The Florida Journey: Adapting FIMR to Address Maternal Mortality

Produced by the Alabama Department of Public Health
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Faculty

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Learning Objectives

- Assist other states in understanding the processes involved in adapting of FIMR to Maternal Mortality Review / PAMR
- Provide ideas for other states to accomplish MMR

Early Beginnings

- In 1993, Florida was included in national initiative
  - The first Florida FIMR project was established in Broward County as one of 12 projects funded nationwide by ACOG

Early Beginnings

- That same year the state of Florida provided funding for approximately 19 FIMR community projects

Early Beginnings

- A statewide training coordinator was hired (through grant funding) for the purpose of:
  - Establishing a network of FIMR projects
  - Providing training on the FIMR model

Early Beginnings

- Providing technical assistance with abstracting and development of case reviews

- The Florida FIMR projects utilized the standard abstraction forms and review process developed by ACOG and NFIMR

Early Beginnings

- The establishment of statewide FIMR projects increased awareness of the need for continual quality improvement initiatives
- This commitment to a strong community based system of review laid the groundwork for the expansion into the review of maternal mortality

A Historical / National Perspective…

- In 1986, CDC began raising awareness of the potential for under-reporting of maternal deaths
- In the early 1990s a cluster of maternal deaths in a single Florida county caught the attention of the public health officials

A Historical / National Perspective…

- The state of Florida re-examined their MMR data from 1993-1995 utilizing an enhanced data linkage system and confirmed the significant under-reporting of maternal deaths through the standard system utilized by Vital Statistics

Florida . . . Launching to Maternal Mortality Review

- In 1996, the Florida Department of Health formed an Advisory Council to conceptualize a plan for systematically reviewing maternal deaths
- Over a period of 6 months Florida's Pregnancy-Associated Mortality Review (PAMR) was developed

Florida . . . Launching to Maternal Mortality Review

- The NFIMR model and materials served as the foundation for the PAMR process

To Summarize . . . Reasons for PAMR Development

- CDC's publications confirming under- reporting of maternal deaths
- Questions about changes in health care systems
- Observed cluster of deaths
- 1999-2002 Florida PAMR Report

Establishing Pregnancy Associated Mortality Review (PAMR)

- Many of the founding members associated with development of FIMR also participated in the development of PAMR

Establishing Pregnancy Associated Mortality Review (PAMR)

- Both FIMR and PAMR are covered under the same statutory authority, confidentiality protocols, and immunity protections
- The PAMR medical record abstractors were hired from the FIMR projects .
  - RN's with MCH experience

Purpose of FIMR vs. PAMR

- FIMR
  - The goal is to address factors and issues that affect infant mortality and morbidity to empower communities to enhance services, influence policy, and direct planning efforts that will ultimately lower mortality rates

Purpose of FIMR vs. PAMR

- PAMR
  - The goal is to seek to elucidate gaps in care, identify systemic service delivery problems, and recommend areas in which linkages between community resources can be improved to facilitate improvements in the system of care

Stage I: Link / Find All Maternal Deaths Case Abstraction

- Statewide review of all maternal deaths
- FIMR abstractors are hired to review selected possible PAMR cases / records in their areas

Stage I: Link / Find All Maternal Deaths Case Abstraction

- As with FIMR, abstraction forms capture information from the medical and social history, prenatal, labor and delivery, Healthy Start records, Medical Examiner, and law enforcement reports

Stage II: Case Review

- De-identified summaries of the cases are reviewed by team
- The team collaborates to identify trends and issues and to formulate recommendations for improvements to the system of care for women

Stage II: Case Review

- Key question:
  - "If she had not been pregnant, would she have died?"

PAMR Team Meetings

- Held quarterly
  - Approximately 15 cases / quarter
- In Tallahassee, central location, state level process
- Coordinated at central office
- Budget overview / funding
- IMRH staff coordinate process

PAMR Team Meetings

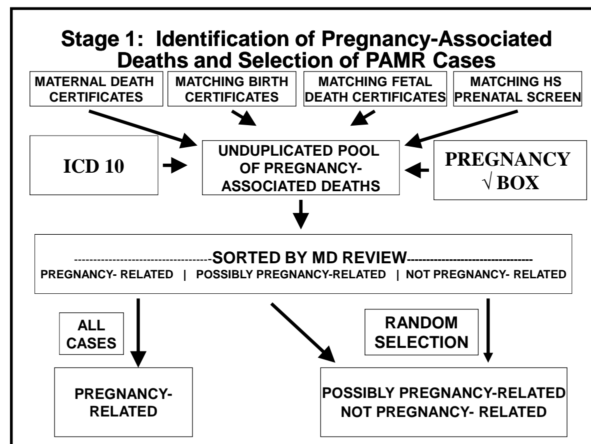
- MCH Practice and Analysis Data System

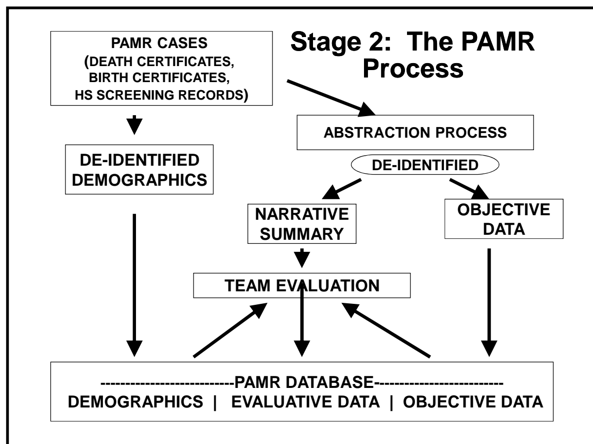
PAMR Team Membership

- Physicians
- Nurses
- Social workers
- Certified nurse midwife
- Domestic violence advocate
- Perinatologist
- OB/GYN specialists

PAMR Team Membership

- Researchers
- Professors
- Forensics professionals
- Epidemiologists





PAMR Goals: Increase Awareness – Promote Change

- Identify all deaths to women in Florida who have died within one year of termination of pregnancy
- Perform thorough medical record abstraction, in order to obtain details of events and issues leading up to the terminal event

PAMR Goals: Increase Awareness – Promote Change

- Perform a multidisciplinary review of cases to gain a holistic understanding of the issues
  - Surrounding the death and life of mother
- Promote the translation of findings and recommendations into quality improvement actions at all levels

PAMR Goals: Increase Awareness – Promote Change

- Goals/Objectives:
  - Recommend improvements to care at the individual, provider and system levels with the potential for reducing or preventing future events

PAMR Goals: Increase Awareness – Promote Change

- Prioritize the findings and recommendations to guide the development of effective messages
- Disseminate the findings and recommendations to a broad array of individuals and organizations

PAMR Goals: Increase Awareness – Promote Change

- Promote the translation of findings and recommendations into quality improvement actions at all levels

Issues Identified

- Nutrition issues
- Access to prenatal care
  - Including funding issues
- Substance use
- Absence of prenatal risk assessment
- Lack of social support
- Problems with housing

Issues Identified

- Mental health issues
- Family violence or neglect
- Social issues
- Access to transportation
- Problems with provision or design of services

Issues Identified

- Environmental or occupational hazards
- Concerns about family planning access or contraceptive method

Recommendations / Results from PAMR Reviews

- Risk factors significantly associated with pregnancy-related mortality in 1999-2008 were:
  - Being obese class III (morbidly obese) (BMI of 40.0 or +) (RR 9.0)
  - Not receiving any prenatal care (RR 6.9)

Recommendations / Results from PAMR Reviews

- Having a cesarean delivery (RR 4.6)
- Being 35 years or older (RR 4.1)
- Having less than a high school degree (RR 3.7)
- Black race (RR 3.3)

Recommendations / Results from PAMR Reviews

- Another major risk factor is chronic disease including preexisting hypertension, asthma, heart disease, and other conditions

Recommendations / Results from PAMR Reviews

- Of 368 pregnancy-related deaths:
  - 358 (97%) had information available on medical problems prior to pregnancy
  - 153 (43%) had a history of at least one chronic disease

Recommendations for Improvement

- The PAMR process identified four priority areas where improvements can be made to reduce the number of pregnancy-related deaths
  1. Clinical factors
  2. System factors
  3. Death review process factors
  4. Individual and community factors

Florida PAMR Issues and Recommendations

- 58 pregnancy-related deaths in 2009
- After reviewing pregnancy-related deaths, the PAMR committee identifies relevant issues related to the death and makes recommendations in an effort to prevent such future deaths

Florida PAMR Issues and Recommendations

- The following text summarizes the identified issues into four prevention categories:
  - Clinical Factors
  - System Factors
  - Individual and Community Factors
  - Death Review Factors

Florida PAMR Issues and Recommendations

- Clinical Factors: Relates to services provided by the entire health care system
  - Issues – A lack of services evidenced by:
    - Incomplete assessment
    - Inadequate documentation

Florida PAMR Issues and Recommendations

- Lack of coordination and follow-up, particularly of high-risk women
- Deficient communication between staff and patients

Florida PAMR Issues and Recommendations

- Lack of association between a change in mental status and deteriorating medical condition
- Prevention-Patient Education (Preconception / Pregnancy / Postpartum)

Florida PAMR Issues and Recommendations

- System Factors: A lack of policies and procedures may lend itself to deficient quality of care, which potentially can affect a woman's health outcome

Florida PAMR Issues and Recommendations

- Issues
  - Barriers to accessing care
    - Lack of insurance, provider shortage, transportation
  - Lack of standardized policies and procedures

Florida PAMR Issues and Recommendations

- Individual / Community Factors: A woman's health prior to pregnancy can greatly affect birth outcome, as well as the woman's health status after birth
  - Some deaths may be associated with a woman's personal decision regarding her health and her care

Florida PAMR Issues and Recommendations

- It is important that healthcare providers enable women to make informed decisions

Florida PAMR Issues and Recommendations

- Issues
  - Women presenting in pregnancy with pre-existing medical conditions, such as hypertension, obesity, diabetes, and asthma

Florida PAMR Issues and Recommendations

- Lack of documentation of patient education and counseling regarding a woman's risk factors

Florida PAMR Issues and Recommendations

- Death Review Factors: The PAMR process relies on information from death certificates and autopsy reports for the identification and evaluation of pregnancy-related deaths

Florida PAMR Issues and Recommendations

- Issues
  - Lack of autopsy on unexplained or inconclusive deaths
  - Death certificates not always completed accurately
  - Missing prenatal records in hospital charts

2009 Recommendations

- Cause of death: Hemorrhage
  - It is important to be prepared for increasing potential for percreta / acreta in patients with previous cesarean deliveries
  - Be aware of appropriate use and timing for administration of pitocin after delivery

2009 Recommendations

- Be aware of and monitor for signs of impending hemorrhage and know the factors that increase a woman’s risk for hemorrhage
- Maintain high index of suspicion for women of reproductive age presenting with bleeding and pain

2009 Recommendations

- Providers who deliver care to women in prison should have protocols to routinely test women for pregnancy and be aware of symptoms of ectopic pregnancy

2009 Recommendations

- Educate the community on signs and symptoms that may signify a potential complication in pregnancy and stress the importance of seeking prompt care
- Recommend inclusion of potential complications in early pregnancy and warning signs on home pregnancy tests kits

2009 Recommendations

- It is important for all hospital facilities to have procedures in place for addressing medical emergencies in obstetric deliveries

2009 Recommendations

- Cause of death: Infection
  - Monitoring vital signs are extremely important and can be a first indicator of a serious problem
  - Promote the importance of influenza vaccination for pregnant / postpartum women

2009 Recommendations

- Maintain a high index of suspicion of H1N1 in pregnant and postpartum patients even those with subtle respiratory symptoms
- Recommend performing PCR testing opposed to rapid influenza testing
  - Due to decreased sensitivity of rapid test

2009 Recommendations

- Provide prompt antiviral treatment for pregnant / postpartum women who present with flulike symptoms
- Important to follow-up on influenza vaccination for pregnant women who have previously denied vaccination

2009 Recommendations

- Increase community awareness of need to access prompt care for influenza symptoms particularly if pregnant
- Raise awareness on benefits of immunizations and influenza vaccinations particularly for pregnant / postpartum women with asthma

2009 Recommendations

- Increase provider awareness of low tolerability of respiratory conditions in pregnancy
- Encourage coordination and collaboration of services for pregnant women with acute and chronic medical conditions

2009 Recommendations

- Consider performing electrolyte studies in patients with gastrointestinal conditions
- Be alert to a patient's changing mental status due to hypoxia and the effects that hypoxia may have on an individual's ability to make medical decisions and / or sign informed consents

2009 Recommendations

- It is important to assess childcare support and resources, for single women with acute / chronic medical conditions

2009 Recommendations

- Cause of death: Thrombotic Embolism
  - It is important to consider options for thromboembolism prophylaxis

2009 Recommendations

- Cause of death: Hypertensive Disorders
  - Provider training is important to promote early recognition and treatment of hypertension and preeclampsia

2009 Recommendations

- Important to include shortness of breath as a potential warning sign on postpartum discharge instructions

2009 Recommendations

- Cause of death: Cardiomyopathy
  - Important to provide focused preconception counseling to patients with a family history of chronic conditions including cardiac problems, hypertension, and asthma

2009 Recommendations

- Increase community awareness of pregnancy risks when a patient has chronic cardiac condition

2009 Recommendations

- Cause of death: Other Cardiovascular Problems
  - It is important to stress to patients the benefits of compliance with medical treatments
  - Be aware of contraindication of administering brethine in women with cardiac conditions

2009 Recommendations

- Provide a thorough cardiac assessment and / or obtain cardiac consult prior to discharge for women with known or suspected cardiac conditions
- Patients presenting with unusual or atypical symptoms may require a collaborative assessment by providers

2009 Recommendations

- Perform thorough cardiac / lung assessments on initial prenatal visits

2009 Recommendations

- Cause of death: Other Conditions
  - Remember the importance of reviewing vital signs
  - OB providers need to closely monitor pregnant women with chronic illness and provide referrals to specialist for unstable conditions

2009 Recommendations

- Increase provider understanding of the unique needs of a pregnant sickle cell patient
- Evaluate the level of care required for women with chronic illness based on the individual and status of their condition

2009 Recommendations

- Important for obstetric providers to evaluate liver function tests on pregnant women presenting with right upper quadrant pain
- Be aware of contraceptive benefits / risks associated with chronic conditions

2009 Recommendations

- Include Healthy Start staff as part of healthcare team
  - Care and services should be coordinated
- Pregnant women with uncontrolled seizure disorder should be referred to neurologist for evaluation and consultation for appropriate medication dosing

2009 Recommendations

- Providers should consider performing baseline electrolytes and 24 urine test in women with a history of anemia / bulimia
- Healthy Start (HS) may need to find creative ways to engage women with multiple social issues to encourage HS participation

Other Recommendations

- Encourage medical examiners to perform autopsy on sudden unexplained deaths even if substance abuse is a factor
- It is important for prenatal records to be sent to delivering hospital prior to the 36th week

Other Recommendations

- Consider adding a special category for coding of pregnancy-related deaths due to respiratory infection
- The entire medical chart should be made available for medical chart reviewers
- Electronic records should include the nursing progress notes

Other Recommendations

- It is important to document the cause of death (COD) completely and correctly on death certificates

Summary

- In 2009, the pregnancy-related mortality ratio in Florida was 26.2
  - Significant increase from 2008 pregnancy-related mortality ratio of 14.3 (p= 0.004)
  - Increase is largely attributed to the deaths due to ectopic pregnancy and influenza

Summary

- A special analysis is currently underway to examine the increase in the number of deaths due to ectopic pregnancy
- Our hope is recommendations for improvements in providing care will result in a reduction or prevention of pregnancy-related deaths in the future

Postpartum Education

- Systems need to be in place to assure that the needs of the postpartum woman are being met
- Women and their families need to know the “danger signs:”
  - Shortness of breath
  - Chest pain
  - Palpitations

Postpartum Education

- Syncope
- Severe or prolonged headache

Additional Resources

http://www.doh.state.fl.us/Family/mch/pamr/pamr_info.html

Additional Resources

The 'real Florida PAMR expert'

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What It Takes . . .

- The ability to 'Walk a Mile'
- Leadership, Vision, Action
- Annette Phelps, ARNP, MSN
  - An essential component to development of FIMR/PAMR thus far in Florida and nationally
- Infrastructure – Healthy Start Coalitions

What It Takes . . .

- Boots on the ground
- Excellent team of professionals . . .
  - Diverse, opinionated, motivated, respected by colleagues