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

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NH AIM/ERASE Monthly Webinar
March 10, 2022

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!
I. Why This Matters

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.

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

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

Created from a Centers for Disease Control, Division of Reproductive Health source.
Why This Matters

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

NH-AIM Key Driver Diagram

Reduce Maternal Mortality and Severe Maternal Morbidity in NH

Primary Drivers
- Overdose Prevention
- Social Determinants of Health Addressed
- All Patients Receive Respectful Care
- Behavioral Health (BH) Needs Addressed
- MMRC Recommendations Implemented

Secondary Drivers
- Access to SUD/OUD Treatment
- Access to naloxone in ambulatory & hospital settings
- Focus on Postpartum Care
- Family Care Plans implemented for 100% of pp patients with SUD and infants
- Adopt ACOG postpartum care guidance
- PCAC Feedback identifies concerns
- PCAC recommendations inform practice improvements
- National AIM Respectful Care training
- Develop referral network for pre- and postpartum access to BH care
- OB practices implement suicide screening & prevention
- Annual Report Published
- Implementation team incorporates MMRC recommendations in NH-AIM

Change Concepts
- Universal SBIRT
- Develop protocols for OB/GYN naloxone distribution
- Staff training on harm reduction
- Plan of Safe Care initiated in prenatal setting
- Universal screening for social determinants of health
- Increase accuracy of REaL Data collection
- SMM & perinatal outcomes data disaggregated by race, ethnicity & payer
- Engage representative PCAC
- Implement universal screening for behavioral health needs
- Promote AWHONN Warning Signs
- Timely case identification
- Regular review by MMRC
- MMRC recommendations based on reviews
II. Data: Disaggregation & Standards

NH Looks Good Overall

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

N.H. | 5.37% | 4.53% | 0.84%
--- | --- | --- | ---
U.S. | 6.68% | 5.62% | 1.06%

N.H. Source: NHSPH Material & Data Health Section analysis of vital records
NH %LBW Disaggregated by Race/Hispanic Origin

Percent Low Birth Weight by Maternal Race/Hispanic Origin
Births occurring in New Hampshire, 2017 to 2022

What is needed?
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**!

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**Pregnancy-Related Deaths, 2007-2016**

![Graph showing pregnancy-related deaths per 100,000 live births by education level.](https://www.cdc.gov/reproductivehealth/maternal-mortality/disparities-pregnancy-related-deaths/infographic.html)
Pregnancy-Related Deaths, 2007-2016


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.

Without measurement there is no accountability.

Equity = No Significant Difference Between Groups

## Data Standards

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

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

- 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  
III. How does your EHR align with the standards?

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<tr>
<td>Are you Hispanic, Latino/a, or Spanish Origin</td>
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</tr>
<tr>
<td>Select one or more</td>
<td>Select one or more</td>
</tr>
<tr>
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<td>No, not of Hispanic, Latino/a, or Spanish origin</td>
</tr>
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<td></td>
<td>Yes, Puerto Rican</td>
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<tr>
<td></td>
<td>Yes, Cuban</td>
</tr>
<tr>
<td></td>
<td>Yes, Another Hispanic, Latino/a or Spanish origin</td>
</tr>
<tr>
<td>Race</td>
<td>What is your race?</td>
</tr>
<tr>
<td>Select one or more</td>
<td>(One or more categories may be selected)</td>
</tr>
<tr>
<td>White</td>
<td>White</td>
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<tr>
<td>Black or African American</td>
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<td>American Indian or Alaska Native</td>
<td>American Indian or Alaska Native</td>
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<td>Vietnamese</td>
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<tr>
<td>Other Asian</td>
<td>Other Asian</td>
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<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>Native Hawaiian</td>
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<tr>
<td>Guamanian or Chamorro</td>
<td>Guamanian or Chamorro</td>
</tr>
<tr>
<td>Samoan</td>
<td>Samoan</td>
</tr>
<tr>
<td>Other Pacific Islander</td>
<td>Other Pacific Islander</td>
</tr>
<tr>
<td>More than one race</td>
<td>More than one race</td>
</tr>
</tbody>
</table>

• Which set of standards does your hospital EHR use?

• Does your EHR have the right categories?

• Can one select all that apply?

• Is there an “other (specify)” or additional categories?
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?

IV. Comparing Data Sources: Birth Certificate & EHR Linkage
<table>
<thead>
<tr>
<th>NH Birth Certificate</th>
<th>Hospital A</th>
<th>Hospital B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mother of Hispanic Origin?</strong> (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)</td>
<td><strong>Ethnicity</strong></td>
<td><strong>Ethnicity</strong></td>
</tr>
<tr>
<td>No, not Spanish/Hispanic/Latina</td>
<td>Non-Hispanic or Latino</td>
<td>Not Hispanic nor Latino</td>
</tr>
<tr>
<td>Yes, Mexican, Mexican American, Chicana</td>
<td>Hispanic or Latino</td>
<td>Hispanic or Latino</td>
</tr>
<tr>
<td>Yes, Puerto Rican</td>
<td>Hispanic or Latino</td>
<td>Hispanic or Latino</td>
</tr>
<tr>
<td>Yes, Cuban</td>
<td>Hispanic or Latino</td>
<td>Hispanic or Latino</td>
</tr>
<tr>
<td>Yes, other Spanish/Hispanic/Latina (Specify): __________</td>
<td>Unknown</td>
<td>Unknown or Unavailable</td>
</tr>
<tr>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown or Unavailable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Mother’s Race</strong> (Check one or more races to indicate what the mother considers herself to be)</th>
<th><strong>Race</strong></th>
<th><strong>Race</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td>Black or African American</td>
<td>Black/African American</td>
<td>Black or African American</td>
</tr>
<tr>
<td>American Indian or Alaska Native (Name of the enrolled or principal tribe): __________</td>
<td>American Indian/Alaska Native</td>
<td>American Indian/Alaska Native</td>
</tr>
<tr>
<td>Asian Indian</td>
<td>Asian</td>
<td>Asian</td>
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<tr>
<td>Chinese</td>
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<td>Asian</td>
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<tr>
<td>Vietnamese</td>
<td>Asian</td>
<td>Asian</td>
</tr>
<tr>
<td>Other Asian (Specify): __________</td>
<td>Hawaiian/Pacific Islander</td>
<td>Native Hawaiian/Other Pacific Islander</td>
</tr>
<tr>
<td>Native Hawaiian</td>
<td>Hawaiian/Pacific Islander</td>
<td>Native Hawaiian/Other Pacific Islander</td>
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<tr>
<td>Samoan</td>
<td>Hawaiian/Pacific Islander</td>
<td>Native Hawaiian/Other Pacific Islander</td>
</tr>
<tr>
<td>Other Pacific Islander (Specify): __________</td>
<td>Other</td>
<td>Other</td>
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<tr>
<td>Other (Specify): __________</td>
<td>Other</td>
<td>Other</td>
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</tr>
<tr>
<td>Refused to Answer</td>
<td>Refused to Answer</td>
<td>Refused to Answer</td>
</tr>
<tr>
<td>Declines to List</td>
<td>Declines to List</td>
<td>Declines to List</td>
</tr>
<tr>
<td>More than one race</td>
<td>Not possible since not select one or more</td>
<td>More than one race</td>
</tr>
</tbody>
</table>

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
Example finding from one hospital

- The birth certificate identified nearly 50% more racial diversity\(^*\) compared to EHR alone.
- The EHR captured only about three-quarters of mothers of Hispanic origin compared to the birth certificate.

46% 77%

\(^*\) Other than single white race

EHR Issues

- Broad variation in categories
- Missing fields
- Broad variation in how collected/asked
- Staff and patient discomfort
V. How Can We Get This Right?

There are tools and resources

How can we get this right?

- There are toolkits...
- Look at how it’s being collected
- Assure respectful, self-report
- Ongoing staff training

VI. Improvements can be made!

Original Research

OBSTETRICS

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

Eileen K. Main, MD; Shao-Chih Chang, MS, PhD; Ranil Dhutaj, MS, PhD; Valeria Copa, BA; Jochen Probst, MD, MPH; Jeffrey S. Gold, 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. Severe maternal morbidity

B. Severe maternal morbidity excluding cases with transfusion alone

AJOG, American Journal of Obstetrics and Gynecology; SMM, severe maternal morbidity; CI, confidence interval; HR, hazard ratio; CI, confidence interval; HR, hazard ratio; SMM, severe maternal morbidity; CI, confidence interval; HR, hazard ratio; SMM, severe maternal morbidity.
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

Questions?

THANK YOU!

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