

# NEW HAMPSHIRE'S QUEST FOR TIMELINESS IN NEWBORN SCREENING

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# ALL ABOUT NEW HAMPSHIRE

Located in the the northeastern corner of the United States, New Hampshire is one of the smallest states in the country.

Population: 1,322,847 (2013 est.)

19 Birth Hospitals

Number of births in 2014: 12,290

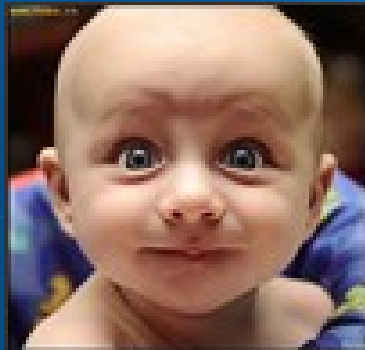


# OUR LITTLE WORLD

Until November, 2013 we didn't know we might have a problem with timeliness

In the fall of 2014, NH Newborn Screening was invited to participate in the CoIN project to improve Timeliness

In preparation for this participation, we gathered data on our timeliness not really expecting any issues.



**WE WERE WRONG!!**

# WHERE WE WERE

## The data that proved us wrong

*Table 1: Age in Hours at Newborn Screening Specimen Collection  
Infants Born in NH Hospitals Jan 1 through Feb 25, 2015  
Sorted by percentage of specimens collected in accordance with the new protocol*

Birth Location	<24 HRS	24 to 48 HRS (New Protocol)	>48 HRS to 72 HRS	Total 24-72 HRS (Old Protocol)	>72 HRS to 5 days	>5 days and <=30 days
Hospital 03	2.2%	97.8%	0.0%	97.8%	0.0%	0.0%
Hospital 06	0.0%	95.4%	3.9%	99.3%	0.0%	0.7%
Hospital 15	0.0%	92.5%	7.5%	100.0%	0.0%	0.0%
Hospital 18	0.0%	90.9%	9.1%	100.0%	0.0%	0.0%
Hospital 05	1.5%	89.7%	7.4%	97.1%	1.5%	0.0%
Hospital 09	0.0%	89.1%	10.9%	100.0%	0.0%	0.0%
Hospital 04	0.0%	88.9%	11.1%	100.0%	0.0%	0.0%
Hospital 17	0.0%	85.2%	14.8%	100.0%	0.0%	0.0%
Hospital 11	0.0%	78.6%	14.3%	92.9%	7.1%	0.0%
New Hampshire Total	0.8%	77.3%	19.8%	97.1%	1.8%	.2%
Hospital 19	2.3%	76.4%	19.0%	95.4%	2.3%	0.0%
Hospital 07	0.0%	75.0%	25.0%	100.0%	0.0%	0.0%
Hospital 08	0.0%	74.3%	22.9%	97.2%	2.9%	0.0%
Hospital 10	1.3%	71.1%	27.0%	98.1%	0.7%	0.0%
Hospital 12	3.7%	70.7%	25.6%	96.3%	0.0%	0.0%
Hospital 14	0.0%	70.6%	27.5%	98.1%	2.0%	0.0%
Hospital 01	0.4%	70.4%	24.5%	94.9%	4.4%	0.4%
Hospital 02	3.8%	66.0%	30.2%	96.2%	0.0%	0.0%
Hospital 13	0.0%	63.9%	35.1%	99.0%	0.5%	0.5%
Hospital 16	0.0%	60.3%	27.9%	88.2%	11.8%	0.0%

# WHERE WE WERE

## The data that proved us wrong

*Table 2: Did the specimen arrive at the lab at the first opportunity given the constraints of the system?  
 Infants Born in NH Hospitals Jan 1 through Feb 25, 2015  
 Sorted by percentage of specimens that arrived at the first opportunity*

Birth Location	Yes	1 day later	2 days later	3 days later	4 or more days later
Hospital 18	97.0%	3.0%	0.0%	0.0%	0.0%
Hospital 11	92.9%	7.1%	0.0%	0.0%	0.0%
Hospital 17	92.6%	0.0%	0.0%	7.4%	0.0%
Hospital 15	92.5%	0.0%	0.0%	3.0%	4.5%
Hospital 02	88.7%	3.8%	1.9%	5.7%	0.0%
Hospital 08	88.6%	2.9%	5.7%	2.9%	0.0%
Hospital 01	88.0%	0.4%	6.6%	0.4%	4.7%
Hospital 05	86.8%	1.5%	7.4%	1.5%	2.9%
Hospital 10	85.5%	6.6%	5.9%	0.0%	2.0%
Hospital 12	85.4%	6.1%	8.5%	0.0%	0.0%
Hospital 07	81.3%	0.0%	0.0%	0.0%	18.8%
Hospital 03	80.4%	13.0%	6.5%	0.0%	0.0%
New Hampshire Total	79.6%	10.6%	5.9%	2.1%	1.7%
Hospital 09	78.8%	13.1%	6.6%	1.5%	0.0%
Hospital 16	77.9%	11.8%	8.8%	0.0%	1.5%
Hospital 19	76.4%	12.1%	10.3%	1.1%	0.0%
Hospital 04	68.9%	13.3%	11.1%	6.7%	0.0%
Hospital 06	67.1%	20.4%	3.3%	9.2%	0.0%
Hospital 14	66.7%	23.5%	7.8%	0.0%	2.0%
Hospital 13	62.3%	28.8%	4.7%	2.6%	1.6%

# SYSTEM ISSUES

## Out of hospital control

The issues we were sure of were the absence of weekend and holiday pick up, delivery and testing

Another issue was our snowy winters often delay pick up and delivery

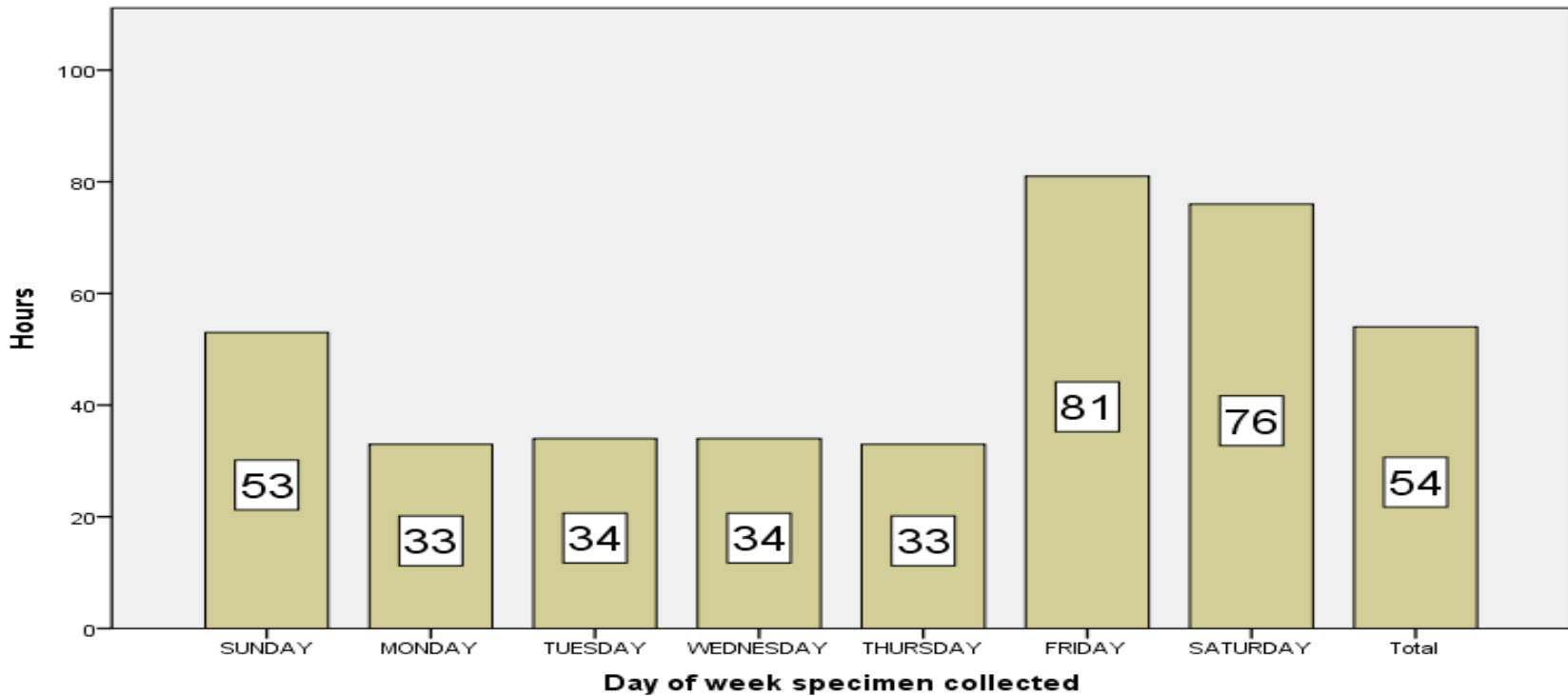
Our specimens are shipped to a lab in Massachusetts

We can only control the first issues

# SYSTEM ISSUES

## What we discovered

Median hours between specimen collection and lab receipt (using est 930am arrival)  
Births occurring in NH Jan-Nov 2014



# OUR GOAL

We are aiming high!

Our goal is to have 95% of all dried blood spot cards arrive at the Lab within 1 day of collection by January 1, 2017

2017





# HOW ARE WE GOING TO ACCOMPLISH THIS?!!

- We compiled a report for the birth hospitals on where they are and where they need to go to meet the goal we set
- We included recommendations on what they can do to improve timeliness for their facility

● But what we think will work the best is:  
**We are going to make their data public** - this was included in the report

# Best Practices/Promising Practices Checklist

Collect specimens as close to UPS pick-up time as is feasible while remaining within the infant age window and allowing 3 hours drying time

Arrange for the UPS pick-up staff to come directly to the birth unit by contacting the NH Newborn Screening Coordinator

Remind staff that this is an important blood sample to be treated with priority, not “just another piece of mail”

At least monthly, review your facility’s statistics for collecting specimens between 24 and 48 hours of life

At least monthly, review your facility’s statistics for quickly getting specimens on their way to the lab

Share lessons learned with the State Newborn Screening Coordinator to be included in PDSA cycles

# A SMALL SUCCESS

One Hospital had canceled the dedicated afternoon courier pick up

The Birth Unit sent the envelope down to the loading dock at 6:30 am

The Nurse Manager was part of the COLIN team  
She made two changes

The Birth Unit reinstated the afternoon pickup

And changed the pick up location to the Birth Unit

Proportion of Specimens Arriving Late

100%  
90%  
80%  
70%  
60%  
50%  
40%  
30%  
20%  
10%  
0%

Shipping/Receiving

Birth Unit

2014, Week 11  
2014, Week 16  
2014, Week 21  
2014, Week 26  
2014, Week 31  
2014, Week 36  
2014, Week 41  
2014, Week 46  
2014, Week 51  
2015, Week 03  
2015, Week 09  
2015, Week 14

Week of Year



The mean proportion of specimens arriving late changed from 31.9% to 3.7% since the changes were made !!!



# OUR PLANS

- Saturday Pick Up and Delivery starts July 11, 2015 (Also testing)
- Encourage pick up locations to be moved to the birthing units
- Change Age at Specimen goals to 24-48 hours instead of 24-72 hours
- Provide monthly reports on the 2 performance measures to each hospital

# I wish to thank the Team Members of the NH COLIN Timeliness Project

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Foundation for Healthy Communities

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New**STEPS**s

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THANK YOU  
NEWSTEPS  
AND APHL!!!!