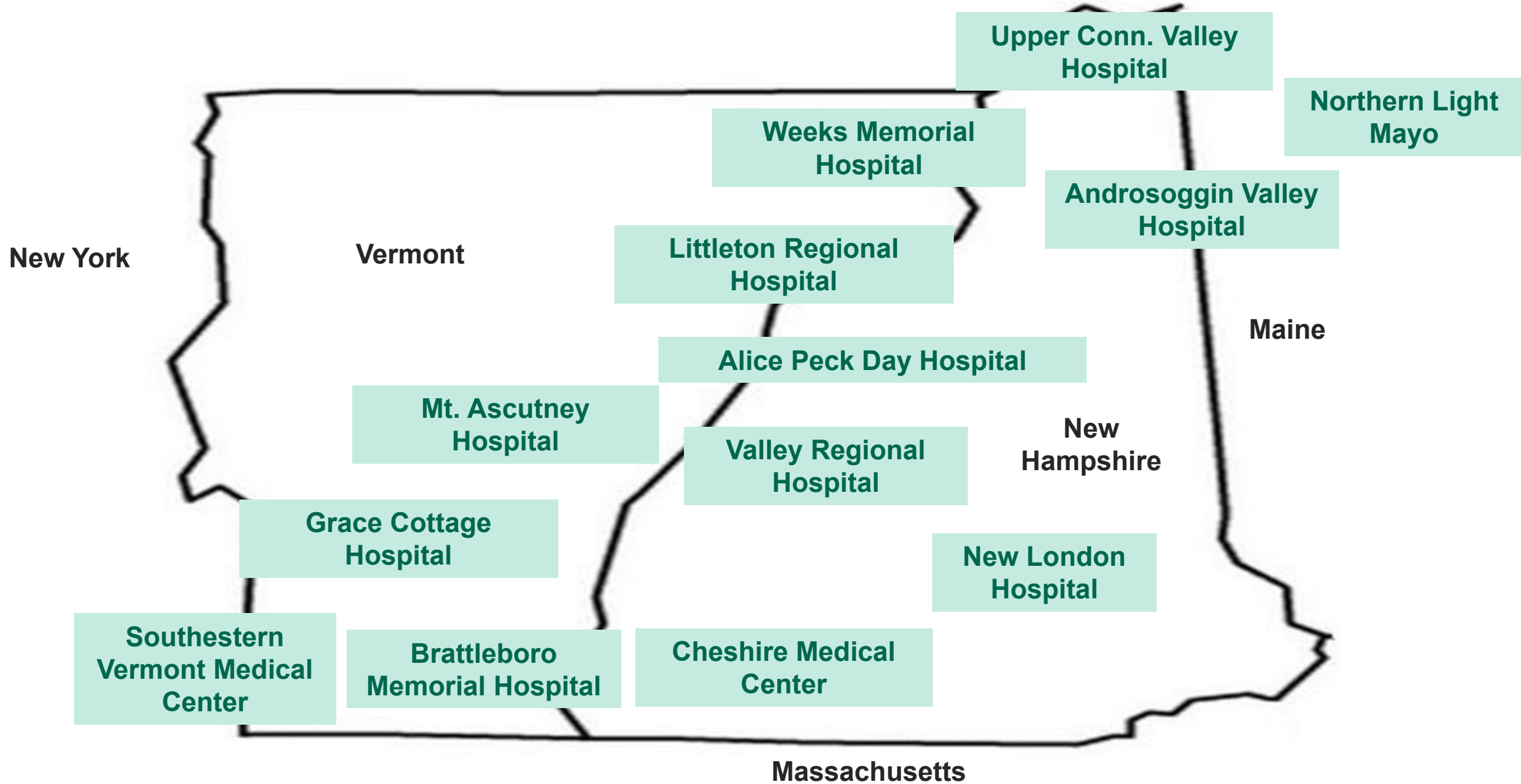
Service	Sites	Icon
TelePharmacy	29	Orange dot
TeleEmergency	13	Red dot
TeleNeurology	14	Dark Green dot
TeleICU	5	Brown dot
TelePsychiatry	13	Purple dot
Telemedicine Clinics	16	Pink dot
TeleICN	11	Yellow dot
TeleGeriatric ED	4	Light Green dot

# DH Connected Care Service Locations



# DH TeleEmergency Locations

Connected Care





# TeleEmergency: hardware



# TeleEmergency: Hub support

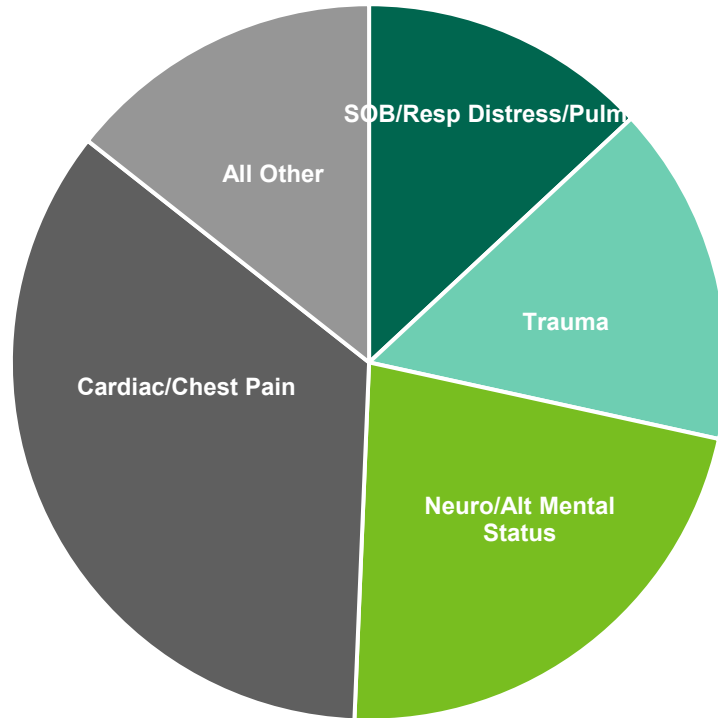


Nurse	Physician	Transfer
<ul style="list-style-type: none"> <li>• Nursing documentation and support</li> <li>• Assistance with running codes</li> <li>• Medication questions</li> <li>• Procedural assistance</li> <li>• EHR review</li> </ul>	<ul style="list-style-type: none"> <li>• Physician collaboration for unusual or challenging cases</li> <li>• More rapid initiation of patient care during volume surges</li> <li>• Procedural support</li> </ul>	<ul style="list-style-type: none"> <li>• Hub physicians work with local Critical Care Transport and relevant Transfer Center</li> <li>• Coordinate transport, accepting facility and accepting MD</li> <li>• Doc-to-Doc and Nurse-to-Nurse report</li> </ul>

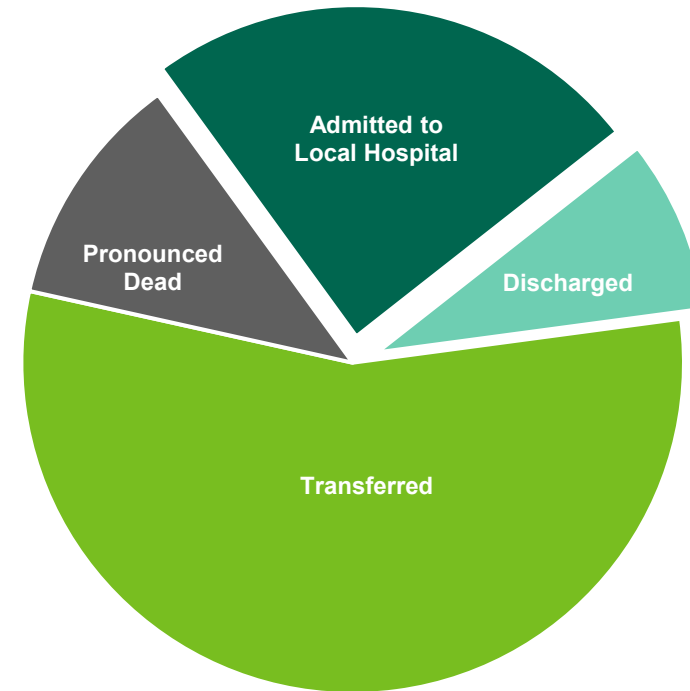


# TeleEmergency: data

Chief Complaint



Patient Disposition



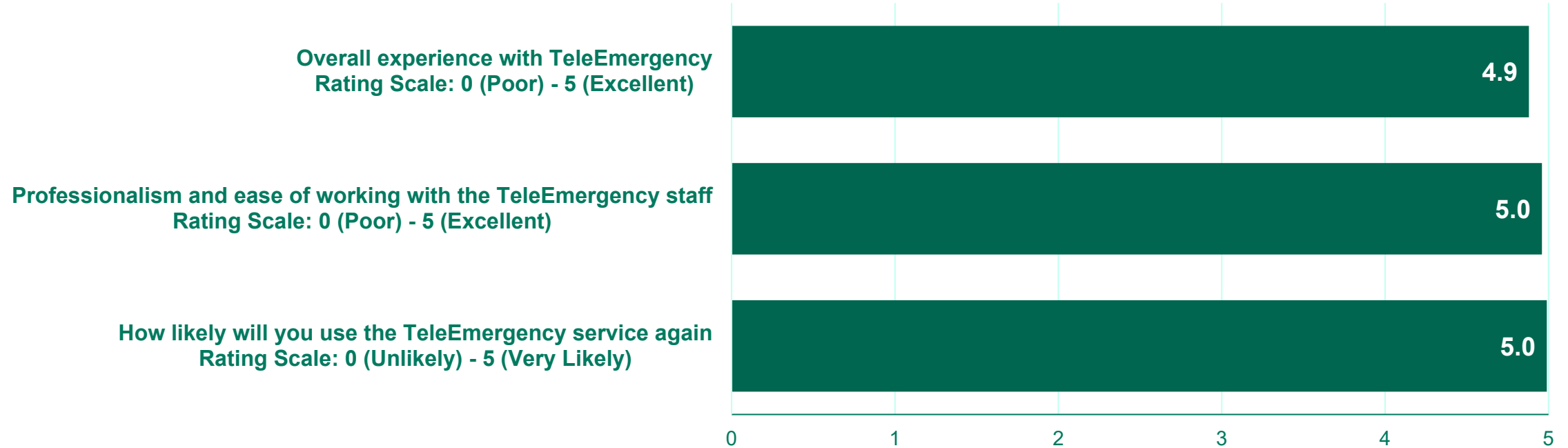
➤ Transfer avoided in  $\geq 13\%$  of cases

- Relationship 1<sup>st</sup>
- Join the bedside team
- Take in the room
- The spoke knows more than the Hub
- Help in whatever manner requested
  - make their life easier
- Solve problems together
- EM practice variation is normal

- Effective communication is key
  - You're always on camera
  - Talk  $\leq$  10% of time
  - Pace your suggestions
  - Don't overtalk
  - Use names *et al*
  - Nudges *prn*
  - Repeat and/or change tactics if needed



# TeleEmergency: Site Satisfaction



# TeleOB?!

April 24<sup>th</sup>, 2023:

*A 24 year old female presents to a critical access hospital in labor. No prenatal care, LMP 8 months prior, significant history of trauma and multiple social determinants risk factors.*

*The phone rings in the hub...*

# TeleED training

DHMC Patient Safety Training Center

Brief didactics

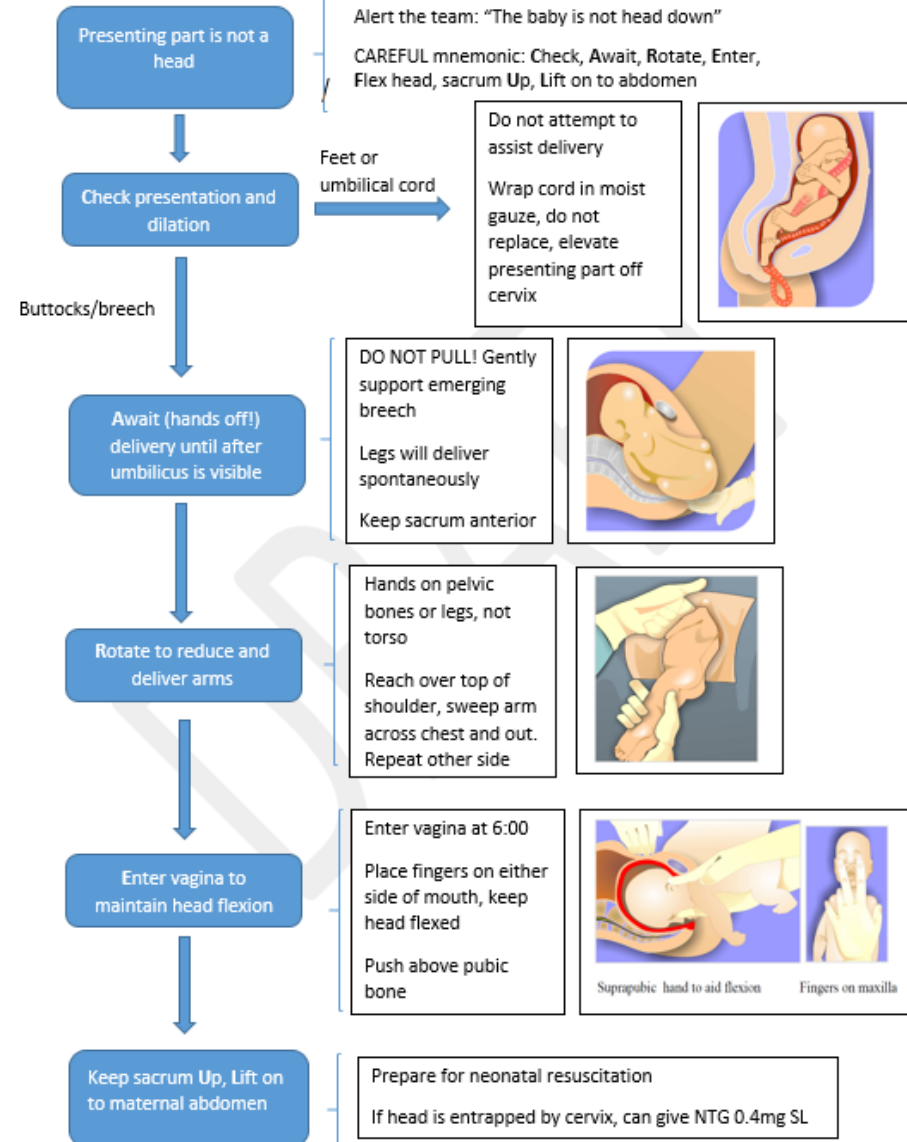
- SVD/AMTS
- Breech
- Shoulder dystocia
- PPH
- Maternal code/resuscitative hysterotomy

“At-the-elbow” resources

Two groups:

- Sim center (remote provider)
- Hub (TeleED doc)

## TeleED At-The-Elbow Guide: Malpresentation



\*Images and CAREFUL mnemonic ©Basic Life Support in Obstetrics, American Academy of Family Physicians, 2017

See Spontaneous Vaginal delivery ATE Guide for 3<sup>rd</sup> Stage

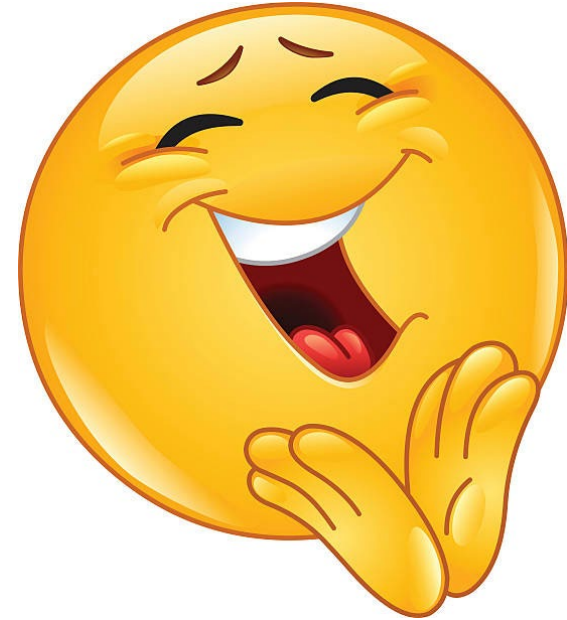
# Best practice demonstration?

*Breech vaginal delivery*



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# GROUP ACTIVITY

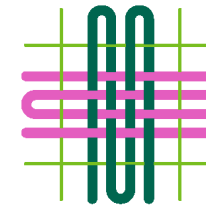


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# WHAT ABOUT THE NEONATE?



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Dartmouth  
Health Children's

# TeleICN Program

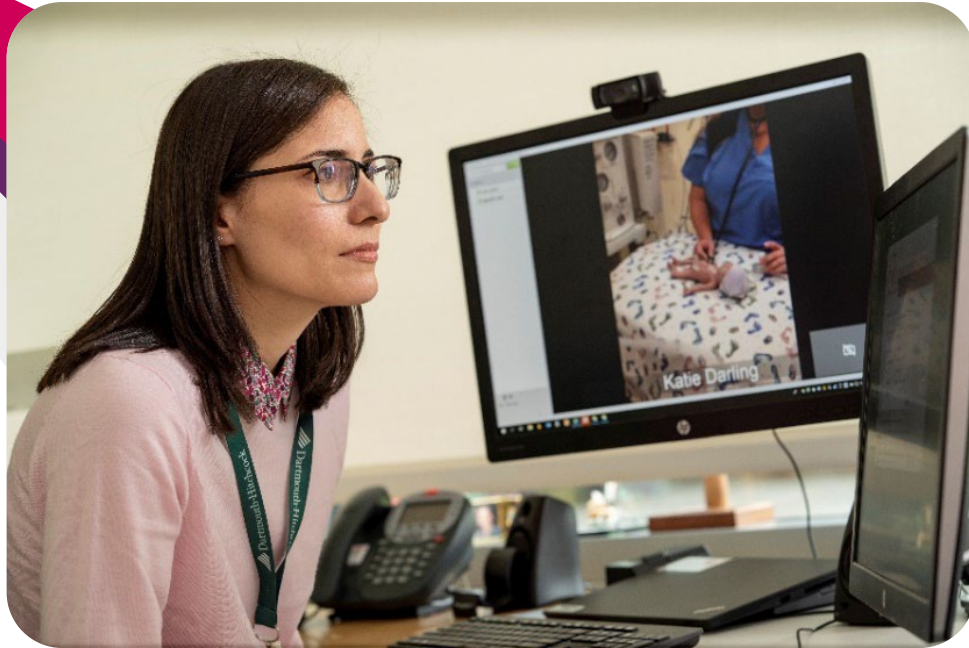
Michelle Tyler, MD, MPH  
TeleICN Medical Director

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# D-H TeleICN Overview



- Established 2017
- Board Certified Neonatologist support 24/7/365 to hospital care team
- Secure, simple, reliable videoconferencing equipment
- Avoidance of transfer, keeping patients closer to home for care and minimizing cost of care
- Improve care through real time support of decision making



# D-H TeleICN Common Consults

- Unexpected depressed baby
- Unexpected Preterm baby
- Birth trauma
- Respiratory Distress
- Seizures
- Infectious disease consultation
- Neurologic Exam/evaluation for cooling
- Dysmorphic features



# A rising problem...

2019 • 19-1

New England Public Policy Center Regional Briefs

## Declining Access to Health Care in Northern New England

By Riley Sullivan

### **With Springfield Hospital's birthing center closed, expectant mothers face a delivery dilemma**

By NORA DOYLE-BURR  
Valley News Staff Writer

Published: 5/4/2019 10:05:49 PM  
Modified: 5/5/2019 9:58:53 PM

### **Critical condition**

New Hampshire's rural hospitals struggle to keep pace with changing market

May 9, 2019 by [Michael Kitch](#)

POLICY CENTER

Health Policy Center 

## Labor and Delivery Unit Closures in Rural New Hampshire

### Hospital maternity ward closes after century of delivering babies

By RICK GREEN, THE LACONIA DAILY SUN | May 31, 2018 |  1



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# D-H TeleICN in Emergency Departments

## Pre-Birth:

- Review set-up of warmer
- Check neonatal equipment
- Anticipate needs during resuscitation

## After Birth:

- Lead Neonatal resuscitation
- Evaluation assistance
- Management guidance

# D-H TeleICN in Emergency Departments

- Neonate with respiratory distress
  - Evaluation of breathing pattern
  - Assistance with medical decision making
  - Provide recommendations
- Peri-viable Case
  - Consultation with family
  - Assistance preparing room for extreme prematurity
  - Assistance with transfer

# D-H TeleICN “Go-Live”

- Review/assist with site protocols
- Neonatal Resuscitation Simulations
- Hands on training with:
  - NeoNatalie
  - Premie Annie
  - Intubation Head
  - Technology & workflow trainings



# Questions? We'd love to hear from you...

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TeleICN Medical Director

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**If you selected **Other** in the poll, please type how you found registration information session in the chat!**



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## Constant Contact (Email Newsletter)



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### 2023 Obstetric Emergency Readiness Community of Learning

May 8, 2023



Please join us for AIM Obstetric Emergency  
Readiness Educational Offering #4!  
Registration details are below.

### Educational Offering # 4

Innovation in Technology Assisted Care

Date and Time: May 15, 2023, from 1:00 PM - 2:30 PM EST

## Direct Email

Good morning,

Please join us for AIM Data Support Community of Learning (COL) Educational Offering #6!  
Registration details are below.

Title: **Using Data to Understand Inequities: Strategies for Collecting Race, Ethnicity, and Language Data in Clinical Settings.**

Date and Time: **May 02, 2023, from 3:00 PM – 4: 30 PM ET**

Faculty: **Amelia Shapiro, MBA; Brianne Genow, MS, RN.**

Registration link: <https://us02web.zoom.us/meeting/register/tZwrfu-uqDkjEtKQ3ZTcgm3hyyv4IVIDEenj>