About the National Center

• The National Center for Fatality Review and Prevention (NCFRP) is a resource and data center that supports child death review (CDR) and fetal and infant mortality review (FIMR) programs around the country.

• Supported with funding from the Maternal and Child Health Bureau at the Health Resources and Services Administration, the Center aligns with several MCHB priorities and performance and outcome measures such as:
  – Healthy pregnancy
  – Child and infant mortality
  – Injury prevention
  – Safe sleep
Acknowledgement

This presentation was made possible in part by Cooperative Agreement Numbers UG7MC28482 and UG7MC31831 from the US Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB) as part of an award totaling $1,099,997 annually with 0 percent financed with non-governmental sources. Its contents are solely the responsibility of the authors 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.
Fetal & Infant Mortality Review (FIMR) is:

A multidisciplinary, community team that examines a fetal or infant death case that is:

- Comprehensive
- De-identified
- Confidential
- Giving voice to mothers’ experiences
A bit of history . . .

• The origins of FIMR date back to the mid 1980’s when concern over high infant mortality rates intensified nationwide
• MCHB began Infant Mortality Review (IMR), the forerunner of FIMR, by funding the first ten projects in states and communities in 1988
• Stillbirth review was added in 1990
• MCHB funded the American College of Obstetricians and Gynecologists (ACOG) to create a National Resource Center, NFIMR, in 1991
A bit of history . . .

• In 1996, MCHB funded the Johns Hopkins University Women’s and Children’s Health Policy Center to conduct a nationwide evaluation of FIMR, focusing on the utility of FIMR at the community level


• From 1997 – 2004, MCHB sponsored 12 state FIMR Support Programs

• In 2015 HRSA combined the support centers for CDR and FIMR under Michigan Public Health Institute
FIMR today

- FIMR has a presence in 28 states, DC, Puerto Rico, and CNMI
- 175 local programs
- Tribes plan and participate in FIMR in WI and WY
  - Inter-Tribal Council of Michigan has its own FIMR
176 FIMR Programs in 28 States, DC, Puerto Rico, and CNMI
The FIMR process

Case Review Team (CRT)

Surveillance
- Death notification
- Monitoring

Review
- Abstract records
- Interview family
- De-identified case summary

Root Cause
- Multidisciplinary Review
- Identify systems issues/gaps
- Make recommendations

Preventative Action
- Community Action Team (CAT)
- Prioritizes and implements recommendations

Community Action Team
FIMR: a two-tiered process

CRT: Case Review Team

CAT: Community Action Team
Role of the Case Review Team (CRT)

• Review cases
  – Sentinel events
  – Trends
  – Incidental findings

• Develop initial recommendations
Role of the Community Action Team (CAT)

• Composed of those who have the political will and fiscal resources to create large-scale systems change

• Responsible for taking CRT recommendations to ACTION
  – Creative solutions to improve services and resources
  – Prioritize and implement interventions
Confidentiality

- FIMR cases are de-identified so that the names of families, providers, and institutions are confidential – the FIMR focus is on improving systems, **NOT** assigning blame.
The FIMR maternal interview

- Provides insight into the mother’s experience before, during, after pregnancy and during the infant’s life/death
- Tells the story of mothers’ encounters with local service systems
Healthy Start in the US

• Healthy Start is a federally-funded, community-driven program dedicated to reducing disparities in maternal and infant health
• Healthy Start works in communities with infant mortality rates at least 1.5 times the national average, and high rates of low birth weight, preterm birth, and maternal morbidity and mortality
• Authorized by Congress in 1991, Healthy Start has grown from a demonstration program in 15 communities, to a network of 100 Healthy Start programs in 37 states and the District of Columbia
HS Strategic approach

- Improve women’s health
  - Promote quality services
- Improve family health and wellness
- Promote systems change
- Assure impact and effectiveness
## Healthy Start in North Carolina

<table>
<thead>
<tr>
<th>County</th>
<th>Agency</th>
<th>Level</th>
<th>Serving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wake</td>
<td>North Carolina Department of Health and Human Services</td>
<td>3</td>
<td>1,500 participants/year</td>
</tr>
<tr>
<td>Robeson</td>
<td>University of North Carolina, Pembroke</td>
<td>1</td>
<td>500 participants/year</td>
</tr>
<tr>
<td>Robeson</td>
<td>Robeson Health Care Corporation</td>
<td>1</td>
<td>500 participants/year</td>
</tr>
</tbody>
</table>

All competing and continuing applicants must discuss how your program will participate in at least one of the following activities: Fetal Infant Mortality Review (FIMR), Maternal Morbidity and Mortality Review (MMMR), or Periodic Periods of Risk (PPOR).
Three components of the FIMR Process are especially valuable to Healthy Start:

- Diverse coalition/community partnership building
- Inclusion of home interview with mothers who have lost their babies
- Outcome Interventions – based on the findings of the reviews, improvements in the health of the community and the families who live there
FIMR and CDR Collaboration Goals

• Recognize that FIMR and CDR are distinct but complimentary processes
• Preserve the integrity and methodology of each program and the unique perspective it brings
• Capitalize on opportunities for shared resources; leverage funding and use of data to drive prevention initiatives
Rationale for Collaboration

• Fetal, infant, and child deaths often have intertwined risk factors. Coordination can help review teams share information and findings, thereby contributing to our understanding of the link between fetal, infant, child, and maternal deaths

• Collaboration can help to discover that different types of deaths are associated with similar issues within the same service agencies or across agencies

• Coordination can also minimize duplication of efforts and create economies of scale
Examples of FIMR/CDR Collaboration

Funding
Sharing funding between CDR and FIMR can assist in sustaining both programs. Funding can be shared at the state and/or local level. Examples include:

- Assigning one agency to coordinate/administer CDR and FIMR
- Consolidating staff resources
- Partnering on grant applications
- Coordinating trainings
- Establishing a dedicated staff member who participates in both CDR and FIMR
Examples of FIMR/CDR Collaboration

Leadership

• Collaborative leadership can reduce cost and duplication while improving efficiency and potential for prevention recommendations

• Communities with separate CDR and FIMR team leaders can still benefit from collaboration by meeting regularly, dividing process tasks, and coordinating prevention activities
Collaboration on Essential Functions

Communication

• Establish formal liaisons between review teams, and have members serve on multiple teams
• Work together to identify cases or common case findings
• Obtaining records: one person or one agency requests records that are used by both CDR and FIMR
• Triage or cluster reviews by types of deaths
Recommendations for Collaboration

Standardize and/or link data collected from reviews

• NFR-CRS launched April, 2018
• Encourage analysis of the data to jointly inform prevention efforts
Models of collaboration: One meeting

- Case Identification completed by CDR/FIMR Coordinator
- Case triage by CDR/FIMR Coordinator
- Joint Review
  - CDR Review
  - FIMR Review
- Recommendations and prevention work though a community action team OR information/data is shared with relevant prevention agencies

Collect, enter, and analyze data
Models of collaboration: Separate review teams

Case Identification completed by CDR Coordinator

CDR team reviews cases that meet definition

Case Identification FIMR Coordinator

FIMR team reviews cases that meet definition

Community Action Team prioritizes and select evidence-based strategies

Finalize and implement prevention recommendations
Models of collaboration: Triage cases

- Case Identification completed by CDR/FIMR Coordinators
- Case triage by CDR/FIMR Coordinators
  - CDR Review
  - CDR/FIMR review independently
    - FIMR Review
    - Preliminary recommendations and prevention work
      - Community Action Plans or information sharing with relevant prevention agencies
Components of FIMR that can assist CDR

• Team Composition
• Gather enough data to give a clear picture of maternal health history and infant health
• Identify the risks, gaps in care and services
• Put findings into action to improve care and resources for women, infants, and families
Team composition

Medical Expertise

- Obstetrics
- Maternal Fetal Medicine
- Pediatrics
- Neonatologist

- Pathology
- Emergency department
- Family practice
- Psychiatry
Team composition

Other Health Care Providers

- Nurses
- Social workers
- Dietitian
- Discharge planning
- Home care & home visiting
- Emergency medical services
- Medical examiners
Team composition

Human Service Providers

- Child welfare agencies
- Mental health
- Substance abuse

- Housing authority
- Transportation authority
Team composition

Public Health

• Medicaid
• Health plans
• WIC
• Family planning
• Outreach workers
Team composition

Community Leaders

• Mayor, city council, county executives
• Business leaders, chambers of commerce
• Clergy
• Civic groups (Kiwanis, Junior League)
• Law enforcement
Team composition

Advocacy Groups

- March of Dimes
- Healthy Mothers/Healthy Babies
- Family support groups
- Safe Kids Coalition
Data Gathering

• Birth and Death certificates
• Prenatal records
  – OB/GYN history, past pregnancies
• Hospital records
  – Antepartum
  – Delivery
  – Newborn/NICU
  – ED admissions

• Pediatric records
  – Well baby
  – Sick visits
  – Urgent care
Data Gathering

- Public Health Records
  - Maternal Infant Health Program: MIHP
  - WIC
  - Family Planning
  - Other support services (CSHC, Healthy Start)
- Evidence–based home visiting services
- DHS Records (including CPS histories)
- Police reports (domestic violence, other stressors)
After the Review

• Identify strengths
• Did the family receive the services or community resources that they needed?
• Were the systems and services culturally and linguistically appropriate?
• What gaps in or duplication of service systems are apparent or suggested by this case?
• What does this case tell us about how families are able to access existing local services and resources?
Where might FIMR have the greatest impact in North Carolina?
State Ranking for Overall Infant Mortality

Three Year Average, 2014 – 2016

<table>
<thead>
<tr>
<th>State</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mississippi</td>
<td>8.8</td>
</tr>
<tr>
<td>Alabama</td>
<td>8.55</td>
</tr>
<tr>
<td>Delaware</td>
<td>7.92</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>7.73</td>
</tr>
<tr>
<td>Georgia</td>
<td>7.66</td>
</tr>
<tr>
<td>Louisiana</td>
<td>7.58</td>
</tr>
<tr>
<td>Arkansas</td>
<td>7.58</td>
</tr>
<tr>
<td>North Carolina</td>
<td>7.24</td>
</tr>
<tr>
<td>Indiana</td>
<td>7.21</td>
</tr>
<tr>
<td>Ohio</td>
<td>7.07</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State</th>
<th>Three Year Average, 2014 – 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>14.15</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>13.84</td>
</tr>
<tr>
<td>Ohio</td>
<td>13.57</td>
</tr>
<tr>
<td>Indiana</td>
<td>12.74</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>12.55</td>
</tr>
<tr>
<td>Illinois</td>
<td>12.26</td>
</tr>
<tr>
<td>Michigan</td>
<td>12.1</td>
</tr>
<tr>
<td>Delaware</td>
<td>12.06</td>
</tr>
<tr>
<td>North Carolina</td>
<td>11.96</td>
</tr>
<tr>
<td>Georgia</td>
<td>11.77</td>
</tr>
</tbody>
</table>

Source: CDC WONDER On-line Database. Accessed at http://wonder.cdc.gov/lbd-current.html on Nov. 16, 2018
States with highest Native American Infant Mortality Rates

Three Year Average, 2014 – 2016

<table>
<thead>
<tr>
<th>State</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Dakota</td>
<td>15.39</td>
</tr>
<tr>
<td>Alaska</td>
<td>12.38</td>
</tr>
<tr>
<td>South Dakota</td>
<td>11.54</td>
</tr>
<tr>
<td>Minnesota</td>
<td>11.14</td>
</tr>
<tr>
<td>Montana</td>
<td>11.11</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>8.65</td>
</tr>
<tr>
<td>Arizona</td>
<td>8.56</td>
</tr>
<tr>
<td>Washington</td>
<td>8.12</td>
</tr>
<tr>
<td>North Carolina</td>
<td>7.66</td>
</tr>
<tr>
<td>California</td>
<td>7.09</td>
</tr>
</tbody>
</table>

Source: CDC WONDER On-line Database. Accessed at http://wonder.cdc.gov/lbd-current.html on Nov. 16, 2018
North Carolina Infant Mortality Rates by County
2012 - 2016

Rates Per 1,000 Live Births
- 0.0 - 4.9
- 5.0 - 7.4
- 7.5 - 10.3
- 10.4 - 19.0
- Suppressed*

* Rates based on less than 10 deaths are unreliable and have been suppressed.

North Carolina Infant Mortality 2016

- Total Births: 120,779
- Infant Deaths: 874
  (7.24/1,000 live births)
  - White: 438
  - Black: 394
  - Native AM: 15
- Fetal Deaths = 824
  (6.82/1,000 live births)

Infant Death rates by race

Black: 11.95
Native: 7.95
White: 5.49

The National Center for Fatality Review and Prevention
North Carolina Infant Deaths by Cause

2016

SUID:
- SIDS=1.5%
- Suffocation=2.5%
- Undetermined=11.9%

Preterm and preterm “related” total 57.3%
## Five Counties’ contribution to NC Infant mortality, 2016

<table>
<thead>
<tr>
<th>County</th>
<th>White Births</th>
<th>White Deaths</th>
<th>Rate</th>
<th>Black Births</th>
<th>Black Deaths</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wake</td>
<td>8,323</td>
<td>23</td>
<td>2.76</td>
<td>3,302</td>
<td>45</td>
<td>13.63</td>
</tr>
<tr>
<td>Mecklenburg</td>
<td>7,802</td>
<td>31</td>
<td>3.97</td>
<td>5,510</td>
<td>60</td>
<td>10.89</td>
</tr>
<tr>
<td>Guilford</td>
<td>2,964</td>
<td>14</td>
<td>4.72</td>
<td>2,783</td>
<td>34</td>
<td>12.22</td>
</tr>
<tr>
<td>Cumberland</td>
<td>2,798</td>
<td>21</td>
<td>7.51</td>
<td>2,301</td>
<td>32</td>
<td>13.91</td>
</tr>
<tr>
<td>Forsyth</td>
<td>2,778</td>
<td>24</td>
<td>8.64</td>
<td>1,472</td>
<td>17</td>
<td>11.55</td>
</tr>
</tbody>
</table>
North Carolina Disparities

Infant Mortality Rates by Race

- Wake: Black IMR = 13.63, White IMR = 2.76
- Mecklenburg: Black IMR = 10.89, White IMR = 3.97
- Guilford: Black IMR = 12.22, White IMR = 4.72
- Cumberland: Black IMR = 13.91, White IMR = 7.51
- Forsyth: Black IMR = 11.55, White IMR = 8.64

The National Center for Fatality Review and Prevention
How FIMR can benefit the community

• Identifies gaps in current services, a key part of needs assessment, and cooperate to fill those gaps
• Expands available services by cooperative programming and joint funding
• Fosters interagency networking and communication
• Develops a greater understanding of maternal and child health community needs by seeing the whole picture, not just a part
FIMR as partner

• Enhances ability of communities to work together.
• Brings players to a common table and improves communication among health and human service providers
• Provides *community specific* information about changing health care systems
FIMR as partner

- Provides data for regional/state assessment and planning
- FIMR findings drive perinatal initiatives
- Gives a **voice to local families** who have lost a baby
- **PREVENTION:** Better health care of women, children, and families
Synergy

The national evaluation suggests that a community where FIMR and Perinatal Initiatives were both present could achieve as much as nine times more progress in systems improvement!

Through the fetal-infant mortality review process, the community becomes the *expert* in the knowledge of the entire local service delivery systems and community resources for childbearing families.
For More Information

National Center for Fatality Review & Prevention
Supporting Fetal and Infant Mortality Review and Child Death Review Teams

There are many ways to stay in touch with the National Center for Fatality Review and Prevention:

twitter.com/NationalCFRP
facebook.com/NationalCFRP
www.ncfrp.org
800.656.2434
info@ncfrp.org

The National Center for Fatality Review and Prevention
Questions?

Rosemary Fournier
FIMR Director
rfournie@mphi.org

The National Center for Fatality Review and Prevention