AIM to Lead Change in Your Community

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Optimizing Outcomes in Women’s Health
Minneapolis, MN
Objectives

- Overview of objectives and activities of the Alliance for Innovation on Maternal Health (AIM)
- Description of evidence-based care bundles
- QI Implementation
- Update on selected AIM state activities, successes, challenges
- AIM Resources
  - Safety Action Series
  - eModules
  - Toolkits
- Implications for midwifery-led care
US Maternal Mortality Rates Have Risen Using Either Death Certificates (NCHS) Or Using MD Case Reviews by CDC PMSS
The US has the highest Maternal Mortality rate of any high resource country and the only country outside of Afghanistan and Sudan where the rate is rising.

Source: Kassebaum et al, Lancet (CDC, Gates Foundation)
Propublica

“The Last Person You’d Expect to Die in Childbirth”

Lauren Bloomstein, a neonatal nurse, died from preeclampsia in the hospital where she worked, and illustrates the need for focus.

Why are more American women dying after childbirth?

PBS NewsHour
August 18, 2017
If Americans Love Moms, Why Do We Let Them Die?

Nicholas Kristof  JULY 29, 2017

The New York Times

Kendria Washington gets an ultrasound from Dr. Lisa Hollier at the Center for Children and Women in Houston. In Texas, women die from pregnancy at a rate almost unrivaled in the industrialized world.
The Burden of Maternal Morbidity

• Reviewed Nationwide Inpatient Sample (ICD-9) for 1998-2009

• Severe morbidity 12.9 per 1000 deliveries
  • Increased by 75% and 114% for delivery and postpartum from 1998/99 to 2008/09
  • Increase in shock, ARF, PE, RDS, Acute MI, blood transfusion, aneurysm, cardiac surgery

• Overall mortality in postpartum period increased by 66%

• Impacts >50,000 women each year
Significant reductions in maternal mortality and morbidity can not be accomplished without addressing the gaps in maternity care for black women.

**The colour of risk**

*United States maternal mortality rate, 2006-10*

Per 100,000 live births

- **Black**: 3-4 X
- **Other races**
- **White**
- **Hispanic**

Sources: Creanga *et al.*, *Obstetrics & Gynecology*
AIM Goals:

- Reduce maternal mortality by 1,000 deaths
- Reduce severe maternal morbidity by 100,000 cases

By:

- Promoting safe maternal care for every US birth.
- Engaging multidisciplinary partners at the national, state and hospital levels.
- Developing and implementing evidence-based maternal safety bundles.
- Utilizing data-driven quality improvement strategies.
- Aligning existing safety efforts and developing/collecting resources.

Funded through HRSA Maternal and Child Health Bureau with a cooperative agreement
Focus on Obstetric Hemorrhage and Preeclampsia

• Most common preventable causes of maternal mortality
• Far and away the most common causes of Severe Maternal Morbidity
• High rates of provider “quality improvement opportunities”

Maternal Mortality Rate, California and United States; 1999-2013

HP 2020 Objective – 11.4 Deaths per 100,000 Live Births

Such an effort requires National Mobilization!
## AIM National Partners:

<table>
<thead>
<tr>
<th>Professional Organizations</th>
<th>Public Health Organizations</th>
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<tbody>
<tr>
<td>Am. Academy of Family Physicians (AAFP)</td>
<td>Assoc. Maternal and Child Health Programs (AMCHP)</td>
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<tr>
<td>Am. College of Nurse-Midwives (ACNM)</td>
<td>Assoc. of State and Territorial Health Officers (ASTHO)</td>
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<tr>
<td>Am. College of Obstetricians and Gynecologists (ACOG)</td>
<td>Maternal and Child Health Bureau/HRSA (MCHB)</td>
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<td>Assoc. of Women’s Health, Obstetric, &amp; Neonatal Nurses (AWHONN)</td>
<td>Centers for Disease Control and Prevention (CDC)</td>
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<td>Nurse Practitioners in Women’s Health (NPWH)</td>
<td>City MatCH</td>
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<tr>
<td>Society for Maternal/Fetal Medicine (SMFM)</td>
<td>Centers for Medicare and Medicaid Innovation</td>
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<tr>
<td>Society for Obstetric Anesthesia and Perinatology (SOAP)</td>
<td>National Healthy Start Association</td>
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**AIM Partners (con’t):**

<table>
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<tr>
<th>Other Quality Improvement Organizations</th>
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<tr>
<td>Am. Society of Health Risk Management (ASHRM)</td>
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<td>California Maternal Quality Care Collaborative (CMQCC)</td>
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<td>HealthStream</td>
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<td>Institute for Healthcare Innovation (IHI)</td>
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<td>March of Dimes (MOD)</td>
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<td>National Perinatal Information Center (NPIC)</td>
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<td>Preeclampsia Foundation</td>
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<td>Premier, Inc.</td>
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<td>The Joint Commission (TJC)</td>
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<td>Trinity Health Care</td>
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AIM Works at National, State, and Facility Levels

**National PH and Professional Organizations**
- Engage/coordinate national partners and resources
- Develop QI tools
- Support multi-state data platform
- Support inter-state collaboration

**Perinatal Collaborative: DPH, Hospital Assoc., Professional Groups**
- Support/coordinate hospital efforts
- Share tools, resources, and best practices
- Use state data for outcome metrics
- Share and interpret progress

**Hospitals, Providers, Nurses, Offices and Patients**
- Create QI team
- Implement bundles
- Share best practices
- Collect structure and process metrics
- Review progress
Examples of AIM National Partners’ Contributions

- **ACOG** – Hosts national staff and meetings, Highlighted at national and district meetings, MD leadership for every state, national education and lobbying efforts
- **AWHONN** – Postpartum discharge teaching; AIM highlighted throughout Annual Meeting; monthly calls with state nursing leaders.
- **ACNM** – Birthtools web info, Leadership on Supporting Intended Vaginal Birth bundle; AIM at annual meeting.
- **AMCHP** – Maternal mortality review web tools; AIM breakout at annual meeting. Engage and support state MCH sections
- **ASTHO** – Engages state health officers to provide support. AIM discussed at bi-monthly calls.
- **AAFP** – Content on bundle work groups and consultation for rural state issues.
- **ABOG** – Maintenance of Certification credit for MDs working on AIM
- **SOAP** – Consultation on bundle implementation and disparities
- **SMFM** – M in MFM annual meeting; leadership and mentorship on state teams. Annual sessions on OB QI and population health
The Core Principle of AIM is Sharing:

- State to State
- Hospital to Hospital

- Best Practices
- Implementation Tools
- Strategies for Overcoming Barriers
AIM Participation: July 2017

AIM Impact
Annual Births: 1,520,000+

AIM Hospital Networks
Premier
Trinity
National Perinatal Information Center (NPIC)
Maternal Safety Bundles

What are they?
• “Checklist” of items and practices for every birthing site
• Not a national protocol!!
• Facilities will modify content based on local resources

Uniform Structure:
• Readiness
  ❖ Every unit—prepare and educate
• Recognition & Prevention
  ❖ Every patient—before event
• Response
  ❖ Every Event—team approach
• Reporting/Systems Learning
  ❖ Every unit—systems improvement

Available at: safehealthcareforeverywoman.org with resource links
AIM Safety/Quality Improvement Bundles

Safety Bundles
- Obstetric Hemorrhage
- Severe Hypertension in Pregnancy
- Maternal VTE Prevention
- Safe Reduction of Primary Cesarean Births

Safety Tools
- Maternal Early Warning Criteria
- SMM Case Review Forms
- Patient, Family and Staff Support

For Every Mother
- Reducing Disparities in Maternity Care
- Postpartum Care Basics
- Maternal Mental Health
- Interconception Care Coming Soon

Just Released
- Obstetric Care of Women with Opioid Dependence

www.safehealthcareforeverywoman.org
Creating multi-disciplinary national consensus Safety Bundles is actually the easy part...

Implementation is the hard part!

Goal: Move established guidelines into practice with a standardized approach localized for each facility
AIM Implementation Efforts

- Support state teams
  - Monthly and ad hoc calls with team members
  - Creating the “collaborative of collaboratives” among state teams
  - Clinical and data technical assistance
  - Identify and address common issues – Examples:
    - Protocols for treating severe HTN
    - Shortages of critical pharmaceuticals
    - Supporting quantification of blood loss

- Implementation (“How-To”) Tool Kits
- E-modules
- Resource platform
- Safety Action Webinars
Implementing QI Projects Toolkit

Team Approach
Leadership & Support
Set SMART Goals
Driver Diagrams
PDSA Cycles
Measures
Models of Change
Sustainability and Spread
The Team Approach

• Shared responsibility
• Equal accountability
• Early onboarding & engagement
• Organizational buy-in
• Leadership support
• Project sponsorship
Set **SMART Goals**

**Specific**

**Measurable**

**Attainable**

**Relevant**

**Time-bound**

“Some is not a number, soon is not a time.”

*Don Berwick*
Driver Diagrams

1. Desired Outcome: clearly defined goal
2. Primary Drivers: factors impacting desired outcome
3. Secondary Drivers: specific areas where evidence based changes occur
PDSA Cycles

- Driver diagrams test whether or not theories presented generate the QI desired
- Next, pair your driver diagram with iterative learning tool such as PDSA Cycle
- Plan, Do, Study, Act
PDSA Cycles

• Model to manage improvements and test theories towards desired outcomes
• Requires process measures to provide timely information on impact of QI plan
• If implemented processes don’t achieve desired outcome, perhaps aspects of identified theory are incorrect
• “A” can mean Adopt, Adapt or Abandon
Measures

• Design measures that assess the impact of various QI components over time

• *Do your identified drivers actually have an impact on your goal?*

• *Do the changes made have a positive or negative impact on your goal?*
Models for Change

• **Six Sources of Influence Model**
  • personal motivation; personal ability; social motivation; social ability; structural motivation; structural ability

• **Kotter's Eight Steps for Leading Change**
  • create a climate for change; enable/engage the whole organization; implement & sustain change
Sustainability and Spread

• Sustainability: Locking in the progress that hospitals have already made and continually building upon it

• Spread: Actively disseminating best practice and knowledge about every intervention and implementing each intervention in every available care setting
Florida Perinatal Quality Collaborative

Initiatives: Wrapping up AIM bundle Severe HTN this June; Plan to launch new initiative this fall to reduce primary cesareans

Previous Initiatives: Early Elective Deliveries; PPH

Status: 1) submitting data and 2) helping other states

Success: Median hospital percent of women treated in one hour of identified elevated blood pressure improved from 20% in Q4 2015 (baseline) to 68% in Q4 2016.
Illinois

- Based on Illinois Perinatal Quality Collaborative (ILPQC), founded in 2012, one of 6 states funded by CDC, >100 birthing hospitals engaged
- Previous activities: Birth Certificate Accuracy, Reduction of Early Elective Deliveries, Antenatal Corticosteroids, Postpartum Hemorrhage
- Monthly meetings, subcommittee for current initiatives:
  - reviewing data/refining of maternal HTN bundle
  - recruitment of patient/family members for hospitals QI teams
Louisiana

- Louisiana Perinatal Quality Collaborative (LaPQC) held two webinars (the first on March 29th) with hospitals that participated with the perinatal hospital engagement network (HEN); next meeting scheduled for May 24th.
- Starting with OB Hemorrhage Bundle
- LaPQC & AIM kickoff meeting scheduled for August 9-10, all maternity care hospitals will be invited
- Applied for CDC's State Perinatal Quality Collaboratives, should hear by June if accepted
Maryland

- Safe Reduction of Primary Cesarean
- 31 of 32 birthing hospitals participating, building on success of becoming first State to have all birthing hospitals eliminate elective birth < 39 weeks
- Multi-professional teams with active CNM participation in steering committee + teams
- Easy to use data entry portal with visual graphs, immediate benchmarking for hospitals
- Challenges:
  - Litigious climate with multiple high-profile, high-payout cases recommending should have done cesarean
  - Inconsistent buy-in at the local practice level
Michigan

- Builds upon work of Michigan Health and Hospital Association (MHA) Keystone Center and of the state’s Maternal Mortality Committee
- Starting with Hemorrhage Bundle
- Barriers to data uploading identified
- Key stakeholders clarified and validated along with contact information
- Hospitals have uploaded their key data to Keystone.
- Phone outreach and site visit protocols identified
- TeamSTEPPS to be made available as needed
Mississippi

MS joined AIM to support PQC’s efforts to advance evidence-based maternity practices across all state hospitals.

**Current AIM Bundle:** Hemorrhage  
**Past:** Severe Maternal Hypertension

**AIM Team is Currently:**
✓ Enrolling hospitals - Group 1: 20 out of 42 hospitals
✓ Focusing on Education and Hemorrhage Cart
✓ Monthly group calls

**Assets:** Experience implementing hypertension bundle without AIM. Discharge data system has just been re-established.

**Challenges:** Many small and rural hospitals on limited budgets.

**Success:** MS AIM Kick-off held in November 2016 with >100 participants from across the state.
• AIM was introduced to stakeholders at the Biennial meeting of the NJ Perinatal Safety Collaborative January 23, 2017
• Correlated with announcement of passage through both NJ houses of "Maternal Health Awareness Day" bill, designating January 23rd each year as a day for awareness of maternal mortality
• In development phase: compiling a steering committee and sending out information to hospitals through Hospital Assn perinatal listserv to raise awareness
North Carolina

• Perinatal Quality Collaborative of North Carolina (PQCNC) overseeing rollout of the bundles in the 80 maternity care hospitals, met with AIM State group in March
  • AIM State Kickoff held September 13, 2017!
• Expert group meets regularly by phone or in person
• Starting with OB Hemorrhage Bundle
• 65 hospitals confirmed thus far
• Networking result: NC DOH interested in relationship of APRN regulatory environment to perinatal outcomes
Oklahoma

**Bundles:** OB Hemorrhage and Severe Hypertension

**AIM Progress:** Submitting data since Q4, 2015

**Success:** 48/51 hospitals enrolled in AIM. > 80% data entry through Q4 2016. First year steady improvement in structure and process measures.

- 57% improvement in QBL
- 24% improvement in timely treatment of severe HTN

**Challenges:**

- Difficulty implementing QBL because it is a complex change and clinicians question the benefits
- Severe HTN values are attributed to pain & anxiety and are not appreciated as a risk for stroke
Utah

- AIM Kick-off - March 2017 - Hypertension Bundle
  - 116 participants: 37 Utah hospitals, 2 birth centers, 6 Wyoming facilities + staff from the UDOH and WYDOH
  - Speakers and support from AIM leadership
- UWNQC previously implemented PPH bundle
- Project ECHO (a telehealth platform) Sessions- 3 HTN sessions completed to date
- Data from facilities sent to UDOH
Newest States: Georgia & Virginia

• Georgia and Virginia applications for enrollment in AIM just approved!

• Virginia AIM Kickoff meeting scheduled for October 16, 2017 in Richmond
California:
Leslie Cragin leslie.cragin@gmail.com

Florida:
Jessica Brumley jbrumley@health.usf.edu

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Newest AIM states: Georgia and Virginia!
Thank You!

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