Safety Action Series

Successfully Implementing Quality Improvement Projects: Presentation of Resource Toolkit
Speakers

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Disclosures

- Sue Gullo, RN, MS has no real or perceived conflicts of interest to disclose.

- Barbara O’Brien, MS, RN has no real or perceived conflicts of interest to disclose.
Objectives

- Provide an in-depth overview of the Implementing Quality Improvement Projects Resource Toolkit.
- Give suggestions for how to effectively implement quality improvement projects in your institution.
- Discuss potential challenges and strategies to overcome these obstacles when implementing quality improvement projects.
Implementation Toolkit Workgroup

Peter Bernstein, MD, MPH, FACOG*
ACOG Committee on Patient Safety and Quality Improvement

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Council on Residency Education in Obstetrics and Gynecology

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Society of OB/GYN Hospitalists

Elliott Main, MD, FACOG
California Maternal Quality Care Collaborative

*Denotes Council Voting Member
Background - Building Consensus

- ACOG-CDC Maternal Mortality/Severe Morbidity Action Meeting occurred in Atlanta - November 2012
- Participants identified key priorities:

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<th>Core Patient Safety Bundles</th>
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<td>Obstetric Hemorrhage</td>
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<td><strong>Severe Hypertension in Pregnancy</strong></td>
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<td>Venous Thromboembolism Prevention in Pregnancy</td>
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<th>Supplemental Patient Safety Bundles</th>
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<td>Maternal Early Warning Criteria</td>
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<td>Facility Review</td>
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<td>Family and Staff Support</td>
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- 6 multidisciplinary working groups were formed
National Partnership for Maternal Safety: Confluence of Multiple Efforts-May 2013
ACOG Annual Clinical Meeting

- CDC / ACOG Maternal Mortality Work Group
- SMFM--M back into MFM Work Group
- AWHONN: Safety Projects
- State Quality Collaboratives
- Merck for Mothers
- Maternal Child Health Branch—M back into MCH
- CDC: Maternal Mortality Reviews and Maternal Morbidity Projects
Current Commentary

The National Partnership for Maternal Safety

Mary E. D’Alton, MD, Elliott K. Main, MD, M. Kathryn Menard, MD, and Barbara S. Levy, MD

Recognition of the need to reduce maternal mortality and morbidity in the United States has led to the creation of the National Partnership for Maternal Safety. This collaborative, broad-based initiative will begin with three priority bundles for the most common preventable causes of maternal death and severe morbidity: obstetric hemorrhage, severe hypertension in pregnancy, and peripartum venous thromboembolism. In addition, three unit-improvement bundles for obstetric services were identified: a structured approach for the recognition of early warning signs and symptoms, structured internal case reviews to identify systems improvement opportunities, and support tools for patients, families, and staff that experience an adverse outcome. This article details the formation of the National Partnership for Maternal Safety and introduces the initial priorities.

issued a Sentinel Alert entitled “Preventing Maternal Death” and proposed various initiatives to decrease maternal mortality including case reporting and review, health care provider education, team training and drills, and thromboembolism prophylaxis.

During the past 2 years, several organizations—including the American College of Obstetricians and Gynecologists (the College), the Centers for Disease Control and Prevention, the Society for Maternal–Fetal Medicine, the Health Resources and Services Administration, the Association of Women’s Health, Obstetric, and Neonatal Nurses, and the American College of Nurse-Midwives—have collaborated to identify priorities for maternal safety. Universal recognition of the need for action to reduce U.S. maternal mortality and morbidity led to the creation of the

May, 2014
Council on Patient Safety: July 2013
Endorsed the concept: 3 Maternal Safety Bundles

“What every birthing facility in the US should have…”

The bundles represent outlines of recommended protocols and materials important to safe care *BUT* the specific contents and protocols should be individualized to meet local capabilities.
“Three bundles, three years”

- Obstetric Hemorrhage
- Severe Hypertension
- Maternal Venous Thromboembolism Prevention
4 Domains of Patient Safety Bundles

Readiness
Recognition & Prevention
Response
Reporting & Systems Learning
Purpose of Implementation Toolkit

• To help health care teams *successfully* implement the tools developed by the Council—specifically the Patient Safety Bundles—in order to drive long-term change that results in improved outcomes.
What’s preventing your hospital/unit from implementing a QI project?

• Time constraints?
• Competing priorities?
• Lack of staff?
• Don’t know where to start?
• Feeling overwhelmed?
• All of the above and more?

• This toolkit is for you! It’s purpose is to provide you with a practical guide to implement maternal safety bundles in your hospital
Overview of Implementation Toolkit

• Goal Setting
• Teams
• Driver Diagrams
• Measures
• Models for Change
• Building Sustainability and Encouraging Spread
• Resources
It is not enough to do your best; you must first know what to do, and then do your best.

W. Edwards Deming
Teams

Sample Team for Obstetric Hemorrhage Quality Improvement Project:

☐ Technical Leader
☐ Clinical Expertise
☐ Day-to-Day Leadership
☐ Project Sponsor
Teams over Time

• Evaluate the effectiveness of your team
  – Does your team represent all stakeholders?
  – Who are you missing?
  – What is the expectation of each role? Is it clear to all team members?
  – Meeting tempo: weekly for testing, monthly for overall project goals, leadership/sponsor check in
  – Are you driving towards your AIM? Data transparency!
Goal Setting

When implementing a quality improvement (QI) project it is critically important to first identify the overall goal or goals (desired outcome) for your project - what do you plan to achieve as a result of the project?

1. What will we improve?
2. Who will we improve it for?
3. By how much will we improve it?
4. By when will we improve it?
SMART

- Specific, Measurable, Attainable, Relevant, and Time-Bound

<table>
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<tr>
<th>Goal</th>
<th>SMART Goal</th>
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<tr>
<td>Reduce rate of postpartum hemorrhage.</td>
<td>Decrease the rate of postpartum hemorrhage at North Community Hospital by 25% from January 1, 2017 to January 1, 2018.</td>
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<tr>
<td>Providers will understand the importance of effectively quantifying blood loss.</td>
<td>By the end of 2017, 70% of obstetricians and perinatal nurses at North Community Hospital will have successfully completed the educational program on quantifying blood loss.</td>
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<td>Increase number of drills on obstetric hemorrhage events.</td>
<td>By January 2017, North Community Hospital will increase the number of obstetric hemorrhage drills from two per year to four per year (one per quarter).</td>
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Driver Diagrams

• Describe **how** we will achieve our goal
  – Planning tool
  – Exploration tool—driver diagrams are fluid
  – Show how factors are connected
  – Shared visual tool for team
Driver Diagrams

Outcome desired

Primary driver of change A

Secondary driver A1

Secondary driver A2

Primary driver of change B

Secondary driver B1

Primary driver of change C

Secondary driver C1

Secondary driver C2

Secondary driver C3
Driver Diagrams with Measures

Aim

A NEW HEALTHIER ME!!

Primary drivers

CALORIES IN

Daily calorie count

Weight, BMI, waist size

CALORIES OUT

Exercise

Exercise Calorie count

Secondary drivers

Limit daily intake

Limit alcohol

Substitute low calorie

Average drinks/week

Tests of change

Track calories

Plan meals

Drink water not coke

Gym 5x per week

Cycle to work

Meals off plan

Days between workouts

% of days On bike

Chi balls

MEASURES

1. Rate of weight loss/week
2. Reduction in units of alcohol/week
3. Time spent exercising/week
4. Feel good factor

EFFECT

61 CAUSE

COUNCIL ON PATIENT SAFETY IN WOMEN'S HEALTH CARE

safe health care for every woman
### Appendix A: Driver Diagram Applied to Obstetric Hemorrhage Patient Safety Bundle

<table>
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<tr>
<th>OUTCOME</th>
<th>PRIMARY DRIVERS</th>
<th>SECONDARY DRIVERS</th>
<th>ACTION STEPS</th>
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</table>
| Decrease severe maternal morbidity from OB Hemorrhage by ___% from (year) to (year). | Readiness for OB hemorrhage (For Every Unit) | 1. Hemorrhage cart available and accessible intrapartum AND postpartum  
2. Medications immediately available  
3. Obstetric emergency response team in place  
4. Establish massive and emergency release transfusion protocols  
5. Unit education/Unit drills, including post-event debriefs | 1. Establish a multidisciplinary team  
2. Establish an obstetric rapid response team for all obstetric emergencies.  
3. Research and standardize hemorrhage cart  
4. Simulate medication procurement. Identify improvement opportunities and include all stakeholders including Pharmacy  
5. Implement communication process for rapid response obstetric response team  
6. Engage a multi-disciplinary team to develop massive and emergency release transfusion protocol  
7. Adopt education for OB hemorrhage  
8. Identify staff to lead multidisciplinary drills and simulations, including post-event debriefs. |
| Recognition and prevention of OB hemorrhage (For Every Patient) | | 1. Assess hemorrhage risk  
2. Quantify blood loss  
3. Actively manage 3rd stage of labor | 1. Identify hemorrhage risk assessment tool. Pilot. PDSA after pilot  
2. Identify tools for the reliable quantification of blood loss for vaginal and cesarean delivery. One such tool may be to secure and use graduated under-buttocks drapes.  
3. Engage OB providers and nurses on Quantitative Blood Loss measurement and develop a shared educational program with standard tools. Pilot. PDSA after pilot. Ensure all staff and providers are held accountable to the standard.  
4. Secure champions for active management of 3rd stage of labor implementation  
5. Develop active management of 3rd stage of labor policy  
6. Pilot AMTLSL. PDSA after pilot |
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<tr>
<th>Standardized Response to OB Hemorrhage (For Every Hemorrhage)</th>
<th>Reporting and systems learning from OB Hemorrhage (For Every Unit) (Facility Culture)</th>
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<tbody>
<tr>
<td>1. Adopt standard, stage-based, hemorrhage management plan with checklists</td>
<td>1. Identify nursing and medical champions for huddle design and implementation</td>
</tr>
<tr>
<td>2. Adopt support program for patients, families, and staff for all significant hemorrhages</td>
<td>2. Test before implementing huddle. Pilot. PDSA after pilot</td>
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<tr>
<td></td>
<td>3. Engage medical, nursing leadership to lead and implement debriefs</td>
</tr>
<tr>
<td></td>
<td>4. Test before implementing huddle. Pilot. PDSA after pilot</td>
</tr>
<tr>
<td></td>
<td>5. Engage medical, nursing, administrative leadership to establish multidisciplinary review</td>
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<tr>
<td></td>
<td>6. Implement multidisciplinary review for stage 2 &amp; 3</td>
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<tr>
<td></td>
<td>7. Investigate data measures and other resources/tools. Identify data champion</td>
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<tr>
<td></td>
<td>8. Utilize data collection plan. PDSA</td>
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Structure Measures:
1) Does your hospital have OB hemorrhage supplies readily available, typically in a cart or mobile box?
2) Does your hospital have a unit-standardized, stage-based obstetric hemorrhage emergency management plan with checklists?

Process Measures:
1) How many hemorrhage drills were performed this quarter?
2) What proportion of mothers had a hemorrhage risk assessment done at least once before birth during this quarter?
3) What proportion of mothers had formal measurement of cumulative blood loss from birth thru recovery period during this quarter?
4) Has hospital developed OB specific resources and protocols to support patients, family and staff through major OB complications?

Outcome Measures:
1) Days between last hemorrhage
Measure Overview

Measurement is a critical part of testing and implementing changes; measures tell a team whether the changes they are making actually lead to improvement.

• Structure
• Process
• Outcome
• Balancing
PPH Measure Examples (AIM)

Structure: (Yes/No)
Does your hospital have an OB hemorrhage policy and procedure (reviewed and updated in the last 2-3 years) that:
• Provides a unit-standard approach using a stage-based management plan with checklists
• Ensures availability to OB hemorrhage supplies at all times

Process: (weekly or monthly)
• Percentage of women who gave birth had a hemorrhage risk assessment recorded in the medical record prior to giving birth?
• Percentage of women who gave birth had formal measurement of cumulative blood loss from the time they gave birth through the recovery period recorded in the medical record?
Outcome: (monthly or quarterly)
Severe Maternal Morbidity among Hemorrhage Cases

Denominator: All mothers during their birth admission, exclude ectopics and miscarriages, meeting one of the following criteria:

- Presence of an Abruptio Placentae, Previa or Antepartum hemorrhage (641.xx) diagnosis code
- Presence of transfusion procedure code (99.0x) without also having a sickle cell diagnosis code (282.6x)
- Presence of a Postpartum hemorrhage diagnosis code (666.xx)

Numerator: Among the denominator, all cases with any SMM code

Balancing: (monthly)
Number of women unexpectedly transferred to ICU who gave birth.
Tracking Measures
Tracking measure data to uncover trends is critical to creating a learning environment and fostering quality improvement. The Institute for Health Care Improvement (IHI) has developed a free tool to aid organizations in tracking this data: the Improvement Tracker.

Through the Improvement Tracker you can either select from a list of existing measures or enter your own, set your aim, and input your data. Once you do this, the tracker generates a run chart to visualize trends. It also allows for the generation of custom reports, depending on the needs of your organization.

In the sample run chart (shown right), we entered data from the fictional North Community Hospital on rates of postpartum hemorrhage and indicated the event of implementation of the Obstetric
“Results to date indicate that over the last 8 months the Perinatal Teams have reduced the nulliparous cesarean section rate (PC.02) by slightly more than 3.5%. This equates to an estimated increase of 346 moms, babes, families having experienced a safe, normal, and healthy delivery ....”
Models for Change- It’s all about culture

• Six Sources of Influence

• Kotter’s Eight Steps for Leading Change
  – TeamSTEPPS
Building Sustainability and Encouraging Spread

- Always start with the end in mind!

- AND build slowly over time using models for change (culture), data (variation), systems view, and learning on the ground (PDSA). *Deming’s Lens of Profound Knowledge*
Learning from Failure or What \textbf{Not} to Do! \textit{Not linear}

- Start with large pilots
- \textbf{Find one person willing to do it all}
- Expect vigilance and hard work to solve the problem
- \textbf{If a pilot works then spread the pilot unchanged}
- Require the person and team who drove the pilot to be responsible for system-wide spread
- \textbf{Look at process and outcome measures on a quarterly basis}
- Early on expect marked improvement in outcomes without attention to process reliability

\textit{Institute for Healthcare Improvement, “Seven Spreadly Sins”}
Conclusion

• “If we wait until we’re ready, we’ll be waiting the rest of our lives.” - Lemony Snicket

• Now is the time to start!

• What do you want to have done by Tuesday?
Resources

Click here to access the toolkit

Implementing Quality Improvement Projects

Toolkit
Q&A Session
Press *1 to ask a question

You will enter the question queue
Your line will be unmuted by the operator for your turn

A recording of this presentation will be made available on our website:
www.safehealthcareforeverywoman.org
Next Safety Action Series

Utilizing Administrative Data to Drive Quality Improvement in Maternal Health

Thursday, June 9, 2016
12:00pm Eastern

Steven Bloom, MD
Parkland Health & Hospital System
Chair, Obstetrics and Gynecology Department,
University of Texas Southwestern Medical Center

Janet Muri, MBA
President, National Perinatal Information Center/Quality Analytic Services

Click Here to Register