
QUALITY IMPROVEMENT FOR BEGINNERS

KARINA WHELAN, MD
AMY SHAHEEN, MD, MSC



REVISITING THE OVERVIEW FROM THE LAST SESSION:

Weeks 1 - 2

- Complete IHI QI Modules 101-105
- Write an **AIM statement**
- Make a **driver diagram**

Weeks 3-6

- Plan and implement PDSA #1
- Review PDSA progress, plan/start PDSA #2
- Start your A3 Document (helps track progress)

Weeks 7-10

- Update A3
- On track for 3 or more PDSA cycles
- Think about follow-up projects

Weeks 11-14

- Complete A3
- Wrap up PDSAs and think about sustainability
- Make a poster

REVISITING THE OVERVIEW FROM THE LAST SESSION:

Weeks 1 - 2

- Complete IHI QI Modules 101-105
- Write an AIM statement
- Make a driver diagram

Weeks 3-6

- **Plan and implement PDSA #1**
- **Review PDSA progress, plan/start PDSA #2**
- **Start your A3 Document (helps track progress)**

Weeks 7-10

- Update A3
- On track for 3 or more PDSA cycles
- Think about follow-up projects

Weeks 11-14

- Complete A3
- Wrap up PDSAs and think about sustainability
- Make a poster

AIM STATEMENT: Choosing a SMART Aim

S M A R T

SPECIFIC



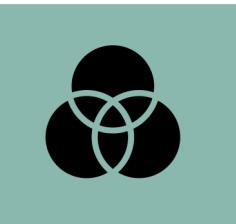
MEASURABLE



ACHIEVABLE



RELEVANT

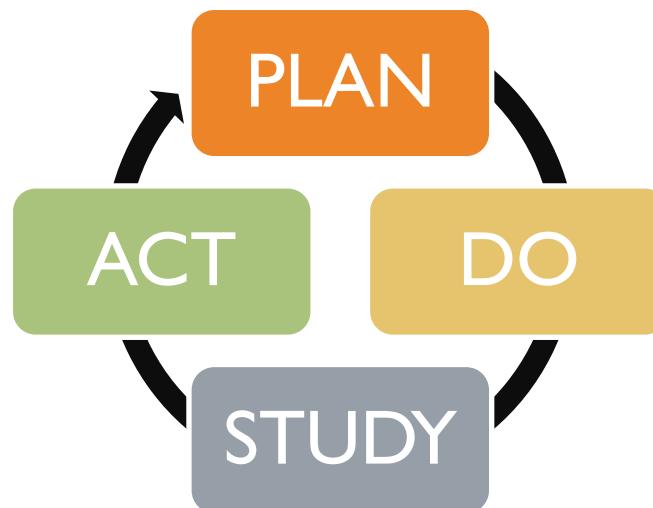
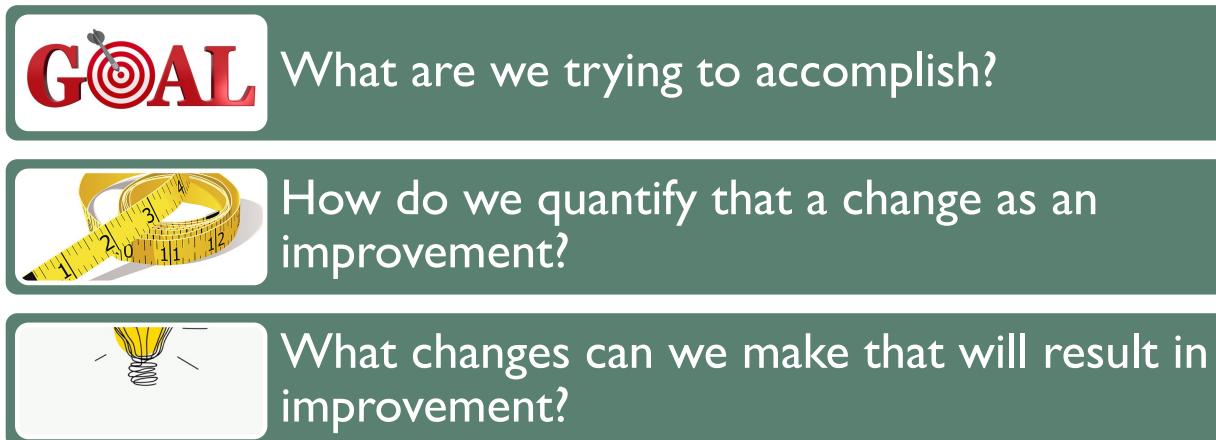


TIMELY



MODEL FOR IMPROVEMENT:

Going from Aim to PDSA

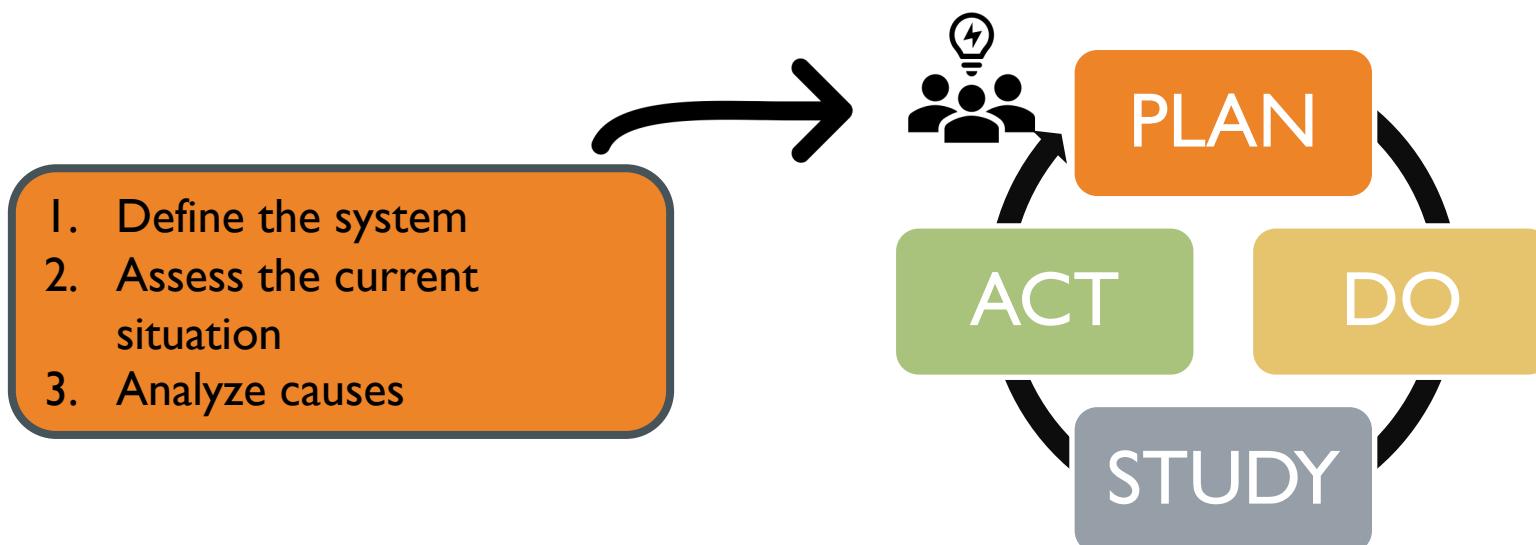


MODEL FOR IMPROVEMENT: How to plan a PDSA

 **GOAL** What are we trying to accomplish?

 How do we quantify that a change as an improvement?

 What changes can we make that will result in improvement?



ORGANIZING YOUR DATA: Brief review of a Driver Diagram

SMART Aim (Specific, Measurable, Achievable, Relevant, Timely)	KEY Drivers (BIG categories, too broad to target)	Secondary Drivers (Specific, well-defined targets)	TARGETS (Ideas for change – Each could yield a SINGLE Project or PDSA)
Increase Pneumococcal vaccination rate by 5% for patients of Dr X and Dr Z who are >/=65 years over a 6 week period	PATIENT	Received elsewhere	Obtain records
		Not interested	Educational hand-out/poster
		No recent appointment	Schedule for RN visit
	PROVIDER	Forgot to order	“Reminder” in visit notes
		Other priorities	Delegate to RN/MA
	NURSE/MA	Did not discuss	Incentivize ?competition
		Forgot to give	Flagging/Alert system
		Did not document prior (patient brought record)	Improve RN/MA documentation
	CLINIC	Room availability (during visit)	Give during triage process/ vitals
		Staffing for RN visit	Dedicated staffing 1 day a week

MODEL FOR IMPROVEMENT: How to plan a PDSA



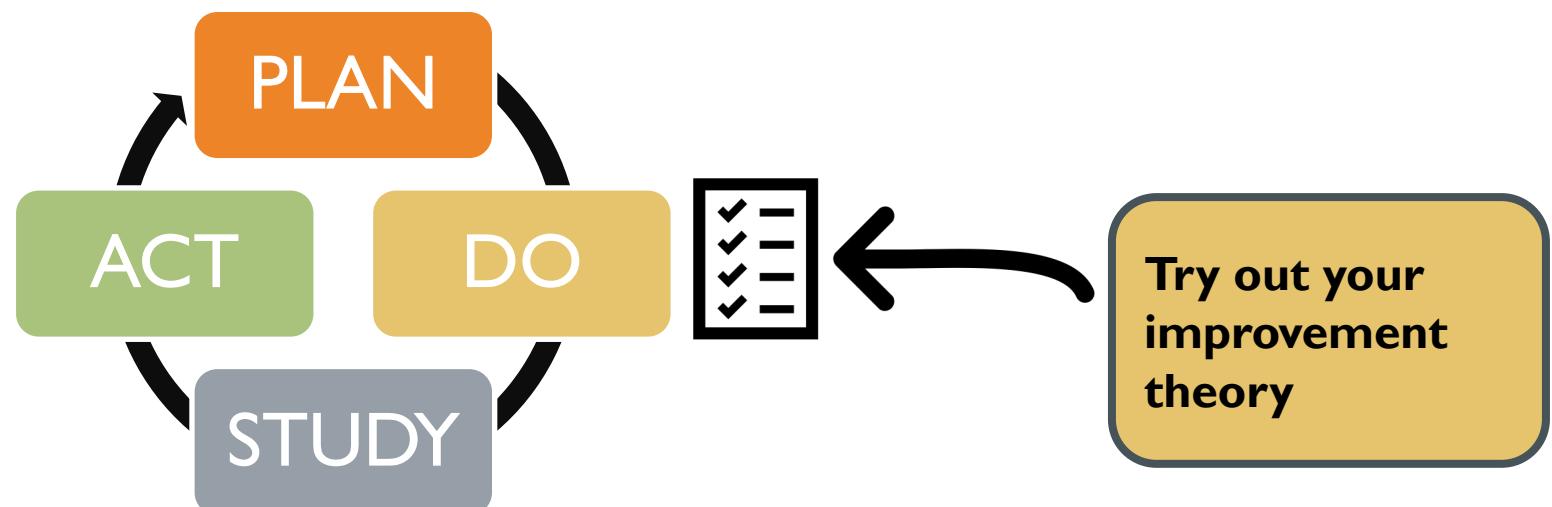
What are we trying to accomplish?



How do we quantify that a change as an improvement?



What changes can we make that will result in improvement?



MODEL FOR IMPROVEMENT: How to plan a PDSA



What are we trying to accomplish?



How do we quantify that a change as an improvement?



What changes can we make that will result in improvement?



Study the results

MODEL FOR IMPROVEMENT: How to plan a PDSA



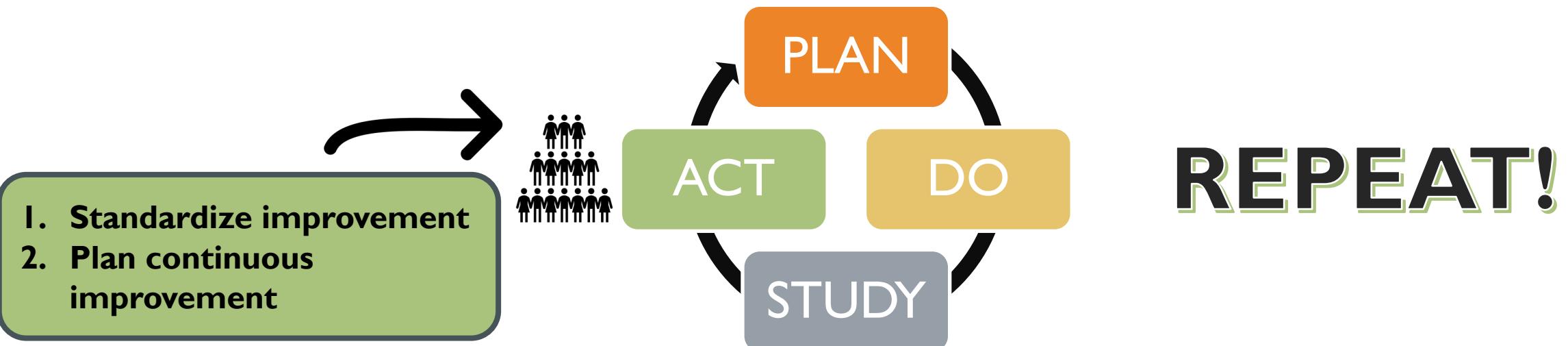
What are we trying to accomplish?



How do we quantify that a change as an improvement?



What changes can we make that will result in improvement?



IF YOU HIT A ROADBLOCK... Return to the Driver Diagram

SMART Aim (Specific, Measurable, Achievable, Relevant, Timely)	KEY Drivers (BIG categories, too broad to target)	Secondary Drivers (Specific, well-defined targets)	TARGETS (Ideas for change – Each could yield a SINGLE Project or PDSA)
Increase Pneumococcal vaccination rate by 5% for patients of Dr X and Dr Z who are >/=65 years over a 6 week period	PATIENT	Received elsewhere	Obtain records
		Not interested	Educational hand-out/poster
		No recent appointment	Schedule for RN visit
	PROVIDER	Forgot to order	“Reminder” in visit notes
		Other priorities	Delegate to RN/MA
	NURSE/MA	Did not discuss	Incentivize ?competition
		Forgot to give	Flagging/Alert system
		Did not document prior (patient brought record)	Improve RN/MA documentation
	CLINIC	Room availability (during visit)	Give during triage process/ vitals
		Staffing for RN visit	Dedicated staffing 1 day a week

LETS PRACTICE
THIS USING A
REAL EXAMPLE

PDSA WORKSHEET

- You should already have your AIM Statement Prepared
- Your completed Driver Diagram will help you pick an intervention for your PDSA
- This worksheet will help you document what you are learning
- Get feedback from your peers and **all practice members affected** then rework it repeat
- Start with small changes

PDSA worksheet (Plan-Do-Study-Act-Repeat!)

BACKGROUND: Why did you choose this project? Why is this topic relevant?

PLAN:

SMART Aim (Specific, measurable, achievable, relevant, time based): What do you hope to learn? What are you trying to improve (aim), by how much (goal) and by when (timeframe)?

Predictions/Hypotheses (What do you think will happen?)

Session A

Plan for change/test/intervention

Who (target population):
What (change/test):
When (dates of test):
Where (location):
How (description of plan):

Measures (What will you measure to meet your aims? How will know a change is an improvement?)

Plan for data collection

Who (will collect):
What (measures):
When (time period):
Where (location):
How (method):

DO: Carry out the change/test. Collect data.

Note when completed, observations, problems encountered, and special circumstances. Include names and details.

STUDY: Summarize and Analyze data (quantitative and qualitative). Include charts, graphs

ACT: Document/summarize what was learned. Did you meet your aims and goals? Did you answer the questions you wanted to address? List major conclusions from this cycle.

Define next steps Are you confident that you should expand size/scope of test or implement? What changes are needed for the next cycle?

LOOK AT YOUR AIM
STATEMENT AND DRIVER
DIAGRAM AND PICK ONE
SPECIFIC TARGET FOR
IMPROVEMENT TO ACHIEVE
YOUR QI GOAL

IF YOU DON'T HAVE ONE:

I want to
implement FIT
testing in the
ACC clinic

I will send out 10
FIT tests to
patients in the
next one week

IDENTIFY YOUR LEADERS AND STAKEHOLDERS:

Leaders: Practice manager, care manager, or a physician leader.

- These individuals either get stuff done or are able to get others to do things

Stakeholders: **ANYONE** affected by your cycle of change, including:

- **Co-workers:** front desk staff, nurses, phlebotomy, medical students, physicians and everyone the project could touch
 - Explain why you think your intervention is important, do it **face to face**
 - Ask whomever you are talking to: ***Is there anything else I should talk to about this?***
- **Clinic/Leadership**
 - Discuss why this project is relevant to the clinic, are we
 - Obtain insight on existing practices and prior projects
- **Patients**
 - One of the greatest assets a practice can have – Ultimately your changes affect them, **patient investment and input is KEY**

OTHER STAKEHOLDERS: LIKELY NOT INVOLVED AT THIS STAGE

- **Institution:** Usually better to have some preliminary data before reaching this high.
- **Electronic health record or IT:** Best to engage them after you have proof of concept and have tried out processes independent of the health record first.



WHAT ARE
YOU GOING
TO IMPROVE?

TYPES OF CHANGE IN HEALTHCARE AND QUALITY/EFFORT YIELD

- **Hierarchy of change-**
 - Some are effective/expensive
 - Some are cheap/effective
- Avoid expensive (or tons of work) with marginal benefit
- Always start small... If it works, THEN expand

TYPES OF CHANGE



PROVIDER LEVEL

Audit and feedback
Education
Financial incentives.



PATIENT LEVEL

Education
Reminders and promotion
of self management
Financial incentives



CLINIC LEVEL

Chronic disease
management
Increased staffing,
Skill mix
Case management



ORGANIZATIONAL/ SYSTEM LEVEL

Reimbursement
Accreditation
EMR changes

TYPES OF CHANGE



PROVIDER LEVEL

Audit and feedback
Education
Financial incentives.



PATIENT LEVEL

Education
Reminders and promotion of self management
Financial incentives



CLINIC LEVEL

Chronic disease management
Increased staffing, Skill mix
Case management



ORGANIZATIONAL/ SYSTEM LEVEL

Reimbursement
Accreditation
EMR changes

This list is EXHAUSTIVE and OVERWHELMING
– A process map can help you identify who is doing what and highlight bottlenecks and where we can do things differently

PLAN YOUR
INTERVENTION...
WHAT FACTORS
DO YOU NEED TO
CONSIDER?

Who

What

Where

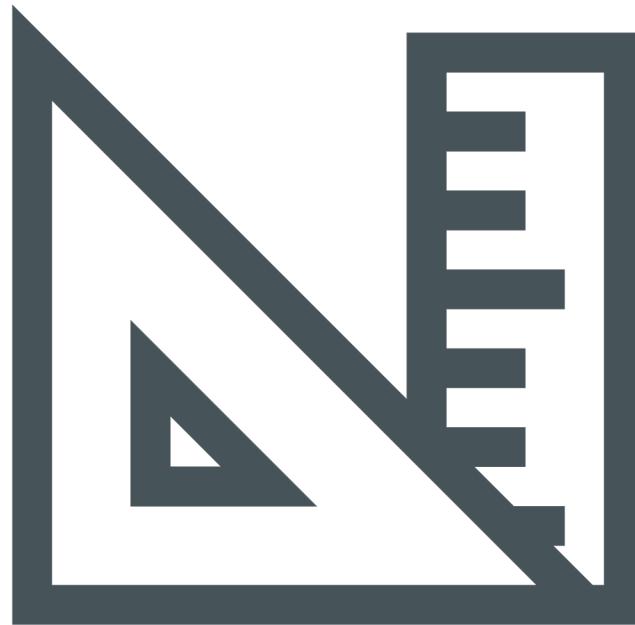
When

How

FACTORS TO CONSIDER FOR FIT TESTING:

- Availability of FIT kits
 - How many; Where do we get them; How much do they cost; Where are they stored; How long does it take for them to be received
- Electronic Health Record
 - Order Availability in EPIC; Preference List; Billing; Update on Health maintenance
- ACC Staff Confidence
 - Training for nurses/physicians; Physician use; Decision Aids
- Patient Factors
 - Eligible population; Issues with mailing/postage; Insurance/cost; Picture in AVS to increase return; Experience survey/Follow up call
- Logistics of FIT kits
 - Family Medicine to discuss issues they have had
- Follow up results
 - What to do with positive results; Tracking progress

PLAN YOUR DATA COLLECTION: HOW WILL YOU QUANTIFY IMPROVEMENT



AGAIN WITH
OUTCOMES,
THINK ABOUT:

Who

What

Where

When

How

PROCESS MEASURES

These are the building blocks to the ultimate outcome measure you are trying to improve

Ex: You propose mailing patients FIT cards to achieve your ultimate goal of improving colon cancer screening rates

First you measure the number of patients due for screening with FIT kits mailed

Then you make reminder phone calls to patients to follow-up

Quantify:
• How many calls made
• How calls answered
• How many kits received

PROCESS MEASURE PITFALLS

You get excited about the data you have collected and forget the ultimate outcome you were trying to change

You tried to change too many things/people at once and can't keep track of what actually helped your outcome

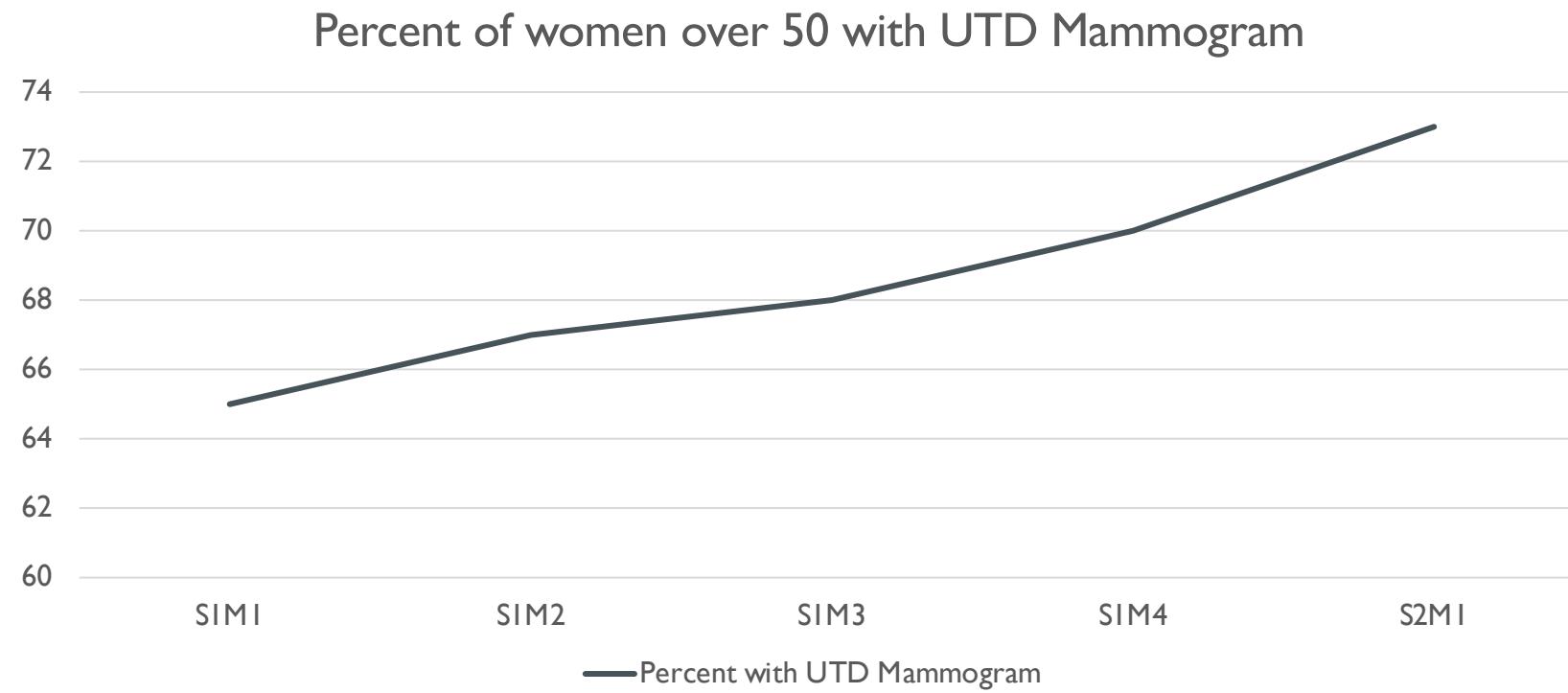
OUTCOMES MEASURES



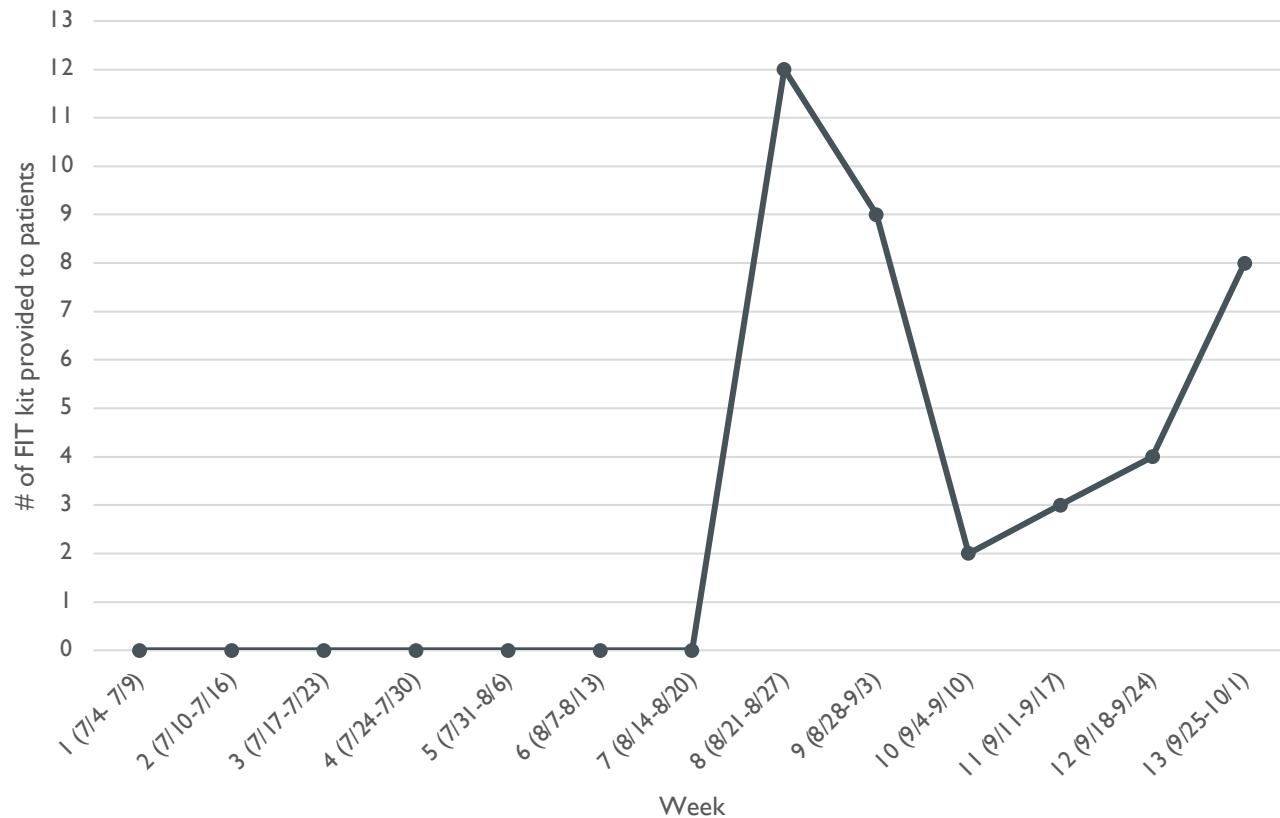
IN PRIMARY CARE:

- These are the ultimate desired patient outcome, vs what you need to do to get here
 - Ex: number of mammograms scheduled vs number of mammograms completed and UTD
- Outcomes in primary care are usually things like screening rates, percent of panel vaccinated, etc.
- Try looking at dashboards, practice run charts, etc to track these
- Find something that might help efficiency or profitability

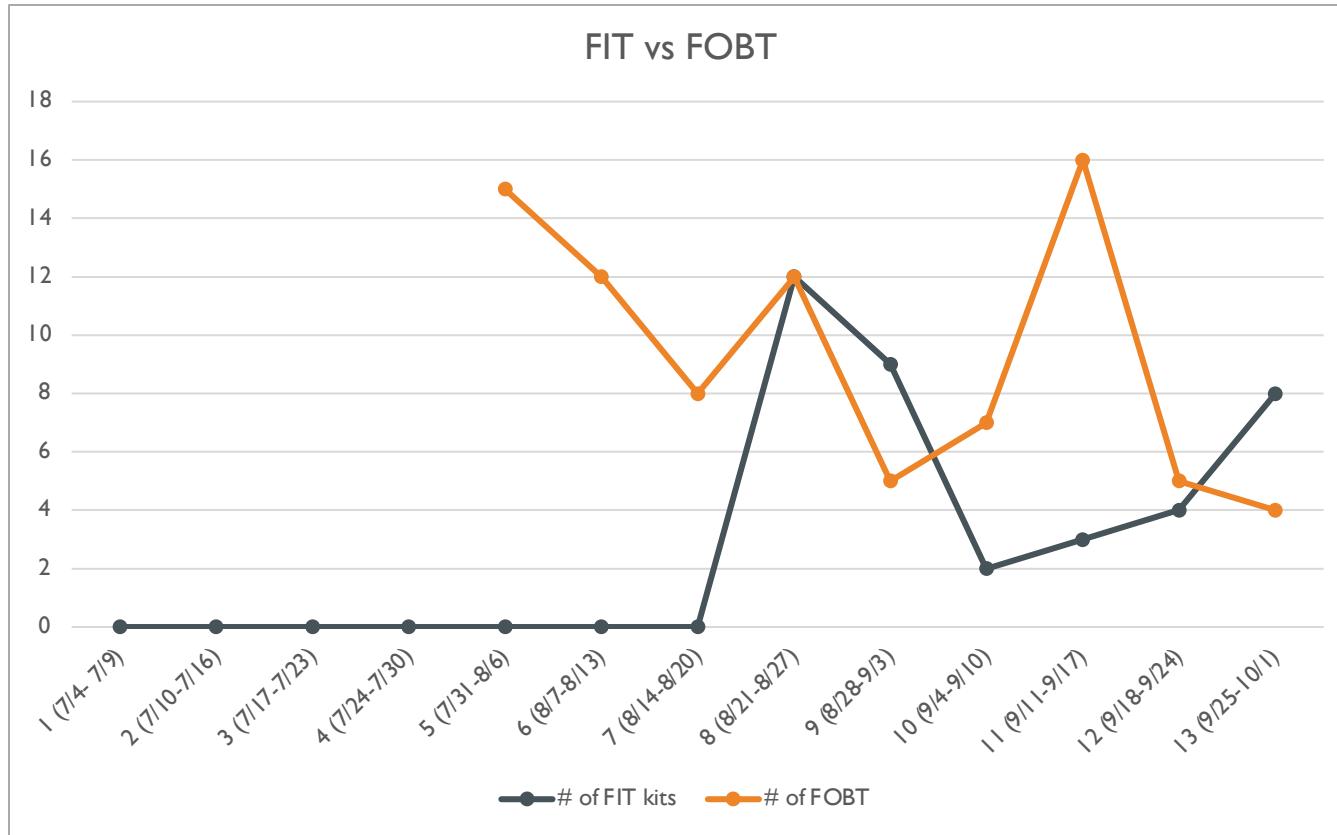
RUN CHARTS: HOW WE TRACK IMPROVEMENT



SOMETIMES IT TAKES A FEW INTERVENTIONS TO SUSTAIN CHANGE



PERHAPS SOMETHING ELSE WAS GOING ON INSTEAD?



WISDOM ON YOUR PDSA CYCLES

- The more you know about your system, the more likely you are to pick a change that will be successful.
- So know the players (stakeholders)
- Keep changes very small and build momentum
- Use process measures to make sure that changes can be done and are adopted (i.e. how many of something happened TODAY) Easy and you don't need data pulls.
- The needle moves slowly. You are nudging it.

QUICK INTRO TO THE A3 DOCUMENT – THERE IS A DETAILED GUIDE ON SAKAI

Box 1. Reason for Action-Why are you doing this? What is the problem and why is it important to make improvement? Who will this effect? Why does the clinic want to do this project?				Box 4. Gaps and Reasons why gaps to high quality care exist				Box 7. Weekly Completion Plan (who is doing what and by when)								
				#	Gaps	Root Cause-why is this happening?	#	Action	Owner	Due	Status					
				1			1									
				2			2									
				3			3									
				4			4									
				5			5									
				6			6									
				7			7									
				8			8									
				9			9									
				10			10									
							11									
							12									
							13									
							14									
							15									
Box 2. Current State & Box 3. Future State - What do you want it to look like? How will you measure?				Box 5. Solution Approach (SA) Solutions should align with the gaps				Box 8. Confirmed State (outcome for each metric at these points in time)								
Outcome Metric		s (i.e %, min)	Current	Solution (S) (if we)		Outcome (then this will happen)	Gap No.	#	Outcome Measures	Unit	Current	Target	4 wk	8 wk	12 wk	15 wk
				1				1		0	0	0				
				2				2		0	0	0				
				3				3		0	0	0				
				4				4		0	0	0				
				5				5		0	0	0				
				6				6		0	0	0				
				7				7		0	0	0				
				8				8		0	0	0				
Current State		Target State		Box 6. What you try or experiment (should align with the solutions-hence S #)				Box 9. Insights								
				#	Experiment	Anticipated Effect	Actual Effect	Follow-up Action	S #	What went well or helped?						
				1												
				2												
				3												
				4												
				5												
				6												
				7												
				8												
				9												
				10												
								What didn't go well or can be improved?								
								What will we do differently now?								
								How will we share lessons learned with others?								

EXAMPLES OF PRIOR STUDENT PROJECTS: What they delivered...



Improve Cervical Cancer Screening rates by 10% in two months (78% to 85.8%)

- > Two practices
- > Pulled reports, for patients for pap smear
- > Scheduled paps, updated EMR for those s/p benign TAH, changed intervals if HPV testing done



Improve statin use in diabetic patients by 10% in 8 weeks

- > Called patients not on statins, suggested starting one and if they agreed, had provider call in statin
- > Developed educational material for patients



Decrease time to routine vaccinations during pediatric well child visits by 5 minutes over one week

- > Used process map and pre-visit planning to determine who was due for what
- > Had vaccines ready from start of visit
- > Obtained time studies from parent and patient perspective

FIT TESTING
PROJECT VIDEO

LET'S SEE A REAL
QI PROJECT IN
ACTION...