Time To Get It Right: Improving Accuracy Of Demographic Data In Maternal Health Records To Identify And Address Maternal Health Disparities

Daisy Goodman, CNM, DNP, MPH, CARN-AP
David Laflamme, PhD, MPH
Trinidad Tellez, MD

NH AIM/ERASE Monthly Webinar
March 10, 2022

NNEPQIN NORTHERN NEW ENGLAND PERINATAL QUALITY IMPROVEMENT NETWORK
AIM ALLIANCE FOR INNOVATION ON MATERNAL HEALTH
NH DIVISION OF Public Health Services Improving health, preventing disease, reducing costs for all

1

Agenda

I. Why this matters
II. Data: Disaggregation & Standards
III. How does your EHR align with the standards?
IV. Comparing EHR and birth certificate records
V. How can we get this right?
VI. Improvements can be made!

2

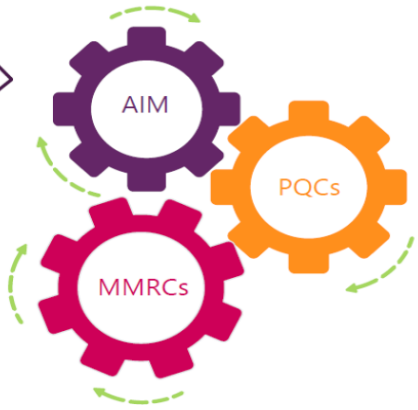
I. Why This Matters

3

Critical Collaborations: NNEPQIN, ERASE and AIM

Alliance for Innovation on Maternal Health moves established guidelines into practice with a standard approach to improve safety in care

Maternal Mortality Review Committees conduct detailed reviews for complete and comprehensive data on maternal deaths to prioritize statewide prevention efforts



Perinatal Quality Collaboratives mobilize state or multi-state networks to implement clinical quality improvement efforts and improve care for mothers and babies

Created from a Centers for Disease Control, Division of Reproductive Health source

NNEPQIN
NORTHERN NEW ENGLAND PERINATAL QUALITY IMPROVEMENT NETWORK

AIM
ALLIANCE FOR INNOVATION ON MATERNAL HEALTH

NH DIVISION OF Public Health Services
Improving health, preventing disease, reducing costs for all

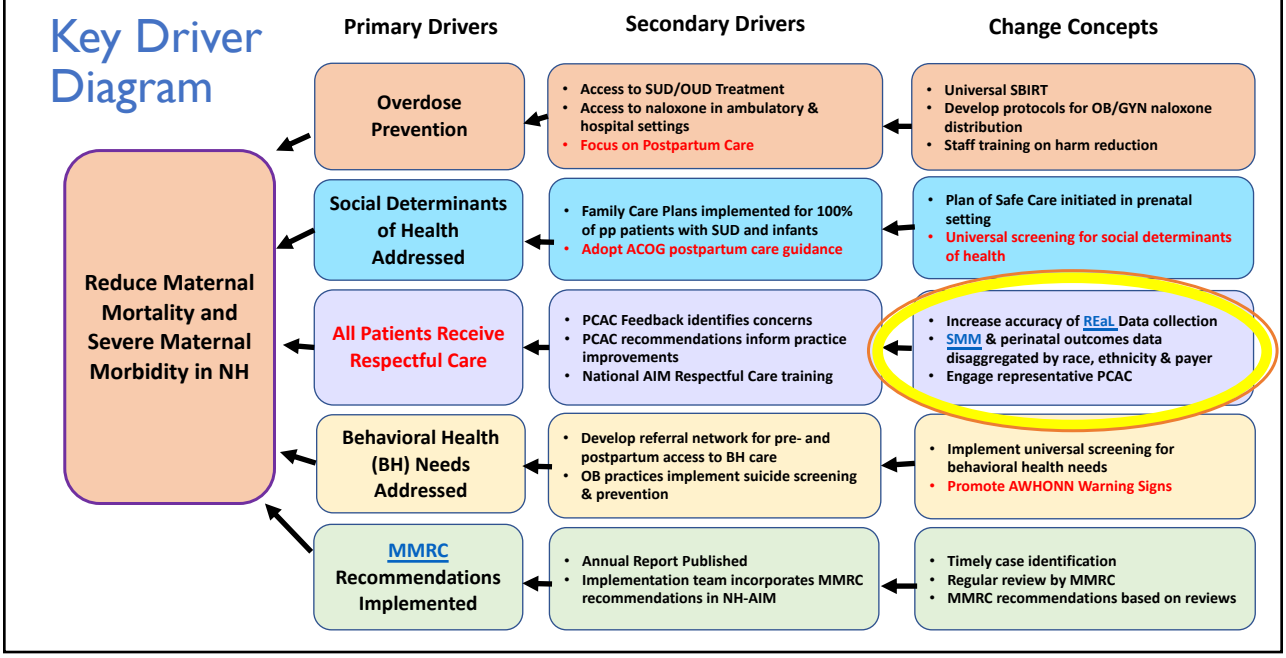
4

Why This Matters

- Maternal health disparities are real
- CMS encourages us to collect demographic data
- AIM asks us to report disaggregated outcomes

5

NH-AIM Key Driver Diagram



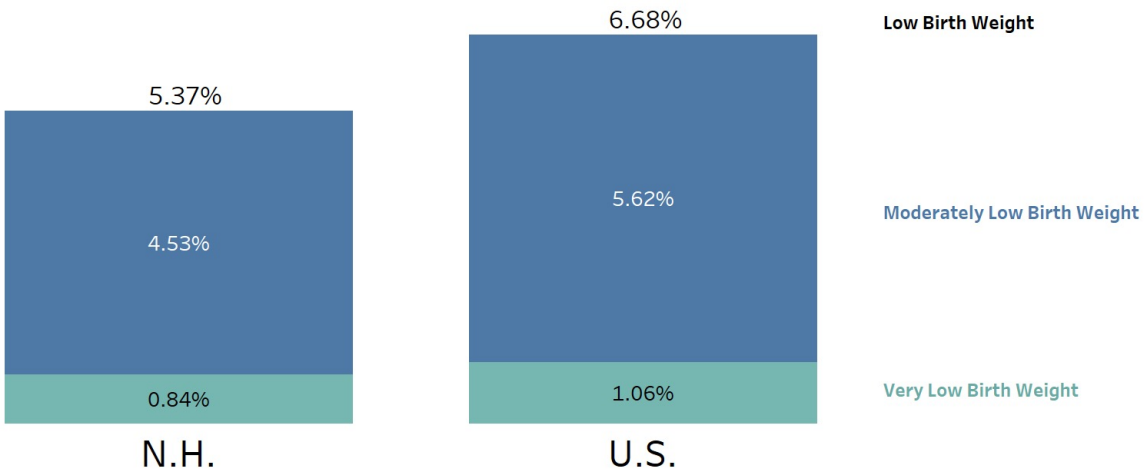
6

II. Data: Disaggregation & Standards

7

NH Looks Good Overall

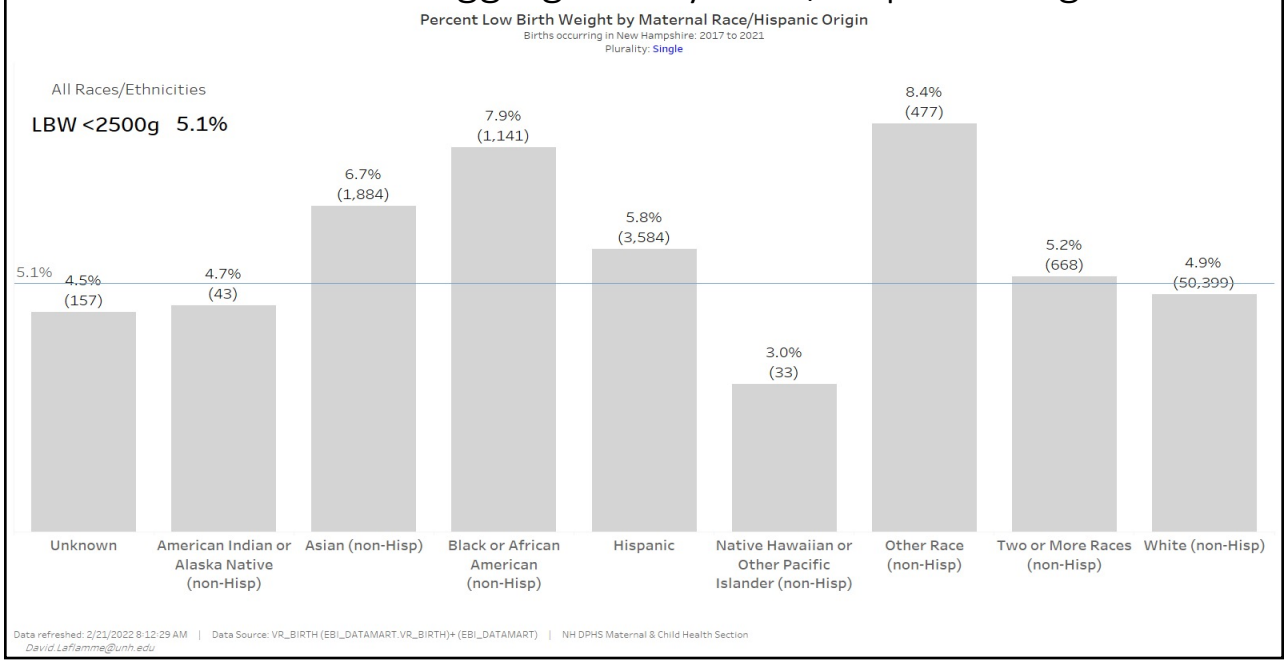
Percent Low Birth Weight
Resident Singletons 2020 / N.H. and U.S.



N.H. Source: NH DPHS Maternal & Child Health Section analysis of vital records
U.S. Source: National Vital Statistics Reports, Vol. 70, No. 17, February 7, 2022

8

NH %LBW Disaggregated by Race/Hispanic Origin



9

10

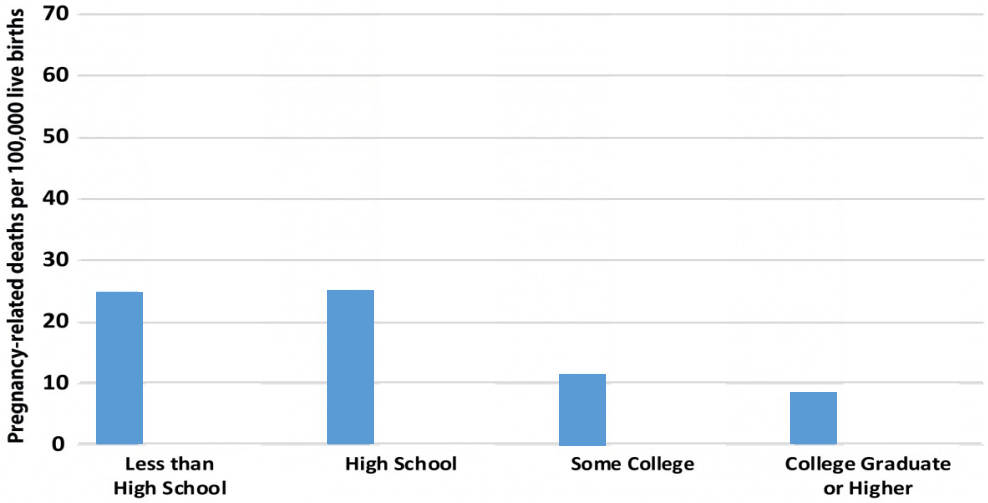
Capacity to disaggregate data to **identify disparities** depends on our ***collection*** of those demographic/SES/SDOH identifiers!

…by age
…by geography
…by insurance status
…by sexual orientation
…by gender identity
…**by race/ethnicity**
…by language
…by veteran status
…by disability status
…by migrant status
…by access to housing
…by income
…by employment status
…by education level
…by incarceration history
…by distance to service

And those identifiers need to be collected ***correctly*** and ***consistently!***

11

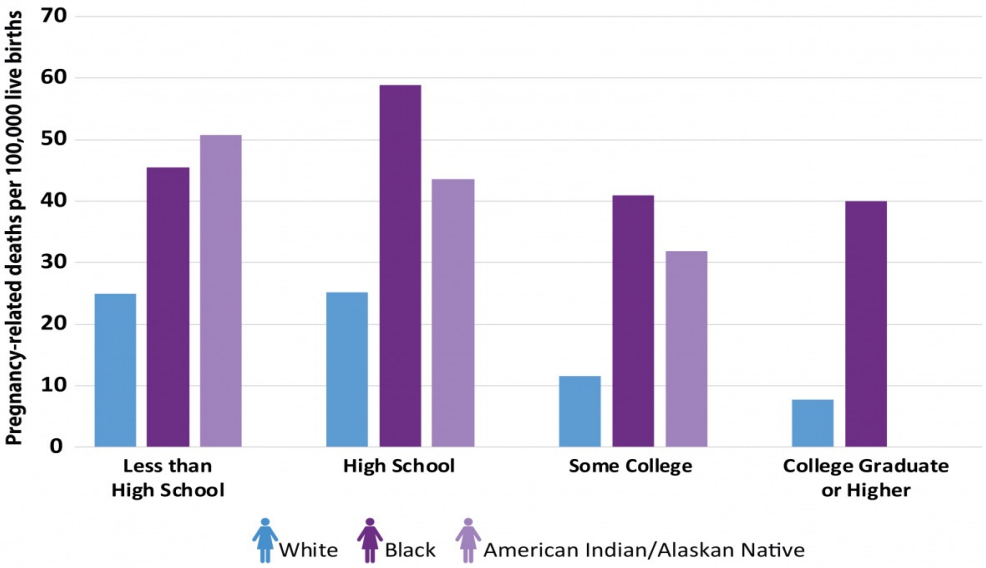
Pregnancy-Related Deaths, 2007-2016



https://www.cdc.gov/reproductivehealth/maternal-mortality/disparities-pregnancy-related-deaths/infographic.html

12

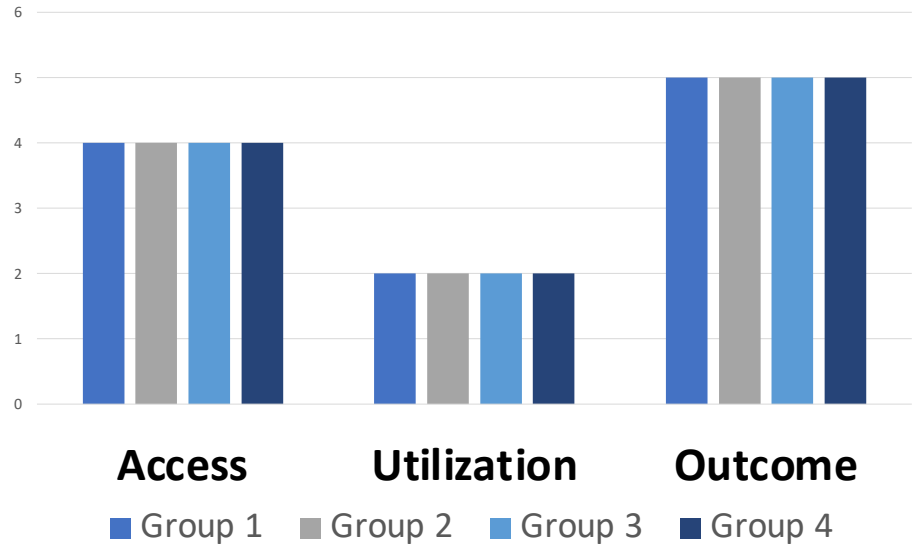
Pregnancy-Related Deaths, 2007-2016



https://www.cdc.gov/reproductivehealth/maternal-mortality/disparities-pregnancy-related-deaths/infographic.html

13

Equity = No Significant Difference Between Groups



Without measurement there is no accountability

For the purposes of measurement, ***health equity*** means reducing and ultimately eliminating disparities in health and its determinants that adversely affect excluded or marginalized groups.

https://www.rwjf.org/en/library/research/2017/05/what-is-health-equity-.html

14

Data Standards

U.S. Office of Management and Budget (OMB) Standards for the Classification of Federal Data on Race and Ethnicity, issued in 1997

OMB 1997 (Minimum Categories)
Select one or more
Are you Hispanic, Latino/a, or Spanish Origin *(One or more categories may be selected)*
Not Hispanic or Latino
Hispanic or Latino
Race
White
Black or African American
American Indian or Alaska Native
Asian
Native Hawaiian or Other Pacific Islander
More than one race

- For census ("denominator"), household surveys, administrative forms and records, medical and other research, and other data collections.
- A **minimum** set of categories for data on race and ethnicity
- Self-identification is the preferred means
- Do not tell an individual who he or she is, or specify how an individual should classify himself or herself

The categories represent a social-political construct designed for collecting data on the race and ethnicity of broad population groups in this country, and are not anthropologically or scientifically based.

https://obamawhitehouse.archives.gov/omb/fedreg_1997standards https://www.govinfo.gov/content/pkg/FR-1997-10-30/pdf/97-28653.pdf

15

U.S. Office of Management and Budget

OMB 1997 (Minimum Categories)	2011 HHS Data Collection Standards
Select one or more	Select one or more
Are you Hispanic, Latino/a, or Spanish Origin *(One or more categories may be selected)*	***Are you Hispanic, Latino/a, or Spanish Origin*** *(One or more categories may be selected)*
Not Hispanic or Latino	No, not of Hispanic, Latino/a, or Spanish origin
Hispanic or Latino	Yes, Mexican, Mexican American, Chicano/a
	Yes, Puerto Rican
	Yes, Cuban
	Yes, Another Hispanic, Latino/a or Spanish origin
Race	***What is your race?*** *(One or more categories may be selected)*
White	White
Black or African American	Black or African American
American Indian or Alaska Native	American Indian or Alaska Native
Asian	Asian Indian
	Chinese
	Filipino
	Japanese
	Korean
	Vietnamese
	Other Asian
Native Hawaiian or Other Pacific Islander	Native Hawaiian
	Guamanian or Chamorro
	Samoan
	Other Pacific Islander
More than one race	More than one race

U.S. Department of Health and Human Services, October 30, 2011, issued as section 4302 of the Affordable Care Act: Data Collection Standards for Race, Ethnicity, Sex, Primary Language, and Disability Status

https://aspe.hhs.gov/reports/hhs-implementation-guidance-data-collection-standards-race-ethnicity-sex-primary-language-disability-0

16

III. How does your EHR align with the standards?

17

- **Which set of standards does your hospital EHR use?**
- **Does your EHR have the right categories?**

OMB 1997 (Minimum Categories) Select one or more	2011 HHS Data Collection Standards Select one or more
Are you Hispanic, Latino/a, or Spanish Origin *(One or more categories may be selected)*	***Are you Hispanic, Latino/a, or Spanish Origin*** *(One or more categories may be selected)*
Not Hispanic or Latino	No, not of Hispanic, Latino/a, or Spanish origin
Hispanic or Latino	Yes, Mexican, Mexican American, Chicano/a Yes, Puerto Rican Yes, Cuban Yes, Another Hispanic, Latino/a or Spanish origin
Race	***What is your race?*** *(One or more categories may be selected)*
White	White
Black or African American	Black or African American
American Indian or Alaska Native	American Indian or Alaska Native
Asian	Asian Indian Chinese Filipino Japanese Korean Vietnamese Other Asian
Native Hawaiian or Other Pacific Islander	Native Hawaiian Guamanian or Chamorro Samoan Other Pacific Islander
More than one race	More than one race

- **Can one select all that apply?**
- **Is there an "other (specify)" or additional categories?**

18

How Does Your Process Work?

- **Do staff explain why the data is being collected?**
  - Standard language/statement?
    - Data is confidential
    - Data is used for improving services for all
- **Are patients able to self-identity?**
- **Are staff comfortable…?**
  - asking the questions?
  - responding to patient's inquiries/ responses?

19

IV. Comparing Data Sources: Birth Certificate & EHR Linkage

20

NH Birth Certificate Select one or more	Hospital A Select only one race and one ethnicity	Hospital B Select one or more
Mother of Hispanic Origin? *(Check the box that best describes whether the mother is Spanish/Hispanic/Latina or check the "No" box if the mother is not Spanish/Hispanic/Latina)*	***Ethnicity***	**Ethnicity**
No, not Spanish/Hispanic/Latina	Non-Hispanic or Latino	Not Hispanic nor Latino
Yes, Mexican, Mexican American, Chicana Yes, Puerto Rican Yes, Cuban Yes, other Spanish/Hispanic/Latina (Specify):_____	Hispanic or Latino	Hispanic or Latino
Unknown	Unknown	Unknown or Unavailable
	Refused to Answer	Declines to List
Mother's Race *(Check one or more races to indicate what the mother considers herself to be)*	***Race***	***Race***
White	White	White
Black or African American	Black/African American	Black or African American
American Indian or Alaska Native (Name of the enrolled or principal tribe): _____	Indian/Alaskan Native	American Indian/Alaska Native
Asian Indian Chinese Filipino Japanese Korean Vietnamese Other Asian (Specify): _____	Asian	Asian
Native Hawaiian Guamanian or Chamorro Samoan Other Pacific Islander (Specify): _____	Hawaiian/Pacific Islander	Native Hawaiian/Other Pacific Islander
Other (Specify): _____	Other	
Unknown	Unknown	Unknown/Unavailable
	Refused/Declined to Provide	Declines to List
More than one race	*Not possible* since not select one or more	More than one race

21

Once you compare your EHR format with the HHS 2011/Birth Certificate format…

- Let's do the linkage in every birth hospital and see what we find
- The BC appears to be higher quality race and ethnicity data
  - Possibly due to best practice of self-identification
  - Still potential for inconsistency between and within birth hospitals
    - Possible literacy challenges
- Birth Certificate reflects "better" HHS standards

22

Example finding from one hospital

The birth certificate identified nearly 50% more racial diversity† compared to EHR alone

46%

The EHR captured only about three-quarters of mothers of Hispanic origin compared to the birth certificate

77%

† Other than single white race

23

EHR Issues

24

V. How Can We Get This Right?

There are tools and resources

25

How can we get this right?

- There are toolkits…
- Look at *how* it's being collected
- Assure respectful, self-report
- Ongoing staff training

http://www.wsha.org/wp-content/uploads/Health-Equity-Metric-Guidance_WSHA.pdf & https://mha.org/Portals/0/Images/MHA%20Keystone%20Center/health_equity_organizational_assessment.pdf

26

VI. Improvements can be made!

27

Original Research ajog.org

OBSTETRICS

Reduction in racial disparities in severe maternal morbidity from hemorrhage in a large-scale quality improvement collaborative

Elliott K. Main, MD; Shen-Chih Chang, MS, PhD; Ravi Dhurjati, MS, PhD; Valerie Cape, BA; Jochen Profit, MD, MPH; Jeffrey B. Gould, MD, MPH

AJOG at a Glance

Why was the study conducted?

It was not known whether a large-scale quality improvement collaborative could reduce racial disparity in severe maternal complications following obstetric hemorrhage.

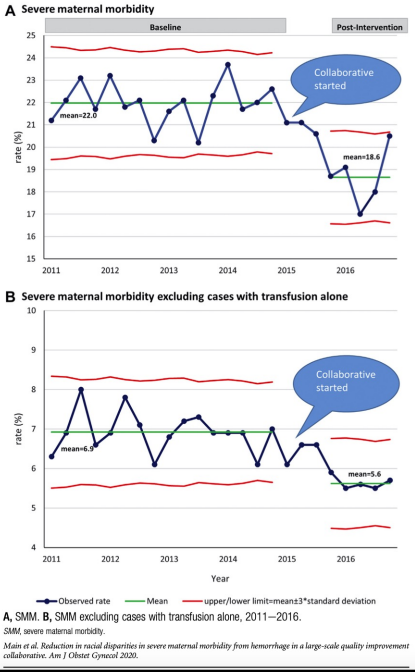
Key Findings

In this cross-sectional study that included 73,476 women with obstetric hemorrhage from 99 hospitals who participated in a hemorrhage quality improvement collaborative, the rate of severe maternal morbidity was reduced for all races. The black–white differences were no longer significant following case mix adjustment.

What does this add to what is known?

Maternal quality-improvement activities that focus on improving access to highly effective treatments have the potential to reduce racial disparities for care-sensitive acute hospital-focused morbidities such as hemorrhage.

FIGURE 1
Control chart of quarterly rates for SMM, 2011–2016



A, SMM. B, SMM excluding cases with transfusion alone, 2011–2016.

SMM, severe maternal morbidity.

Main et al. Reduction in racial disparities in severe maternal morbidity from hemorrhage in a large-scale quality improvement collaborative. Am J Obstet Gynecol 2020.

28

Improvements can be made!

- Stratify your data and look at outcomes to uncover hidden variation and identify disparities
- National guidelines exist
- Vital records provide a useful comparison for demographic data contained in EHRs, and can be used to track improvement over time

29

Questions?

THANK YOU!

- **Daisy Goodman, CNM, DNP, MPH, CARN-AP**
  daisy.j.goodman@hitchcock.org
- **David Laflamme, PhD, MPH**
  david.laflamme@unh.edu
- **Trinidad Tellez, MD**
  drttellez@gmail.com (with 2 T's)

30