
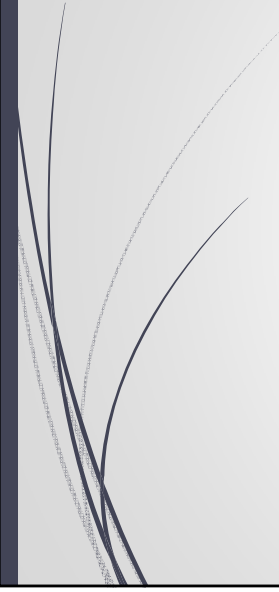


# Using QI Models to Implement Program Change




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## Agenda

- 
- ▶ Introduction to Quality Improvement
  - ▶ Quality Improvement Models
  - ▶ Let's Practice!





## What Do YOU want to change?

- On card in front of you, write:
  - Write ONE thing that you want to change / upgrade in your program – Just WRITE it (don't solve it)



## Introduction to Quality Improvement

Using QI Models to Implement Program Change

## QI Models

- ▶ Healthcare is always changing; always improving
- ▶ QI assure patient safety / satisfaction
- ▶ What happens when we want to change something and implement it with no follow up?
- ▶ Need to have a way of tracking the change and its effectiveness. QI Models!
- ▶ Nursing , Quality, Manufacturing has used the models for years, and you probably have seen it

## QI Model

- ▶ ACGME CPR on QI:
  - ▶ (PBLI) Residents are expected to develop skills and habits to be able to meet the following goals systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement (CPR IV.A.5.c).(4)
  - ▶ (SBP) Residents are expected to advocate for quality patient care and optimal patient care systems work in interprofessional teams to enhance patient safety and improve patient care quality (CPR IV.A.5.f).(4-5)
  - ▶ (PROF) The program director must ensure that residents are integrated and actively participate in interdisciplinary clinical quality improvement and patient safety programs. (CPR VI.A.3.)
  - ▶ The program must monitor and track program quality [through the PEC] (CPR V.C.2.d)
- ▶ ACGME CLER



# Quality Improvement Models

Using QI Models to Implement Program Change



# Quality Improvement Models

- Care Model
- Lean Model
- Model for Improvement (PDSA)
- FADE
- Six Sigma
- Hybrid: Lean Six Sigma

Resource:  
HRSA (Health Services and Resource Administration)  
<https://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/part3.html>



## Care Model

### Description

- ▶ six fundamental aspects of care
- ▶ promotes high-quality disease and prevention management
- ▶ supports productive interactions between patients, who take an active part in their care, and providers, who have the necessary resources and expertise.
- ▶ Aspects
  - ▶ Health Systems
  - ▶ Delivery Systems design
  - ▶ Decision support
  - ▶ Clinical Information Systems
  - ▶ Self Management Support

### How Administrative Systems Could Use It

- ▶ Systems Based Change
- ▶ Change that is effecting more than one program / institution

Resources:  
HRSA (Health Services and Resource Administration)  
<https://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/part3.html>

Agency for Healthcare Research and Quality  
<https://www.ahrq.gov/professionals/prevention-chronic-care/improve/system/rfhandbook/mod16.html>



## Lean Model

### Description

- ▶ defines value by what a customer (i.e., patient) wants
- ▶ maps how the value flows to the customer (i.e., patient)
- ▶ ensures the competency of the process by making it cost effective and time efficient.
- ▶ Entire hospitals have adopted this process operationally to reduce waste – time, resources, materials
- ▶ Started in manufacturing by Toyota.
  - ▶ *Purpose*
  - ▶ *Process*
  - ▶ *People*

### How Administrative Systems Could Use It

Streamline processes

Resource:  
HRSA (Health Services and Resource Administration)  
<https://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/part3.html>

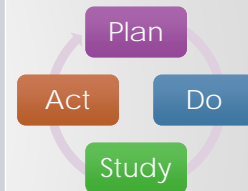
The Lean Enterprise Institute  
<http://www.lean.org/WhatIsLean/>



# Model for Improvement (PDSA)

## Description

- Commonly used in healthcare setting due to versatility
- This model focuses on three questions:
  - Aim / Goal
  - Measures
  - Select changes
- It incorporates PDSA cycles to test changes on a small scale
  - Plan
  - Do
  - Study
  - Act



## How Administrative Systems Could Use It

Any change you want to implement!

Resource:  
HRSA (Health Services and Resource Administration)  
<https://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/part3.html>

IHI (Institute for Healthcare Improvement)  
<http://www.ihi.org/resources/Pages/Howtoimprove/default.aspx>



# FADE

## Description

- Consists of (similar to PDSA)
  - Focus: define process to be improved
  - Analyze: collect and analyze data
  - Develop: develop action plans for improvement
  - Execute / Evaluate:
    - implement the action plans
    - measure and monitor the system to ensure success

## How Clinical Systems Use It

Can be used to implement / track any change

## How Administrative Systems Could Use It

Can be used to implement / track any change

Resource:  
HRSA (Health Services and Resource Administration)  
<https://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/part3.html>



# Six Sigma

## Description

- ▶ measurement-based strategy for process improvement and problem reduction
- ▶ Consists of two models, depending on the point in the process

DMAIC	DMADV
Designed to examine EXISTING processes	Used to develop NEW processes
<ul style="list-style-type: none"><li>▶ Define</li><li>▶ Measure</li><li>▶ Analyze</li><li>▶ Improve</li><li>▶ Control</li></ul>	<ul style="list-style-type: none"><li>▶ Define</li><li>▶ Measure</li><li>▶ Analyze</li><li>▶ Design</li><li>▶ Verify</li></ul>

## How Administrative Systems Could Use It

- ▶ Reviewing a current process, that you need to change (new scheduling format)
- ▶ Implement a brand new process

Resource:  
HRSA (Health Services and Resource Administration)  
<https://www.hrsa.gov/quality/ice/box/methodology/qualityimprovement/part3.html>

Six Sigma Material  
<http://www.six-sigma-material.com/>



# Let's Practice!

Using QI Models to Implement Program Change

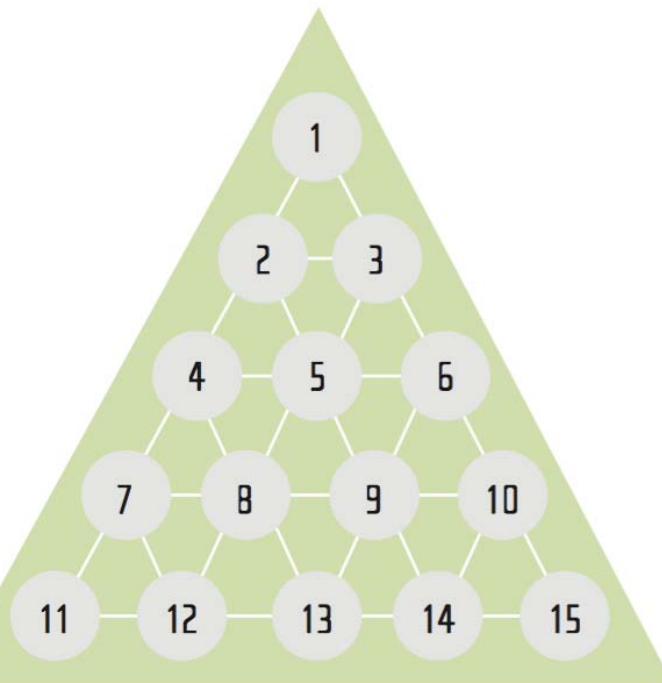


# Peg Game

- ▶ **PLAN:** The goal of the game is to remove as many of the pegs as possible, by jumping one another
  - ▶ *Aim*
  - ▶ *Measures*
  - ▶ *Changes*
- ▶ **DO:** Cover all the numbers on your board with the jellybeans, except 1 (doesn't matter which one). Remove one bean at a time, by jumping to remove
- ▶ **STUDY:** Tally Results, break into teams lead by the 5 top scorers; Discuss Best Practice
- ▶ **ACT:** Repeat, considering the discussed Best Practices

Resource:  
National Quality Center  
<http://nationalqualitycenter.org/>

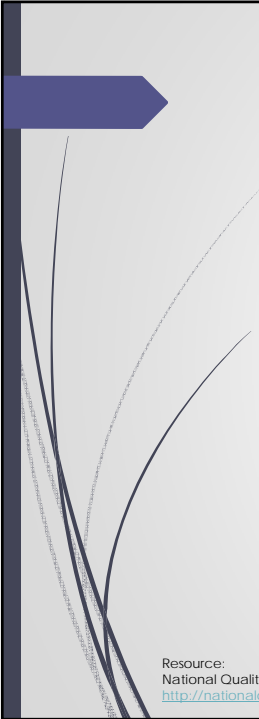
P.D.S.A.



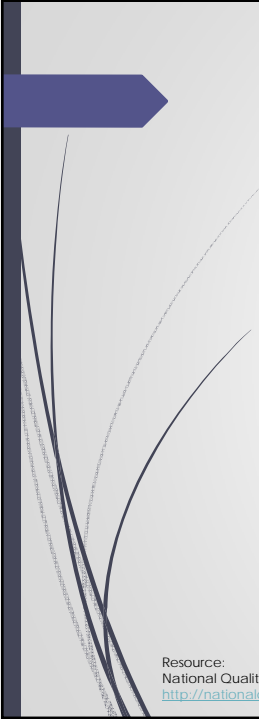
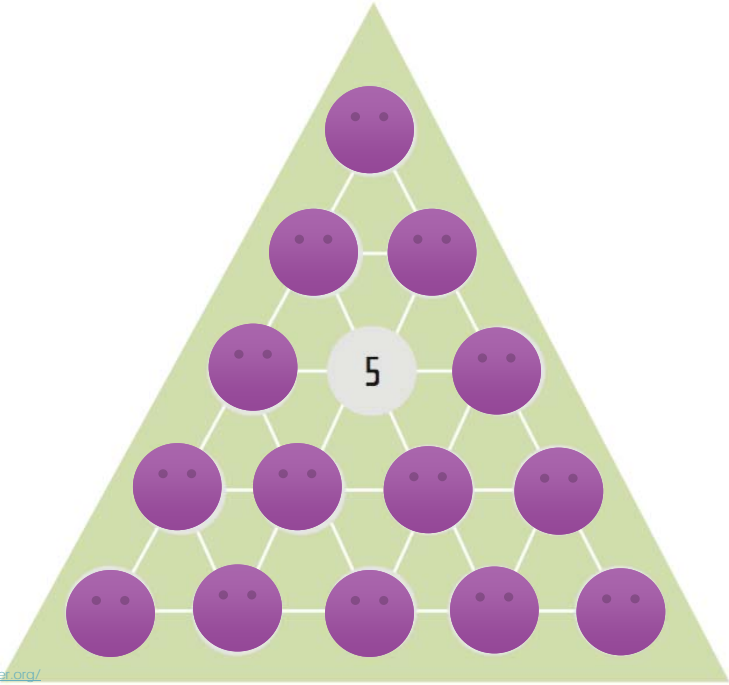
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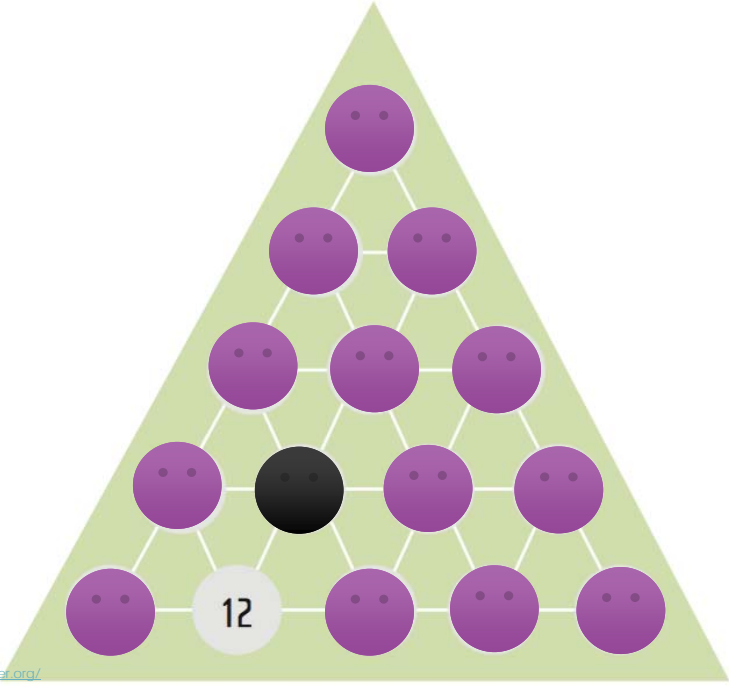


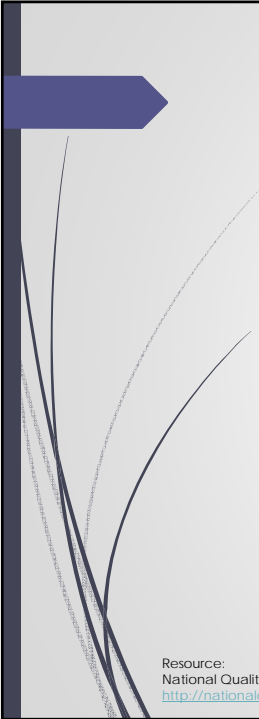


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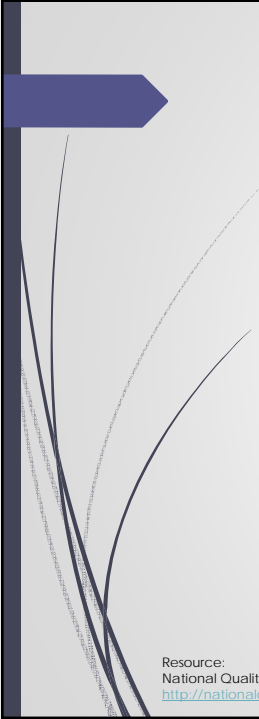
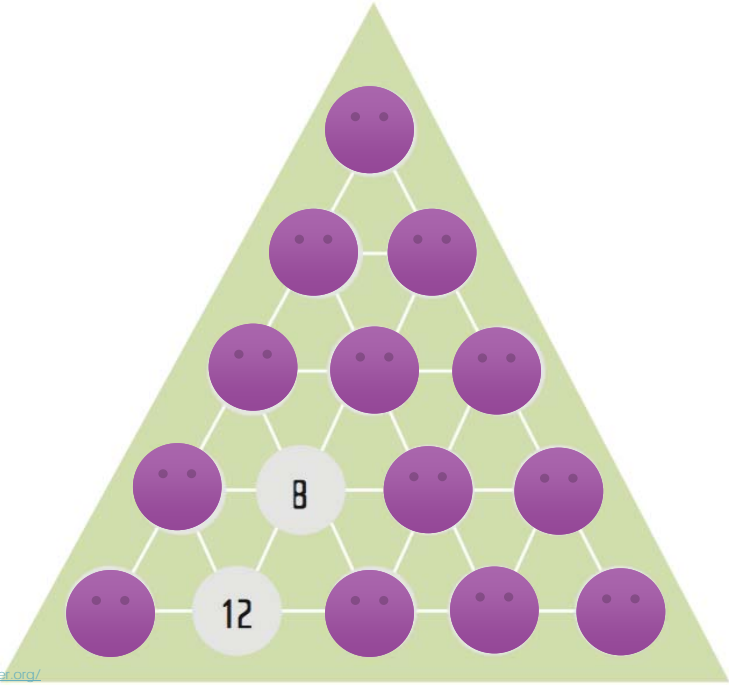


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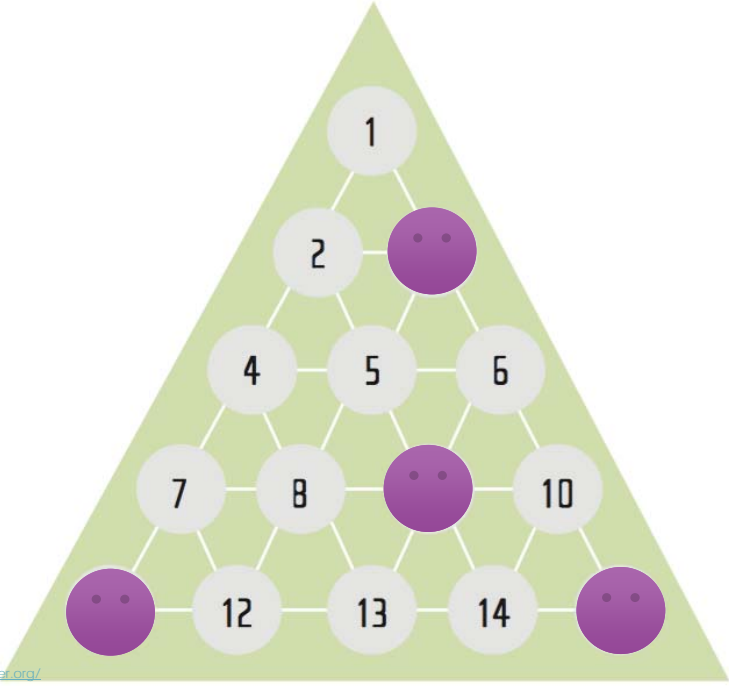


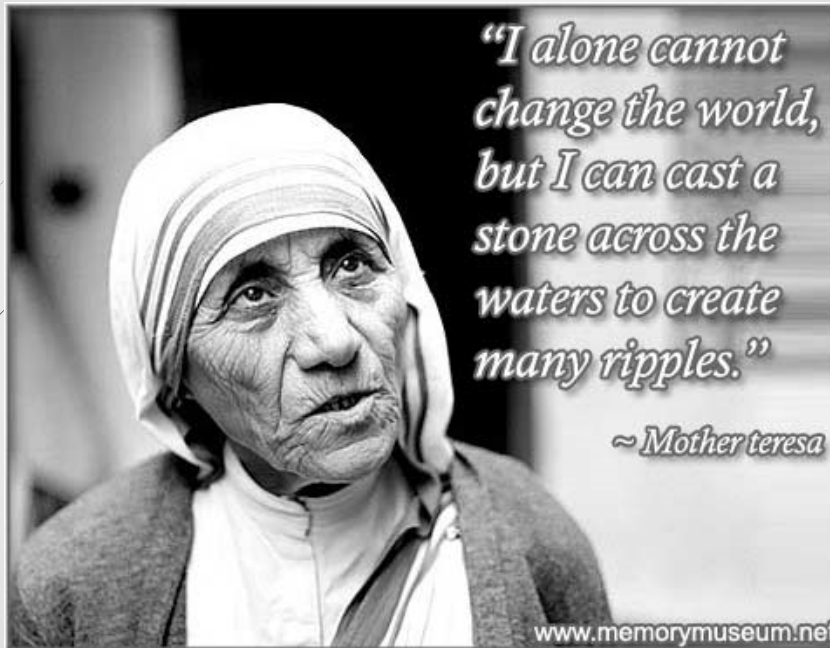


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## Resources

- ACGME Common Program Requirements - <http://www.acgme.org/What-We-Do/Accreditation/Common-Program-Requirements>
- ACGME CLER - <http://www.acgme.org/What-We-Do/Initiatives/Clinical-Learning-Environment-Review-CLER>
- HRSA (Health Services and Resource Administration) - <https://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/part3.html>
- Agency for Healthcare Research and Quality - <https://www.ahrq.gov/professionals/prevention-chronic-care/improve/system/pfhandbook/mod16.html>
- The Lean Enterprise Institute - <http://www.lean.org/WhatsLean/>
- IHI (Institute for Healthcare Improvement) - <http://www.ihl.org/resources/Pages/HowtoImprove/default.aspx>
- Six Sigma Material - <http://www.six-sigma-material.com/>
- National Quality Center - <http://nationalqualitycenter.org/>