Adult Congenital & Pediatric Cardiology

QUALITY NETWORK

Quality Improvement 101
Jeff Anderson, MD, FACC
Objectives

• Model for improvement
• Profound theory of Knowledge
• The Key Driver Diagram
• Breakthrough Collaborative Series
• Improvement team
The Model for Improvement

Model for 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?

Act

Plan

Study

Do
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?
PDSA Cycles

Act

Plan

Study

Do
Why this Model for Improvement?

• Facilitates the use of teamwork to make improvements
• Provides a framework for the application of statistical tools and methods
• Encourages planning to be based on theory
• Emphasizes and encourages the iterative learning process
• Provides a way to empower people in the organization to take action
Repeated Use of the PDSA Cycle

Hunches
Theories
Ideas

Very Small Scale Test

Follow-up Tests

Wide-Scale Tests of Change

Implementation of Change

Changes That Result in Improvement

DATA
Profound Knowledge

W. Edwards Deming
(1900 - 1993)
Key driver diagram: Purpose

• Organizes the “theory of improvement” for a project

• Helps to focus the selection of changes to test by identifying the key drivers

• Connects the aim/outcome, key drivers, and interventions (change concepts) to create a “Learning Structure”

• Communication tool for your work
A driver diagram is an approach to describing our theories of improvement:

• Used to help organize our theories and ideas in an improvement effort.

• The initial driver diagram for an improvement project might lay out the descriptive theory of improved outcomes that can then be tested and enhanced to develop a predictive theory.

• The driver diagram should be updated throughout an improvement effort and used to track progress in theory building.
**Sample Project**

**Key Driver Diagram (KDD)**

**Project Leader(s): Sam Smith**
**Revision Date: 01/01/2014 (v1)**

**SMART Aim**

Population:

What are you trying to achieve?

That would be your **SMART Aim.**

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**Global Aim**

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**Key**

Gray shaded box = completed intervention

Green shaded box = what we’re working on right now

LOR # = Level of Reliability Number, e.g., LOR 1
Sample Project
Key Driver Diagram (KDD)

Key Drivers

What are the key elements to achieving that SMART Aim?

Those are your Key Drivers, the things you believe will ultimately affect your outcome.

Key
Gray shaded box = completed intervention
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Project Leader(s): Sam Smith
Revision Date: 01/01/2014 (v1)

SMART Aim

Population:

Global Aim
SMART Aim

Key Drivers

Interventions

Population:

Global Aim

What potential actions do you want to test to achieve those Key Drivers?

These are the Interventions, or what needs to be done to affect your key drivers and outcomes

Key
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Project Leader(s): Sam Smith
Revision Date: 01/01/2014 (v1)
SMART Aim

Increase the percentage of healthcare personnel caring for pediatric cardiology patients at ______ who receive the annual influenza vaccine from ___ to 90% by _______

Population: Healthcare personnel* caring for patients with congenital heart disease

Global Aim

Reduce risk of infection in patients with congenital heart disease

Key Drivers

- Documentation of staff influenza status
- Availability of influenza vaccine for healthcare personnel
- Staff educated about the importance of influenza vaccination
- System in place for monthly documentation and reporting of “gaps” in immunization coverage
- Positive or negative incentive in place for completing immunization

Interventions

- Assign an “influenza” champion to shepherd the immunization process; This champion should be assigned by July 1, 2015
- Order influenza vaccine for facility by August 1, 2015
- Weekly immunization “clinics” staffed during influenza season; September - March
- Discussion of influenza immunization monthly through email and at faculty/staff meetings
- Creation and dissemination of incentive program information to staff; complete by August 1, 2015

Key:
- Gray shaded box = completed intervention
- Blue shaded box = what we’re working on right now
- Dashed box = driver/intervention unique to your program

Revision Date: 4/21/2015 (v1.0)

* HHS Definition: Medical, front office/check-in, other administrative staff (i.e. practice managers, schedulers), and other personnel; ECG technicians, medical assistants (CNA), LPN, RN, MD, NP, PA, as well as imaging personnel including sonographers, and other healthcare personnel. http://www.hhs.gov/ash/initiatives/hai/hcpflu.html
Measurement of metric

- **Numerator**: number of healthcare personnel who received the immunization vaccination

- **Denominator**: All *healthcare personnel working in patient care areas and caring for patients seen by cardiology caregivers

- **Period of assessment**: September 1, 2015 – March 31, 2016

*HHS Definition: Medical, front office/check-in, other administrative staff (i.e. practice managers, schedulers), and clinical personnel (i.e. EKG technicians, medical assistants (CNA), LPN, RN, MD, NP, PA, as well as imaging personnel including sonographers, and other healthcare personnel). [http://www.hhs.gov/ash/initiatives/hai/hcpflu.html](http://www.hhs.gov/ash/initiatives/hai/hcpflu.html)
Improvement Team Building

• Who?
  – Multidisciplinary
  – Front line
  – Patient and parent centered

• What?
  – Regular meetings
  – Development of Key Driver
  – Development and execution of PDSA cycles
  – Review and digest the data
Questions?