IPRO HQIC
Quality Improvement 101 Course
Content Class #3
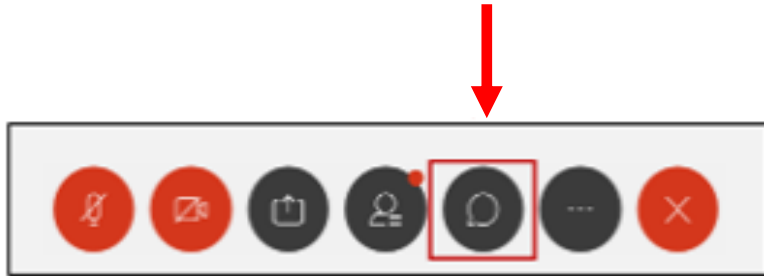# "Study & Act" Phases of PDSA

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How to Use the Chat Box Feature

To send a Chat Message:

➢ **Open** the **Chat** Panel

➢ ***Scroll*** *All the Way* ***Down***

➢ ***Select "Everyone"***

　　➢ ***Do not*** *select*
　　"All Attendees"

➢ **Type message** in Chat Text Box, press **Enter** on your keyboard

Enter in Chat:
- **Name**
- **Role**
- **Organization**
- **State**

Everyone

Sophia Cunningha... (Host)

Rebecca Steinfield (IHI) (Presenter)

Abby Zier Alyesh

Danyce Seney

Edy

emunene

Jeff Wetherhold

jennifer

To: Everyone

Questions and Participation

- If you prefer to ask your question live, please raise your hand and your line will be unmuted.

- There are several opportunities to participate during today's class so please feel welcome to share during polling questions.

Today's Objectives and Speakers

- Describe Methods to Sustain Gains

- Describe Monitoring/Audit tools and Analyzing the Results

- Describe Monitoring Frequency

- Describe Mistake Proof Improvements

- Describe Methods for Displaying Project Data

- Describe Project Closure

Gloria Thorington, RN, CPHQ, CPPS, CSSGB
Quality Improvement Manager
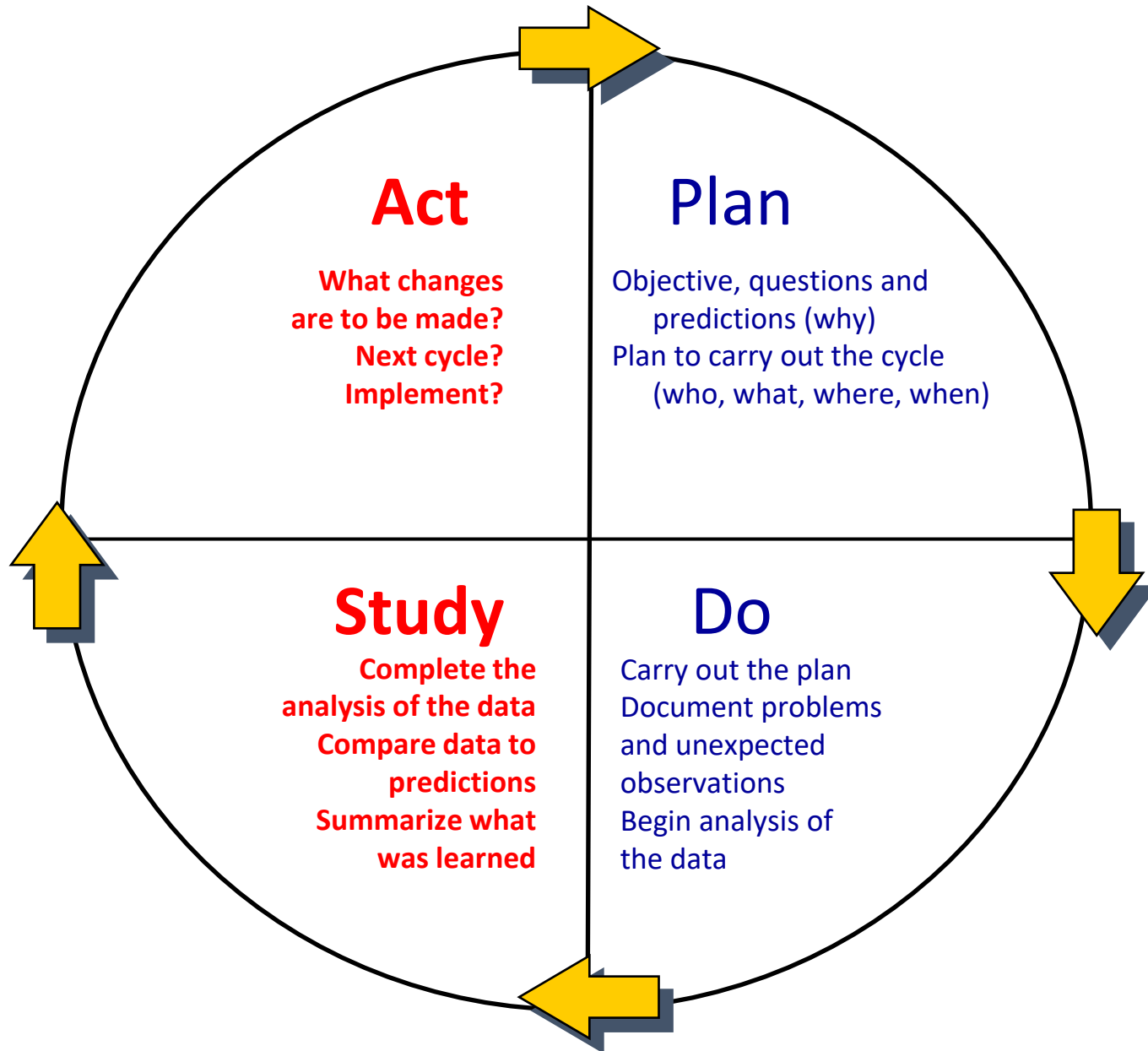Healthcentric Advisors

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Beth Murray, M.Ed., RN, MCHES, HN-BC
Project Manager
The Hospital and Healthsystem Association of Pennsylvania

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Act

What changes
are to be made?
Next cycle?
Implement?

Plan

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

Study

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

Do

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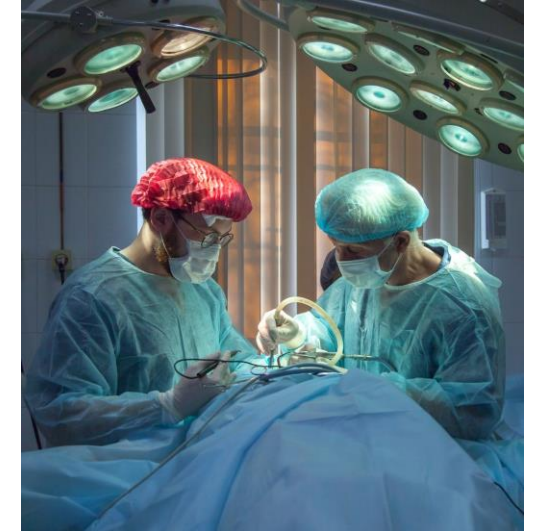Begin analysis of
the data

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When are you "done" with testing?

- Everyone who needs to test the change has
- The process is stable, with few changes
- Staff are satisfied with the current state
- **Your measure is moving in the right direction** (Stay tuned for lots of help on how to use your data tomorrow)

Participant Question

- How do you know if the implemented solutions have become part of the daily work?

- Please enter your answers in the chat box.

Methods to Sustain Gains- Sustainability is a Key Component to Quality Improvement

Making Change "Stick"

- Update policies and procedures

- Ensure everyone is trained

- Build the process into orientation guides

- Build the process into your electronic record

- Decide who will continue to monitor this

Making it "Stick"

- The changes should be tied to an existing accountability structure:
  - Quality Committee
  - Patient Safety Committee
  - Shared Governance
  - Management Team
- At least an annual spot check of the outcome measure; may need a process measure if the outcome is "slipping"
- Think about a contingency plan – new PDSA cycles – if performance starts to slip.

Monitoring/audit tools and analyzing the results

Strategies for Project Sustainment - Jidoka

- "Transforming into something that moves by itself" Japanese LEAN principle to stop the line when an abnormality is detected or automatic stop.

- 7 rights of Medication Administration

- Time Out for Surgery

Safety Culture – Jidoka - https://safetyculture.com/topics/jidoka/

Strategies for Project Sustainment

Standard Work

STOP

Functional Area	Endoscopy	Process Name	Sampling Duodenoscopes - Distal cap seams (Step 1 of 3)	Creation Date:	Signature:
Department Director		Process ID Number		Revision Date:	Signature:
Team Leader/Owner		Position Responsible/Role	Endoscopy Tech	Review Date:	Signature:

Hospital:

Seq. No.	Major Steps/Element Description	Performed By	Check	Workflow diagram
				Required PPE: Sterile Gown, Sterile Gloves, Mask and eye protection, Bouffant
1	Assemble supplies and equipment including: PPE, surface disinfectant, sterile drape, lighted magnification, sterile collection container, specimen label, 45ml Dey-Engley, sterile water, sterile alcohol wipe, sterile swab, 2 pipettes, sterile brush and scissors, (2) 30ml and (1) 5ml syringe.	Sampler & Facilitator	✚	
2	Perform hand hygiene.	Sampler & Facilitator	✚	
3	Label the sterile sample container with duodenoscope device number, channel/sites sampled, date, time, and identification of sampler.	Facilitator	☆	
4	Don fluid resistant face-mask, eye protection and exam gloves.	Sampler &Facilitator	✚	
5	Disinfect counter with appropriate surface disinfectant starting from back of counter working towards front.	Sampler &Facilitator	✚	
6	Don Sterile PPE	Sampler &Facilitator	✚	
7	Place sterile pad or drape on counter.	Facilitator	✚	
8	Retrieve duodenoscope and place on sterile pad or drape, taking care to avoid contact with the elevator recess	Facilitator	△	

Std Process Stock △	Quality Check ☆	Safety ✚

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Monitoring Phase – Sustain the Gains

- Current State

- Post-implementation State

- Detect Defects

- Continuous Monitoring

Data Collection Plan – Control Plan

- Current State or Base Line Data
- Process Owner
- Reviewed throughout the project
- Frequency and methods to collect data
- Sampling
- Operational Definitions
- Interrater Reliability
- Monitoring Data

Process Control Plan

PROCESS CONTROL PLAN WORKSHEET

List of Key Processes & Associated Measures	Process Owner	Frequency Data Needs to be Collected & Monitored	Level at Which Action is Required

Document who will be monitoring performance going forward

Process Control Plan Example

PROCESS CONTROL PLAN WORKSHEET

List of Key Processes & Associated Measures	Process Owner	Frequency Data Needs to be Collected & Monitored	Level at Which Action is Required
Readmissions (outcome measure)	Sue T.	Monthly	If rate goes over 12.5% for 3 months in a row
Follow-up phone calls within 72 hours (process measure)	Mary and Steve	Quarterly spot check on 20 random patients	If rate is <90%

Tools for Sustaining the Gains

- Audit Tools

- Accountability Tools

- Think about how our newly implanted solution could fail – include upstream and downstream concerns.

Audit Tools – AHRQ CVL Audit Tool

AHRQ CVL Audit tool https://www.ahrq.gov/hai/clabsi-tools/appendix-6.html

Monitoring Tools – CDC Environmental Checklist – Terminal Cleaning

CDC Environmental Checklist for Monitoring Terminal Cleaning[1]

Date:	
Unit:	
Room Number:	
Initials of ES staff (optional):[2]	

Evaluate the following priority sites for each patient room:

High-touch Room Surfaces[3]	Cleaned	Not Cleaned	Not Present in Room
Bed rails / controls			
Tray table			
IV pole (grab area)			
Call box / button			
Telephone			
Bedside table handle			
Chair			
Room sink			
Room light switch			
Room inner door knob			
Bathroom inner door knob / plate			
Bathroom light switch			
Bathroom handrails by toilet			
Bathroom sink			
Toilet seat			
Toilet flush handle			
Toilet bedpan cleaner			

Evaluate the following additional sites if these equipment are present in the room:

High-touch Room Surfaces[3]	Cleaned	Not Cleaned	Not Present in Room
IV pump control			
Multi-module monitor controls			
Multi-module monitor touch screen			
Multi-module monitor cables			
Ventilator control panel			

Mark the monitoring method used:

☐ Direct observation ☐ Fluorescent gel ☐ Agar slide cultures
☐ Swab cultures ☐ ATP system

CDC Environmental Checklist:

https://www.cdc.gov/hai/prevent/prevention_tools.html

Rounding tool

Checking CLABSI
Staff education rounding tool

Date: _____

Charge nurse, CLABSI team lead, Infection Preventionist or Unit Manager might use this tool to facilitate a conversation around central lines with staff at a designated time each day or week, such as a shift change or daily safety huddle.

"We are participating in a project to help reduce the number of central line associated blood stream infections in our hospital, and will be taking time regularly to talk about our central line practices and learn how we can improve. Can one of you tell me about the last central line you helped insert or care for?"

CENTRAL LINE INSERTION		
1) Was it a one or two person insertion?	One: ☐	Two: ☐
2) Was an insertion checklist used?	Yes: ☐	No: ☐
3) Was femoral line insertion avoided if possible?	Yes: ☐	No: ☐
4) Were central line supplies standardized and in one place?	Yes: ☐	No: ☐
5) If the line was not placed under sterile conditions, was it marked?	Yes: ☐	No: ☐
6) Was patient/family education provided upon insertion?	Yes: ☐	No: ☐

| CENTRAL LINE MAINTENANCE		
1) Did you use a standardized dressing change kit?	Yes: ☐	No: ☐
2) Was the dressing change frequency defined? • Transparent dressing q7days • Gauze dressing q48h	Yes: ☐	No: ☐
3) Was central line changed after two or more unintended dressing disruptions?	Yes: ☐	No: ☐
4) Did you scrub the hub for at least 10 seconds and allow at least 20 seconds to dry?	Yes: ☐	No: ☐
5) Was the patient bathed with antiseptic (CHG) from head to toe daily?	Yes: ☐	No: ☐
6) Was the patient assessed daily for necessity of central line?	Yes: ☐	No: ☐
7) Upon transfer from the unit, was critical central line information shared? • Date of insertion • location of catheter • type of central venous catheter (temporary non-tunneled, tunneled, dialysis) • whether inserted under sterile conditions • dressing change due date • copy of placement confirmation x-ray if available	Yes: ☐	No: ☐
1) Is there anything you think you might have done differently or better?	Yes: ☐	No: ☐
2) Have we learned anything we might share at a staff meeting?	Yes: ☐	No: ☐

NOTES:

Just in Time Training-Correct Defects

☑

Specific to the gap

👤

Gives the employee the required information at exactly the right time.
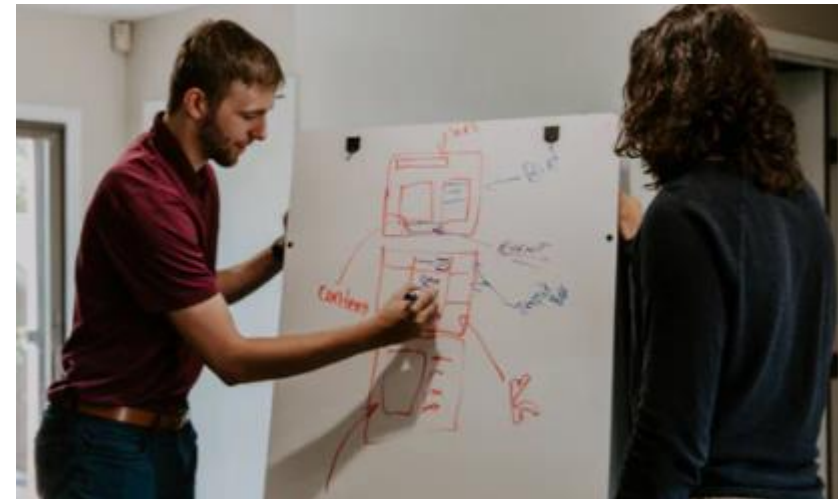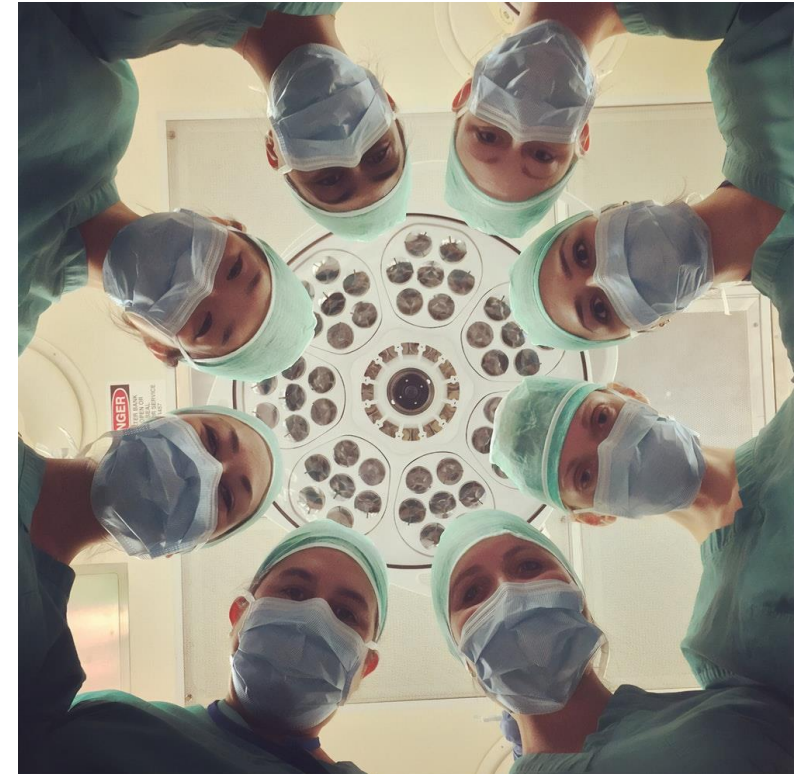
Gemba – Go See!

- Japanese term meaning "the real place."

- Objective of the Gemba is to observe, engage and improve – always be respectful

Participant Question

What checklists do you use frequently in completing assignments in your current role?

Please enter your answers in the chatbox.

Mistake Proofing

Mistake Proofing

- Prevention - The ability to stop mistakes before they occur ie. A checklist built into a system - EMR

- Proofing – make it impossible for errors to be passed to the next step in the process

- Medical Devices

(George et. Al. 2005)

Mistake Proofing

Process Errors

- Omissions and errors
- Error in job set up
- Wrong equipment/supply
- Measurement error

Human Errors

- Forgetfulness
- Sensory Error
- Ineffective Training
- Willful Errors (ignore rules)
- Inadvertent Errors Distraction/Fatigue
- Delays

Seven Steps to Mistake Proofing

1. Describe the defect and impact on patients

2. Identify the process step where defect is discovered and step where it's created

3. Detail the standard procedure where the defect is created

4. Identify errors in or deviation from the standard procedure

(George et. Al. 2005)

Seven Steps to Mistake Proofing

5.   Investigate and analyze the root cause for each deviation

6.   Brainstorm ideas to eliminate or detect the deviation early

7.   Create, test, validate and implement mistake-proofing device

(George et. Al. 2005)

Questions

Monitoring Frequency & Visual Management

Visual Management System

- Manner in which data and status are presented and communicated

- Status of Process

- Directs Leadership to areas that need support

- Indicates actions or countermeasures that are in process

- Shows normal vs. abnormal (right vs. wrong)

Visual Management System

Days Without	
CAUTI	244
CLABSI	20
Fall	35
C-Diff	364
Pressure Injury	2

What should we do for our next round of PDSA to improve to 100% compliance based on our current results?
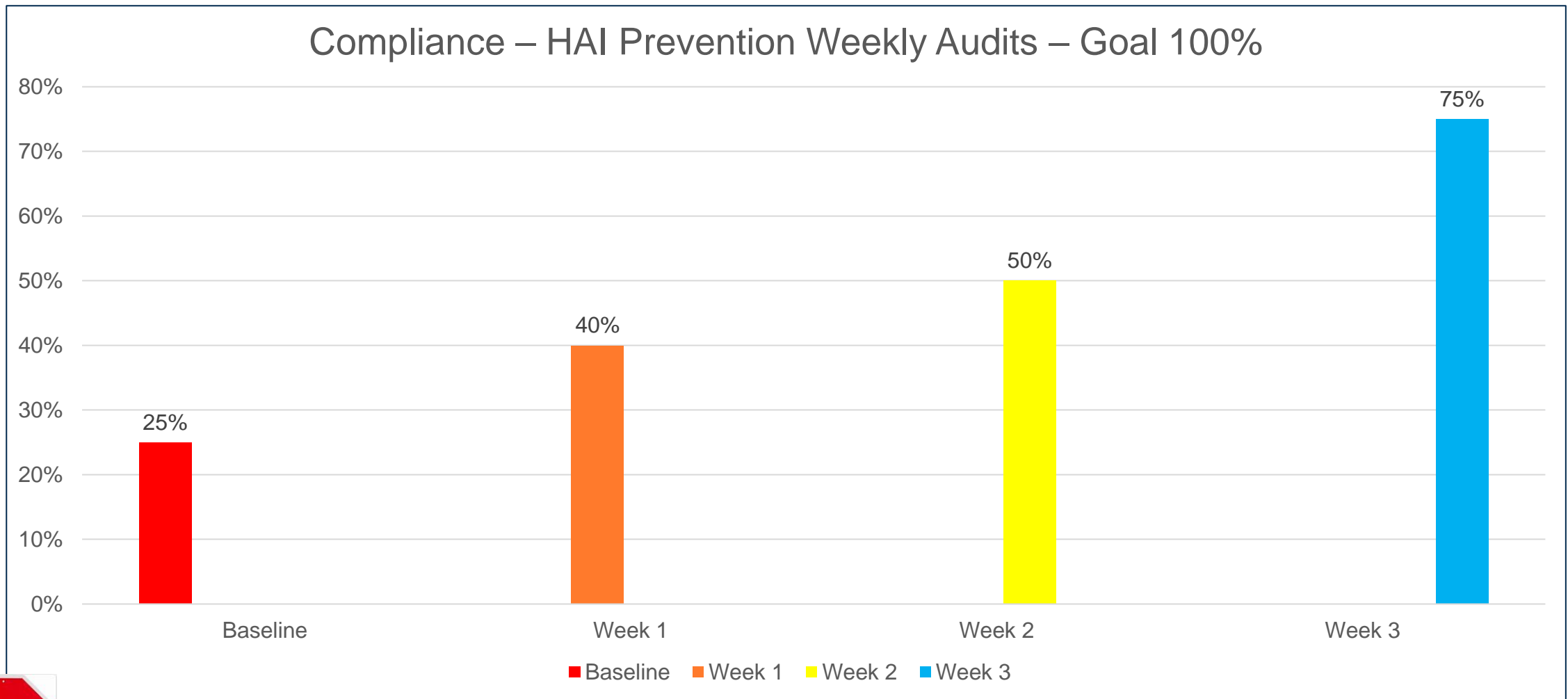
Compliance – HAI Prevention Weekly Audits – Goal 100%

Baseline: 25%
Week 1: 40%
Week 2: 50%
Week 3: 75%

Legend: Baseline, Week 1, Week 2, Week 3

Monitoring Frequency

Daily

Monthly

Quarterly
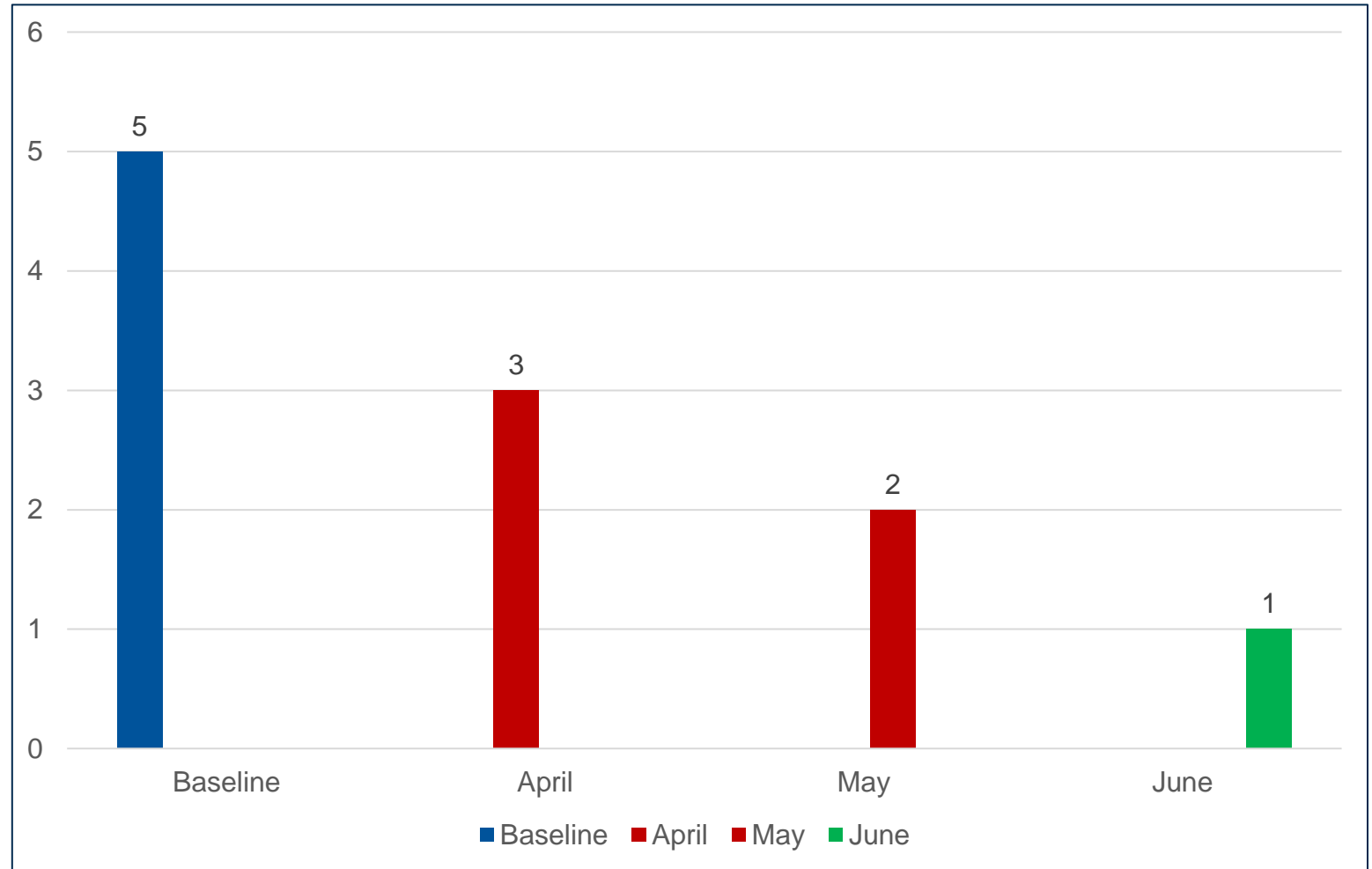
Making the Data Visible – Run Chart and Control Chart

Example: Run Chart
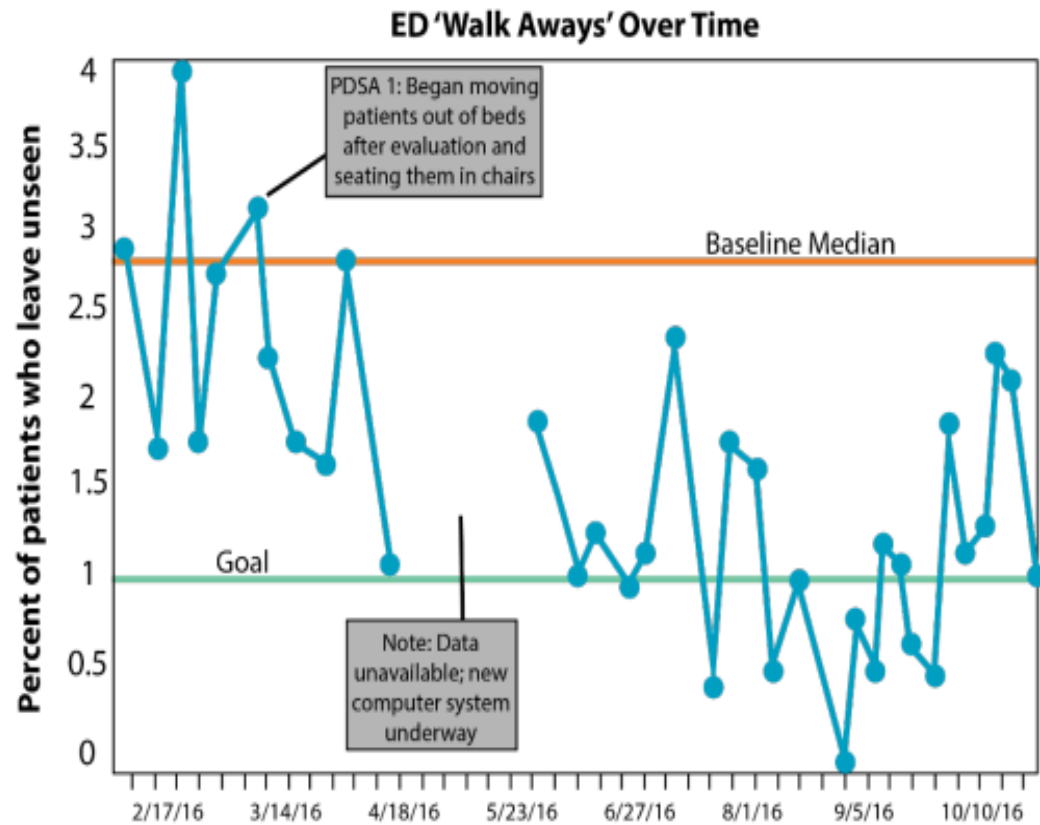
ED 'Walk Aways' Over Time

Example: Control Chart
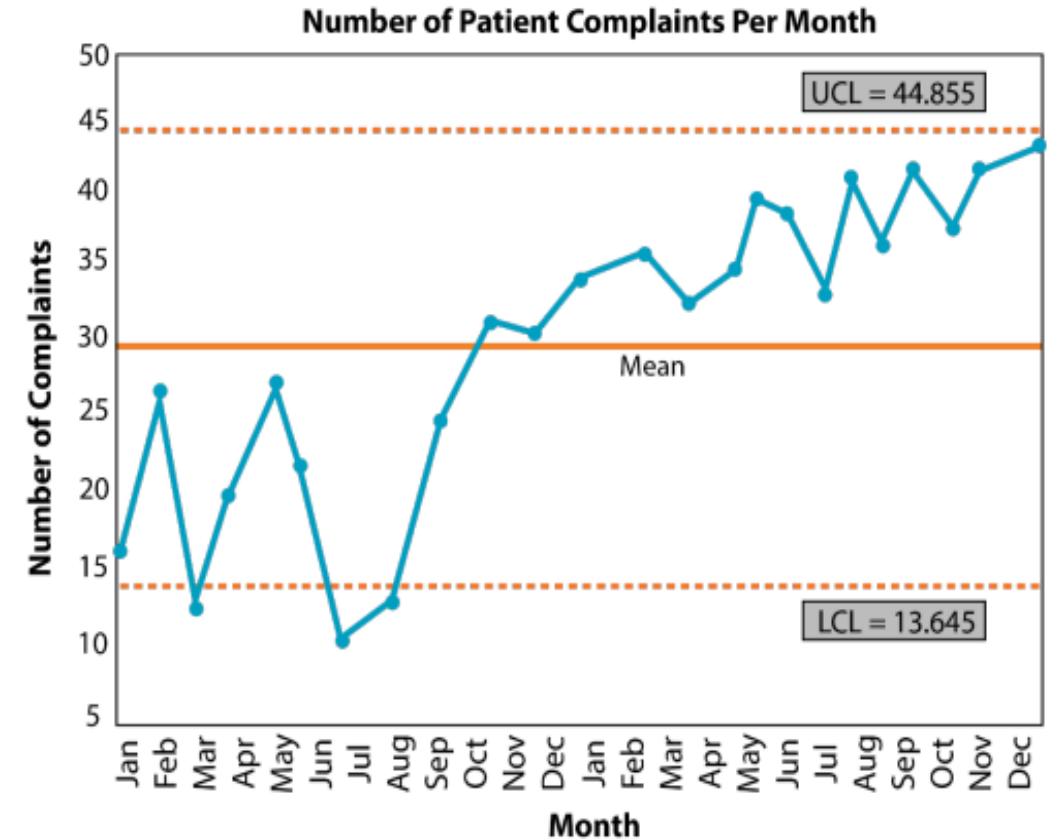
Number of Patient Complaints Per Month

IHI QI Essentials Toolkit:
http://www.ihi.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx

Questions

Evaluation of Improvement Huddles

Huddles/Briefs – Tell the Story

- Opportunity to discuss the newly implemented solution – what's going well? What are the opportunities for improvement?

- Are there any unanticipated upstream or downstream effects?
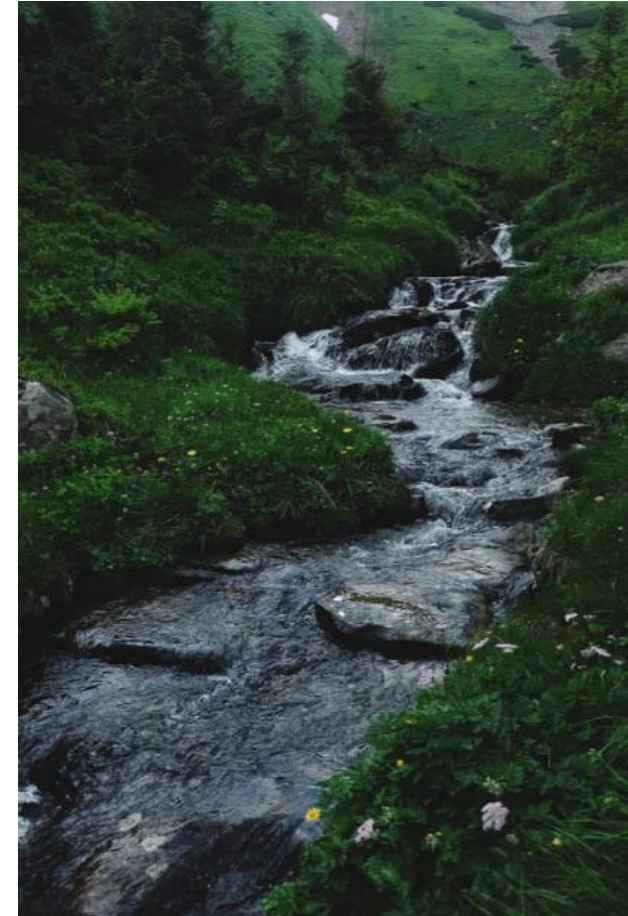
Huddle Example

- Our Unit implemented a quality improvement project to reduce indwelling urinary catheters that no longer meet insertion criteria.

- The team uses the morning huddle to discuss any indwelling urinary catheters on the unit that no longer meet criteria and advocate for removal or exchange with an external urinary device.

Patient Family Engagement

- During Nurse bedside report – discuss importance of hand hygiene and bathing.

- Ensure patient education is appropriate for patient's learning level.

- What healthcare disparities or inequities might we consider during Nurse bedside report?

Polling question

Are you currently using daily huddles or briefs on your Unit?

Enter your answers in the chat box.

Questions

Project Closure

Project Closure

- Team will turnover project to Process Owner

- Process Owner will give updates at specific intervals

- Update the project charter, communication plan

- What was the impact of the project on: quality and safety of patient care, patient and family satisfaction, finance, productivity, turn around times, inventory reduction, reduced waste, increased productivity?

- Present project to Leadership, Unit Leadership, Peers

Presenting your Project

Background and History

Discussion of why you chose the project

What was your SMART Goal

What problem were you trying to solve

Voice of the Customer

Voice of the Business

Key Stakeholders

This is a great time to recognize team members and their contributions.

Project Framework

Did you choose:

- PDSA

- Small Test

- Rapid Cycle

- Pilot

- 5S Project

Repeat → Plan → Do → Study → Act → Repeat
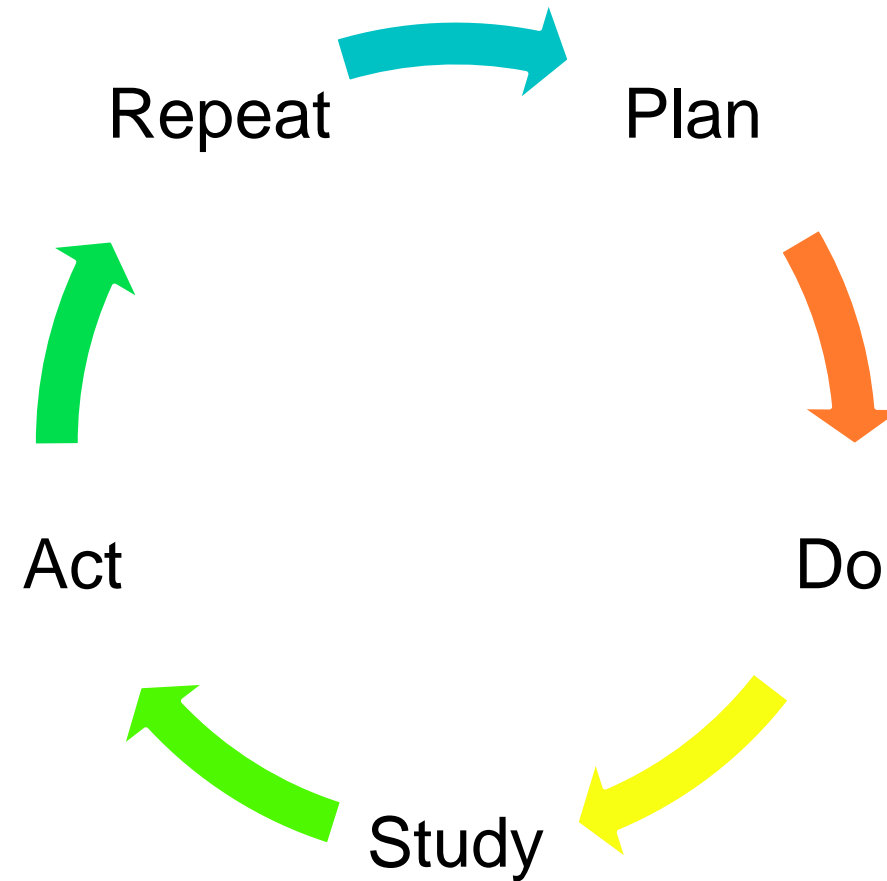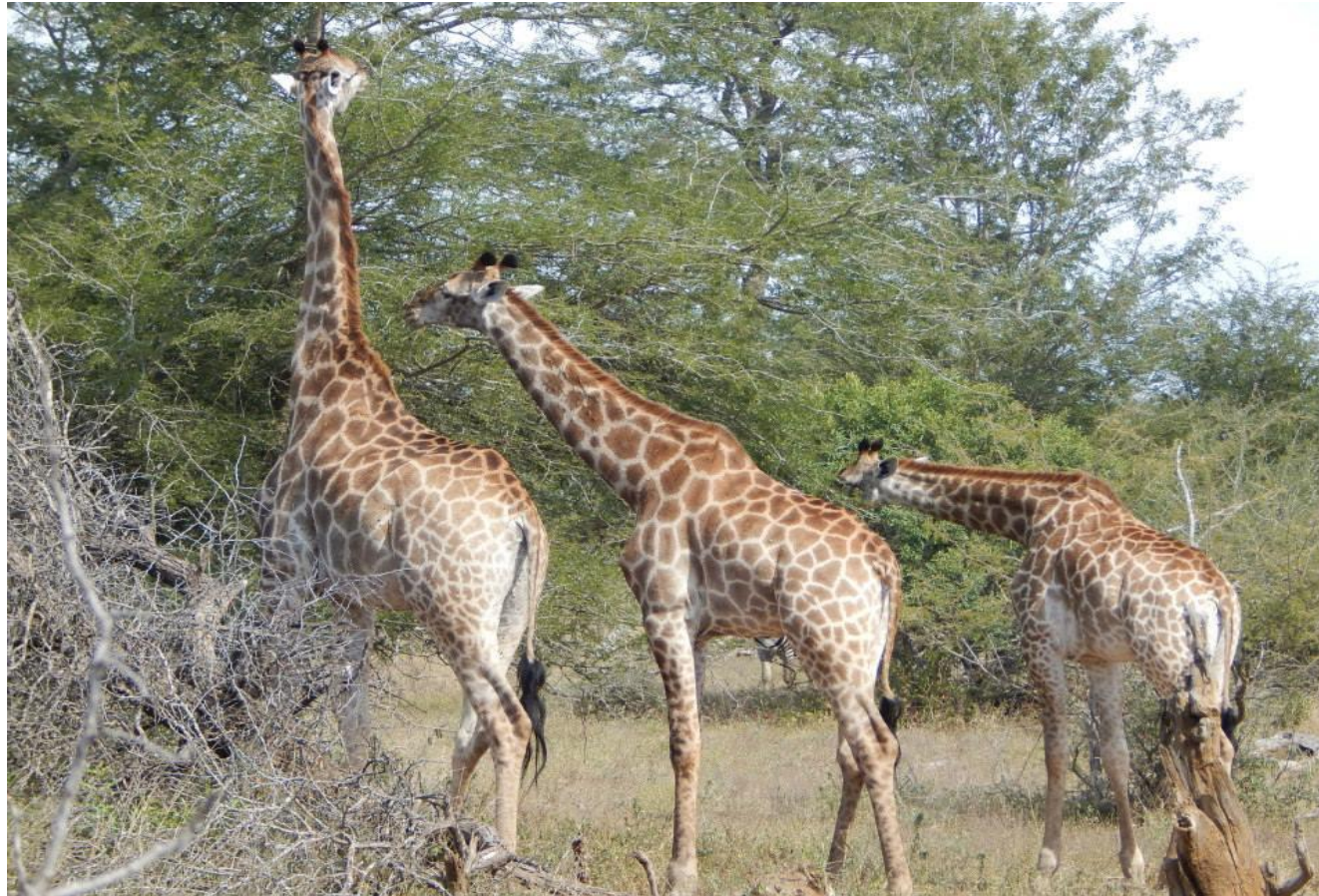
Change Management

- Did you overcome barriers or resistance?

- What change management tools did you use during the project?

- Review your communication plan, data communication plan, other templates or tools.

Have you encountered any conflict or barriers during a project?

Project Timeline

August 15, 2022

September 10, 2022

August 22, 2022

Training and Education

- Discuss any training or education required for your project implementation

- Pre-test, post test data

- Standard work tools – include pictures if appropriate

- Competency tools

Supplies and Equipment

- Discuss any required supplies and equipment to implement the project

- Barriers to obtaining supplies – storage requirements? Availability?

Implementation

- Team roles

- Improvements based on front line feedback

- Lessons learned

Data review

- Include baseline

- Monitoring based on frequency (daily, weekly, monthly)

- Include visual management data (run charts/control charts etc.)

ED Average STAT Lab Turn Around Time
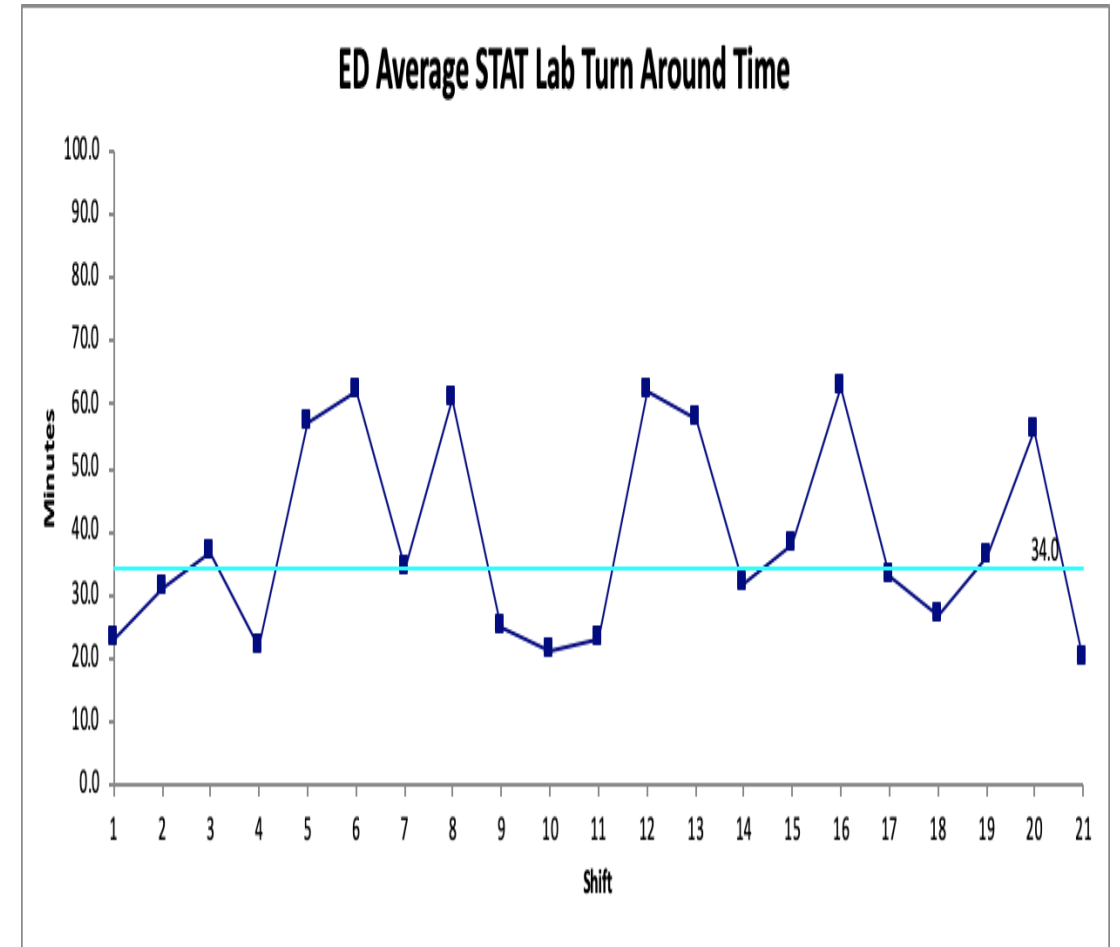
Project evaluation

- Describe wins and opportunities for further improvement

- Review project auditing and/or monitoring tools and frequency

- Plans for repeating project on another unit

- Explain how you are going to sustain your gains

Next Steps or Key Takeaways

- List at least 3 items here that summarize your project

  1. _____

  2. _____

  3. _____

5S Project

- Include a definition of each step

- Include as many before and after pictures as you can

- Include pictures of your team participating in the 5S project

- Describe your method to sustain the project including any monitoring or auditing tools.

1 Sort
2 Set in Order
3 Shine
4 Standardize
5 Sustain
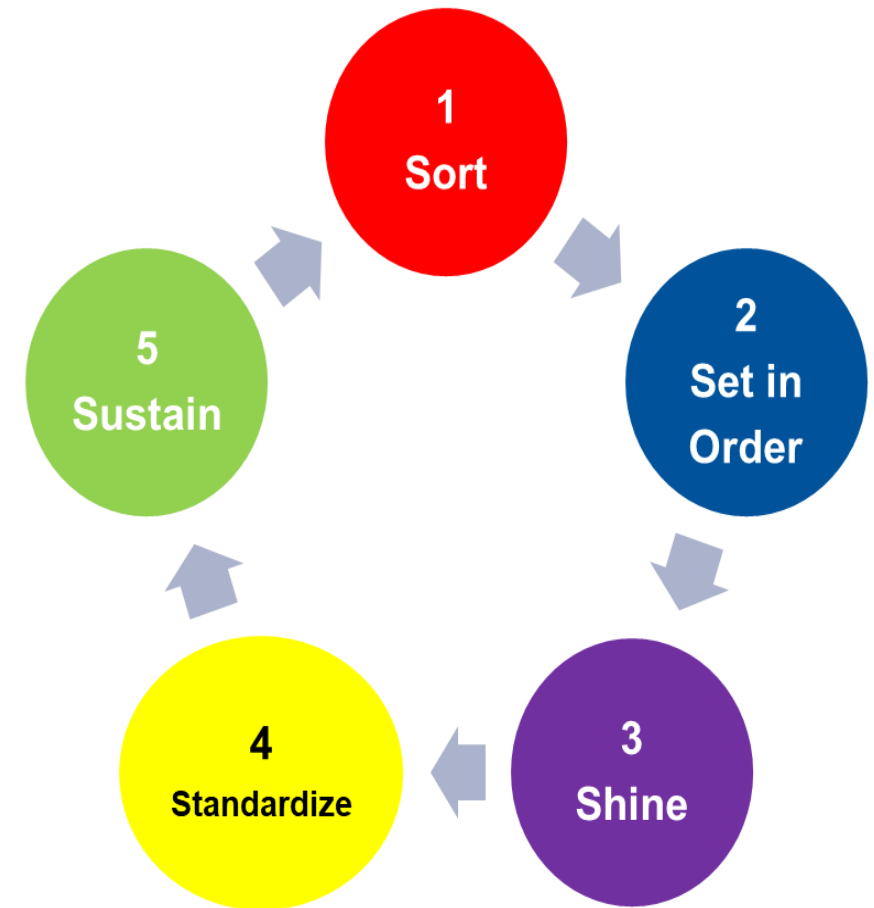
Voluntary Assignment – for practice and learning

- Complete the PDSA Action Plan for your project

- Schedule a date to present your project

- Attend next week's coaching call

PDSA – (Project Name) – Action Plan

PDSA Step	Topic	Owner	Steps – Action Items	Evaluation of Effectiveness
Plan	Communication Plan initiated		1. Communication template 2. Develop message to pass to stakeholders about project 3. Disseminate information to stakeholders	
	Form the Team		1. Invite key stakeholders to join the team 2. schedule team meeting 3. prepare for the meeting	
	Review the current state with a Root Cause Analysis Tool		1. Designate team member(s) to review charts for the last 5 events or last 5 patients at risk with a process discovery tool/roadmap or use other RCA tool	
	List the areas for improvement		1. Team reviews the opportunities from the process discovery tool	
	Prioritize the problem to solve using the priority matrix		1. Use the priority matrix or other method to select the priority problem to solve	
	Brainstorm Solutions for the priority problem		1. Use one of the brainstorming methods to solve the priority problem.	
	Prioritize the solution to implement using the prioritization matrix		1. Use the priority matrix or other method to select the priority solution to solve the problem	
	Review and problem solve for any barriers		1. List and solve for any potential barriers or resistance to implementing the priority problem solution.	
	Develop Action Plan for		1. Use the Action plan template to list steps for implementing the priority solution	

PDSA – (Project Name) – Action Plan

PDSA Step	Topic	Owner	Steps – Action Items	Evaluation of Effectiveness
Do	implementing Solution			
	Develop Data Collection Plan		1. Team decides on data to collect. 2. Frequency of data collection 3. Instructions for collecting data for the auditors 4. Method to display project data and location	
	Conduct Training		1. Train all stakeholders on the new process or change	
	Implement Solution		1. Implement the priority solution	
Study	Collect Surveys or Data		1. Collect the data and assimilate into a useable format	
	Review Data for opportunities for improvement		1. Review data for any opportunities to improve the priority solution	
Act	Adjust implemented solution based on feedback		1. Improve the current solution based on feedback	
	Implement improved solution		1. Implement the improved solution	
	Celebrate wins with each accomplished goal		1. Time to party 😊	

Questions

References

- AHRQ Audit tool for CVL: https://www.ahrq.gov/hai/clabsi-tools/appendix-6.html

- Minnesota Hospital Association CLABSI Roadmap. (2021)

- George, M. L., Rowlands, D., Price, M. & Maxey, J. (2005). The Lean Six Sigma Pocket Toolbook. McGraw Hill, NY.

- IHI QI Essentials Toolkit. (2021). Retrieved from

  http://www.ihi.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx#:~:text=IHI%E2%80%99s%20QI%20Essentials%20Toolkit%20includes%20the%20tools%20and,and%20a%20blank%20template.%20The%20QI%20tools%20include%3A