WELCOME

Quality Improvement: Why and How in GME
February 21, 2018

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Speaker

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Assistant Vice President/Associate Medical Director
Patient Safety Officer
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SBH Health System
Quality Improvement

Why, and How and When in GME?

Daniel Lombardi, DO, FACOEP
AVP/Associate Medical Director
Patient Safety Officer
SBH Health System
Learning Objectives

• What is Quality Improvement?

• Why is it important to GME?

• What is the Model for Improvement?

• How does one sustain Improvement?
History

To Err Is Human: Building a Safer Health System
- 44-98,000 patients die from errors each year in the hospital = one jumbo jet/day

BAD SYSTEMS

Focus more broadly on overuse (applying medical resources and treatments with insufficient evidence that they lead to greater outcomes), underuse (failing to apply resources or treatments with known benefits), and misuse (failing to execute care safely and correctly) of health care resources and treatments
Harm in Healthcare “A 747 a Day”

• **Journal of Patient Safety**—210,000 to 440,000 patients per year suffer from preventable harm that contributes to their death.
  
  (James, John, *A New Evidence-based Estimate of Patient Harms...* September 2013, Volume 9, Issue 3)

• **The BMJ**—Medical error—the third leading cause of death in the U.S. - 251,000 preventable deaths per year

  (Makary, M. and Daniel, M. (2016), Johns Hopkins University School of Medicine)

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The Six Aims of Healthcare Quality Improvement

- **Safe**: Patients should not be harmed by the care that is intended to help them.
- **Effective**: Care should be based on sound scientific knowledge.
- **Patient-Centered**: Care should be responsive to individual preferences, needs, and values
- **Timely**: Unnecessary waits and harmful delays should be reduced.
- **Efficient**: Wasting of equipment, supplies, ideas and energy should be avoided.
- **Equitable**: Providing equal care regardless of personal characteristics, gender, ethnicity, geographic location, and socio-economic status. Care should not vary because of patient characteristics.

-Crossing the Quality Chasm: A New Health System for the 21st Century, The Institute of Medicine, 2001
Why be involved in QI?

• Patient-centered

• Healthcare Worker Wellness

• Regulations- ACGME, The Joint Commission
Patient Centered- What do patient’s want?

*The Exceptional Experience:*

Don’t harm me
Heal me
Be nice to me

...*in that order*
Secondary Victim

• Alleviating "Second Victim" Syndrome: How We Should Handle Patient Harm
  
  By Carolyn M. Clancy, M.D., Director, Agency for Healthcare Research and Quality- 2012
Meaning?

• This term can be described as a "health care provider who [is] involved in an unanticipated adverse patient event, in a medical error and/or a patient related injury and become[s] victimized in the sense that the provider is traumatized by the event." Typically, second victims feel personally responsible for the patient outcome, as if they have failed the patient, second-guessing their clinical skills and knowledge base.
Why is it important to GME? (ACGME)

Clinical Learning Environment Review (CLER)

The CLER program is designed to provide US teaching hospitals, medical centers, health systems, and other clinical settings affiliated with ACGME-accredited institutions with periodic feedback that addresses the following six focus areas: patient safety; health care quality; care transitions; supervision; fatigue management and mitigation; and professionalism.
Our CLER visit....

• Resident Reporting of Safety/Quality Issues
• Feedback to Residents
• More Patient Safety/Quality Education
• Resident Participation in Peer Review/Safety/Quality Events
What is it?

- Quality improvement (QI) consists of systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups. (Health Resources and Services Administration-HRSA)

- Quality Improvement is a formal approach to the analysis of performance and systematic efforts to improve it. (Duke University School of Medicine)

- The systematic approach to reduction or elimination of waste, rework, and losses in production process. (Business Dictionary)
What is it?

Five Deming Principles That Help Healthcare Process Improvement

1. Quality improvement is the science of process management.

2. If you cannot measure it...You cannot improve it.

3. Managed care means managing the processes of care, not managing physicians and nurses.

4. The right data in the right format at the right time in the right hands.

5. Engaging the “smart cogs” of healthcare.

(Dr. John Haughom, Senior Advisor, Health Catalyst)
Choosing a Project

QI projects can focus on:

1. **Structure**: how the system of care is configured and/or its components
2. **Process**: how care is delivered
3. **Outcomes**: mortality, functional status, satisfaction, quality of life
Choosing a Project

QI projects can focus on:

- Current or Ongoing Projects
- Medical Industry Improvement Goals and Standards
- Local, State, and Federal/National Guidelines or Requirements
- Clinical Guidelines
- Experiences while performing clinical duties
Ideas

• Patient ID
• Daily Discharges- time?/LOS
• Medication Reconciliation
• Transitions of Care- Inpatient? Outpatient?
• Hand Washing
• Readmissions
• More efficient rounding
• Standardizing Care Protocols with Clinical Pathways
The Model for Improvement

The model has two parts:

1. Three fundamental questions, which can be addressed in any order.

2. PDSA cycle to test changes in real work settings. The PDSA cycle guides the test of a change to determine if the change is an improvement.

Change Model/Tool to accelerating improvement
What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Aim

Measures

Ideas

From: Associates in Process Improvement
Why an Aim Statement?

• Answers and clarifies “What are we trying to accomplish?
• Creates a shared language to communicate about the project
• Facilitates organizational conversations and understanding

The aim should be time-specific and measurable; it should also define the specific population of patients or other system that will be affected
Aim Statements include:

- What is expected to happen
- The system to be improved or the population of patients
- Specific numerical goals
- Time frame
- Guidance for activities, such as strategies for the effort, or limitations
Aim Statement

• Setting SMART Aims:
  • **Specific**
    – Specific Intervention that targets a specific process, structure, or outcome
    – Specific population of patients that will be affected
  • **Measurable**
  • **Achievable/Attainable**
  • **Relevant/Realistic/Results-focused**
  • **Time-bound**
Examples of Aim Statements

• Reduce ICU mortality by 20 percent within 9 months.

• Reduce incidence of ventilator-associated pneumonia by 25 percent in 3 months.

• Transfer every patient from the Emergency Department to an inpatient bed within 1 hour of the decision to admit in 9 months.
Reducing 30-Day Readmission Rates For Indigent Patients at SBH Using the 340B Drug Pricing Program

R. Cassidy PharmD, M. Flores CPhT, M. Kulshreshtha MD, S. Kumar, Z. Last PharmD, M. Limongelli LMSW, I. Negron, G. Ortiz RN, R. Penecilla RN, R. Sussman PharmD, A. Waldren

Aim

1. Increase access to medications in the uninsured while decreasing costs to SBH for indigent patient prescriptions by 30% over a 12 month time period from Jan 2015 to Dec 2015.
2. Achieve a 10% reduction in all cause 30-day readmission rates for indigent patients with prescription costs billed to SBH over a 12 month time period from Jan 2015 to Dec 2015.

Background

Barriers to medication access contribute to 30-day readmissions due to non-compliance. Lack of access to medications in our indigent patients was resulting in high 30-day readmission rates in these patients.

SBH is deemed a safety net hospital and thus receives 340B pricing for outpatient medications. This reduced pricing is extended to patients at the time of discharge. Indigent patients receive a discount card for use at community pharmacies contracted with SBH.
IMPROVING RAPID STREPTOCOCCUS TESTING IN THE PEDIATRIC EMERGENCY DEPARTMENT.
Ana Victoria Gutierrez, MD, Analynidad Gutierrez, MD, Ana Landaverde, MD, Vincent Uy, MD, Kathleen Aisal, MD, Department of Pediatrics, St Barnabas Hospital

BACKGROUND
Pharyngitis is a common symptom in pediatrics and accounts for over 13 million visits each year in the United States. Only approximately 10% of these patients have true streptococcal infection.

RAPID antigen testing (RST) to detect group A Streptococcus (GAS) infection provides important information for the antibiotic decision making for patients presenting with acute pharyngitis.

The Infectious Diseases Society of America (IDSA) guideline on streptococcal pharyngitis recommends using a rapid test in patients with a modest probability of GAS infection, treating those with a positive rapid test and culturing rapid test negative children and treating patients having positive cultures. The IDSA guidelines and reviews have documented excellent specificity of RST with sensitivity from 70% to 95%.

METHODS

BASELINE ASSESSMENT: 70% of the Rapid strep testing performed in the Pediatric ED was done in patients with low probability of GAS infection. These patients had a negative RST and a throat culture negative for GABHS. The probability for GABHS was determined using the Centor criteria.

PRE-AN INTERVENTION: Review of 10 charts to obtain the baseline data and 15 charts monthly was done to assess the history and physical exam findings supporting the suspicion of moderate or high probability for GABHS pharyngitis as well as rapid strep test (RST) and throat culture results in patients that underwent RST.

INTERVENTION:

CYCLE 1: Education among practitioners in the Pediatric ED was done using a poster containing the Modified Centor criteria. It was placed on the room assigned for Rapid Strep Testing.

CYCLE 2: Modified Centor criteria poster was posted on medical staff work station to allow fast access to the guidelines and the interval for collecting results was increased to 6 months to allow time for a change.

CONCLUSIONS

Centor criteria were established to identify the likelihood of a GABHS infection. These criteria are not commonly used as predictive tools to confirm the isolation of GABHS in a throat swab culture in children. However, this algorithm can guide physicians to determine the probability of a GABHS infection and avoid unnecessary rapid strep testing in patients with low probability of GABHS pharyngitis.

Avoiding unnecessary RST will lower the cost of care and also decrease the anxiety that a rapid strep testing generates in children.

REFERENCES
Model for Improvement
*A Quality Improvement Strategy*

- **Aim**
  - What are we trying to accomplish?
  - How will we know that a change is an improvement?
  - What change can we make that will result in improvement?

- **Study**
- **Do**
- **Plan**
- **Act**

From: Associates in Process Improvement
How will we know that a change is an improvement?

**Establishing Measures**

Teams use quantitative measures to determine if a specific change *actually leads* to an improvement.

“x” leads to “y”
Measurement:

*How Do We Know a Change is an Improvement?*

Improvement is about **making changes to systems**; it is about changing an organization’s approach.
What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Model for Improvement
A Quality Improvement Strategy

Act
Plan
Study
Do

Aim
Measures
Ideas

From: Associates in Process Improvement
What change can we make that will result in improvement?

**Selecting Changes**

Ideas for change may come from those who work in the system or from the experience of others who have successfully improved.

- **Key Changes** for improved care based on:
  - The best available evidence
  - Knowledge of front line workers
  - Experiences of experts
What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?
Testing Changes (PDSA cycle)

PDSA cycle is shorthand for testing a change in the real work setting — by:

P-planning it,

D-trying it,

S- observing the results,

A- and acting on what is learned.

This is the scientific method adapted for action-oriented learning.
Starting Your Project

The PDSA Cycle

“What’s next?”

Act
- Next cycle:
  - Adapt?
  - Abandon?
  - Adopt?

Plan
- Objective
- Questions and predictions (why)
- Plan to carry out the cycle (who, what, where, when)

“Let’s try it...”

“Did it work?”

Do
- Carry out the plan
- Document problems and unexpected observations
- Begin analysis of the data

Study
- Complete the analysis of the data
- Compare data to predictions
- Summarize what was learned

“What will happen if we try something different?”
After a PDSA cycle......

- ADAPT
- ADOPT
- DISCARD
Quality Improvement in Healthcare

- https://www.youtube.com/watch?v=jq52ZjMzqyl
Three More Concepts

• Implementing Changes

• Spreading Changes

• Sustaining Changes**
Implementing Changes

After testing a change on a small scale, learning from each test, and refining the change through several PDSA cycles...

....the team may implement the change on a **broader scale** — for example, for an entire pilot population or on an entire unit
Spreading Changes

After successful implementation of a change or package of changes for a pilot population or an entire unit....

the team can spread the changes to other parts of the organization or in other organizations.
Sustaining Change

Repeated Use of PDSA Cycle

- Implementation at Scale
- Wider Scale Tests of Change
- Fine Tuning Tests
- Small-Scale Tests

Changes that Result in Improvement

Data
Typical Improvement Curve

- Apparent increase due to healthier event/problem reporting culture
- Significant performance improvement as a result of prevention activities
- Actual increase due to complacency or reverting to old habits
- Long-term improvement through sustained prevention

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Sustaining Change

But what goes up .....too often backslides

Need to insert a wedge of sustainability
Sustainability

“The key to sustaining improvement is to focus on the daily work of frontline managers, supported by a high performance management system that prescribes standard tasks and responsibilities for managers at all levels of the organization.”

Improvement alone is not enough.

Sustainability

“Many organizations outside of health care been able to establish high levels of excellence in managing hazardous processes and to maintain those levels over long periods of time, with rates of adverse events many hundreds of times lower than occur commonly in health care.

Can healthcare reach this state of high reliability and stay there?

Lean Daily Management (LDM)
Lean Daily Management

- LDM is a disciplined, daily process of gathering data and assessing performance metrics. This process drives appropriate behaviors and countermeasures that create a culture of seeing and solving the organizations key problems.

- Goal: Turn our organization into focused problem solvers. Continuously improve.
Lean Daily Management

Who?

• Front line staff should be engaged with reviewing, presenting and problem solving.
• Managers should make sure the data is collected, analyzed, ready to present. Rally the team to do problem solving.
• Executives go to the gemba, coach on problem solving, remove road blocks.
LDM- Metric Selection

• How does this impact our quadruple AIMs?

• Why is this important to our department/unit?

• Was there a recent kaizen (rapid-cycle improvement event) in your area or another initiative that you are working on?

• Can my staff have a direct impact on improvement efforts or does the problem reside with another team?

• Can I collect a daily measure that not only reflects when I miss the goal, but identifies why?
LDM
•  https://www.youtube.com/watch?v=3769wcty-yI
GME Quality/Safety Curriculum

• Beginning stages
Resident Quality/Safety Committee

- 12 Residencies
- Representatives from all 12
- Meet Monthly
- Chaired by Resident
- Meet Monthly
- Mentors
- Split Meeting
“Everyone in healthcare should have two jobs: to do the work, and to improve the work.”

Maureen Bisognano, CEO of IHI
Resources

http://www.ihi.org/resources/Pages/Tools/PlanDoStudyActWorksheet.aspx

http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx

www.chcact.org/resources/QI_PDSACycles.ppt
THANK YOU!

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