

Where Knowledge Informs Change "

An Introduction to Using Clinical Microsystems to Improve Healthcare

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About us...



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Today's Agenda

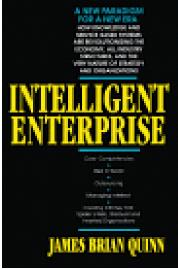
Clinical Microsystem overview
 Clinical Microsystems – what and why
 Clinical Microsystems – application, and examples/case study
 Additional resources

Clinical Microsystem - History

James Brian Quinn

- The Intelligent Enterprise, 1992
- Intellect as a core resource
- Focus on the front line

Paul BataldenO Application to health care



What is a Clinical Microsystem?

...the combination of a small group of people (including the patient) who work together on a regular basis to provide care to a discrete subpopulation of patients.



It has clinical and business aims, linked processes and a shared information environment, and generates performance outcomes. There is no escaping it – Microsystems Exist!



High Functioning Family "Micro-system"





Or...not so high functioning

High Functioning Clinical Microsystem





Or...not so high functioning

Every System Is Perfectly Designed To Get The Results Its Gets – Paul Batalden

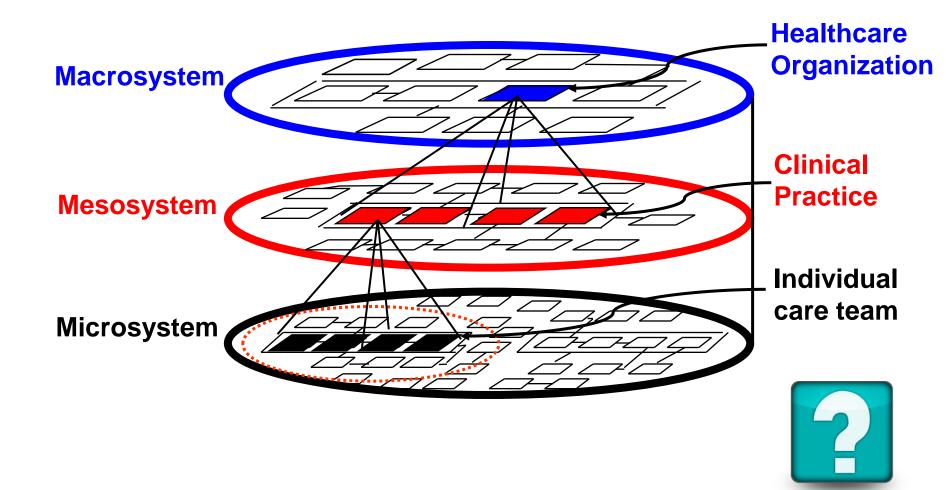


10 Characteristics of High Performing Clinical Microsystems

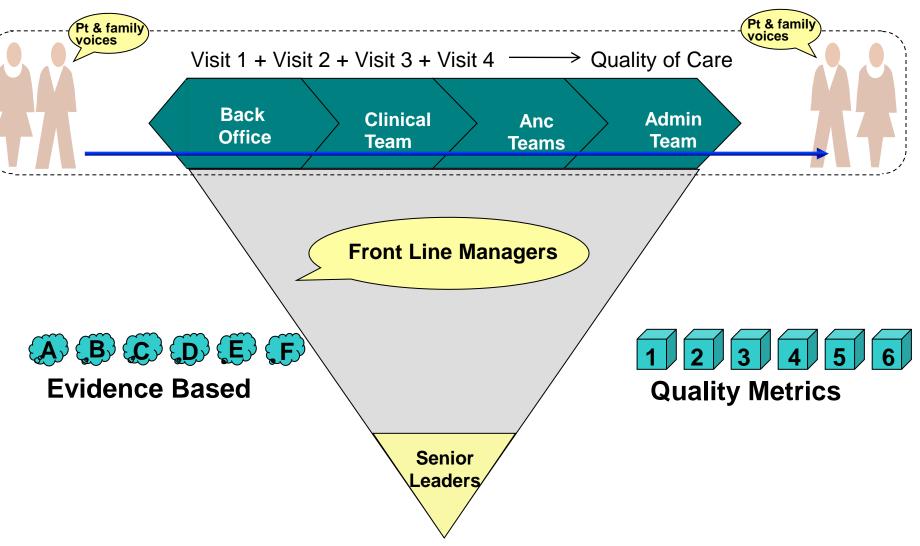
- Leadership
- Organizational Support
- Staff Focus
- Education and Training
- Interdependence
- Patient Focus
- Community and Market Focus
- Performance Results
- Process Improvement
- Information and Information Technology



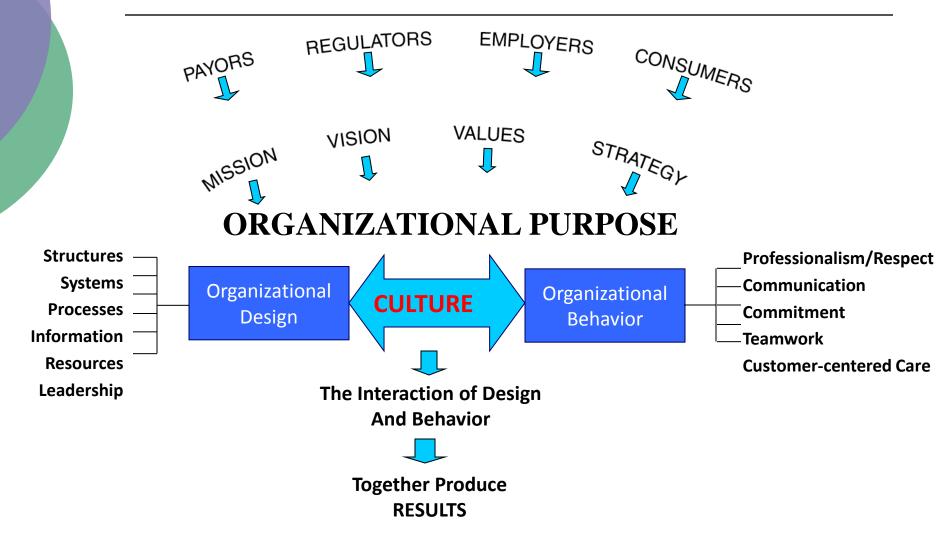
Systems Within Systems



The Big Picture



How Organizations Succeed



Fitzpatrick Consulting

Using Clinical Microsystems as an Improvement Methodology

The Foundation of the Method

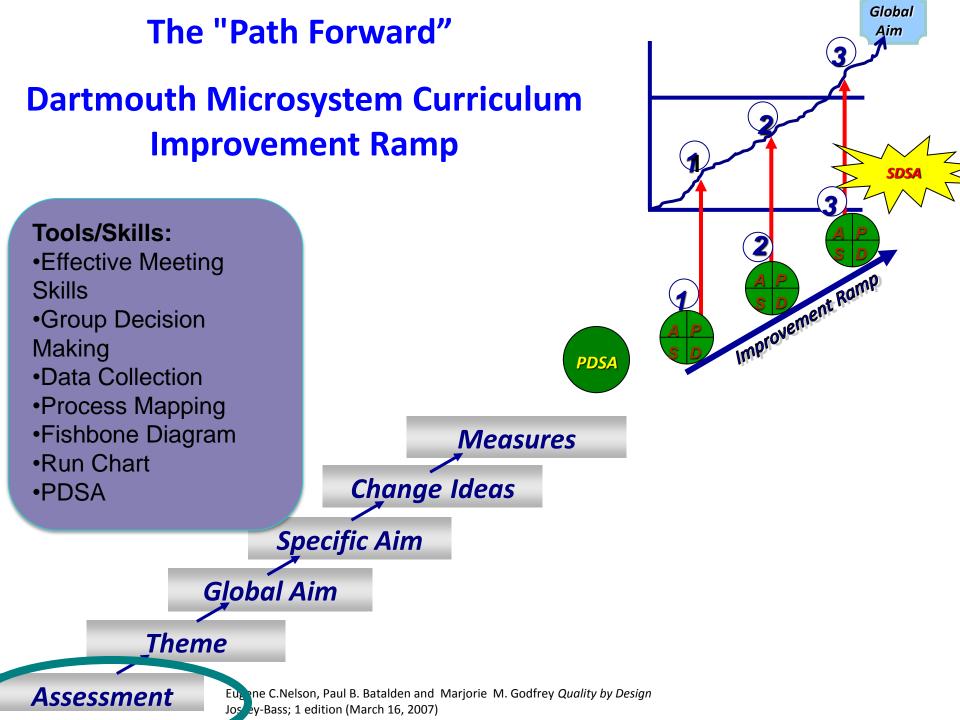
Clinical Microsystems Improvement Method



Systems Perspective

Measurement

Empowerment



Assessment

The 5 P's (Green/Workbooks)

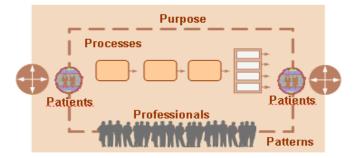
- Purpose
- Patients
- Professionals
- Processes
- Patterns

I

Clinical Microsystems

"The Place Where Patients, Families and Clinical Teams Meet"

Assessing, Diagnosing and Treating Your Outpatient Primary Care Practice



www.clinicalmicrosystem.org



"Why are we here?"





The individuals and their families to whom care and services are provided.







Patients

Staying healthy can be difficult when you have a chronic condition. We would like to learn about the type of help you get from your health care team regarding your condition. This might include your regular doctor, the nurse, or the physician's assistant who treats your liness.

Assessment of Care for Chronic Conditions © Copyright 2004 We Collinationator for Health cale Innovation, Group Health Cooperative Used with permission, Justith Schaefer, MPH. Version 04303

Over the past 6 months, when	I received	care for my	chronic co	onditions, I	was:
	None of the Time	A Little of the Time	Some of the Time	Most of the Time	Always
 Asked for my ideas when we made a treatment plan. 	D 1	0:	Ds	De	0:
Given choices about treatment to think about.		De	Ds	Dk	0:
 Asked to talk about any problems with my medicines or their effects. 	D,	De	Ds	•	•
 Given a written list of things I should do to improve my health. 			Ds	Dk	0:
 Satisfied that my care was well organized. 	D 1		Ds	De	0;
 Shown how what I did to take care of myself influenced my condition. 		De	Ds	•	•
Asked to talk about my goals in caring for my condition.			Ds	Dk	0;
 Helped to set specific goals to improve my eating or exercise. 	D1		Da	De	•
 Given a copy of my treatment plan. 	D 1		Da	De	•
 Encouraged to go to a specific group or class to help me cope with my chronic condition. 	D,	Do	Ds	D4	•
 Asked questions, either directly or on a survey, about my health habits. 		De	Ds		•
 Sure that my doctor or nurse thought about my values, beliefs, and traditions when they recommended treatments to me. 	D.	Ds	•	•	0;
 Helped to make a treatment plan that I could carry out in my daily life. 	D,		Da	D4	•
14. Helped to plan ahead so I could take care of my condition even in hard times. Conta	Ð	De	Ds	D.	•

Patient Assessment – Chronic Care from the Greenbook

© 2001, Trusses of Dermouth College, Godfley, Nelson, Gastideo, Institue for Healthcare Improvement Adapted from the original version, Dermouth-Hitchcock, Version 2, February 2005

PROFESSIONALS

Every member of the microsystem who provides care and/or services to the patient.



Professionals

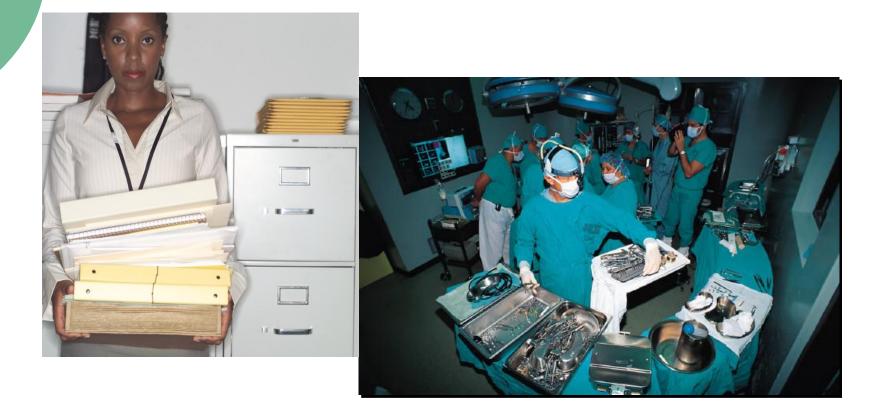
- Creating a joyful work environment starts with a basic understanding of staff perceptions of the practice. All staff members should complete this survey. Use a taily sheet to summarize results.
- Ask all practice staff to complete the Staff Survey. Often you can distribute this survey to any professional who
 spends time in your practice. Set a deadline of one week and designate a place for the survey to be dropped
 off. You may have an organization-wide survey in place that you can use to replace this survey, but be sure t
 is CURRENT data, not months oid, and that you are able to capture the data from all professionals specific to
 the Primary Care Practice workplace.

	Primary Care Staff :	Satisfaction Surv	/ey
1. I am treated with re-	spect every day by everyo	ne that works in this	practice.
Strongly Agree	Agree	Disagree	Strongly Disagree
2. I am given everythin meaningful to my lit	g i need—tools, equipmer e.	nt, and encourageme	nt—to make my work
Strongly Agree	Agree	🗆 Disagree	Strongly Disagree
3. When I do good wor	k, someone in this practic	e notices that I did I	٤
Strongly Agree	🗆 Agree	🗆 Disagree	Strongly Disagree
4. How stressful would	you say it is to work in t	his practice?	
Very stressful	Somewhat stressful	🗆 A little stressful	Not stressful
6. How easy is it to as	k anyone a question about	t the way we care for	patients?
Very easy	🗆 Easy	Difficult	Very difficult
8. How would you rate	other people's morale an	d their attitudes about	ut working here?
Excellent	Very Good	Good G	Fair D Poor
7. This practice is a be	tter place to work than it	was 12 months ago.	
Strongly Agree	🗆 Agree	🗆 Disagree	Strongly Disagree
8. I would recommend	this practice as a great p	lace to work.	
Strongly Agree	🗆 Agree	🗆 Disagree	Strongly Disagree
9. What would make th	is practice better for patie	ents?	
10. What would make	this practice better for the	se who work here?	
2005. Trustees of Darmouth College	. Neison		

© 2001, Trusses of Dermouth College, Godfley, Nelson, Gaskies, Institus for Healthcare Improvement Josped from the original version, Dermouth-Hitchcock, Version 2, February 2005 Professional Assessment – Satisfaction Survey from the Greenbook



Systems in place to care for patients.



Processes

- Beginning to have all staff understand the processes of care and services in the practice is a key to developing
 a common understanding and focus for improvement. Stat with the high level process of a patient entering
 your practice by using the Patient Cycle Time tool. You can assign someone to track all visits for a week toget
 a sample, or the cycle time tool can be initiated for all visits in a one week period with many people contributing
 to the collection and completion of this worksheet.
- Typically, other processes will be uncovered to measure and you can create time tracking worksheets like this
 template to measure other cycle times.

	Primary Care	Practice Patie	nt Cycle Time	
	D	ay:	Date:	
Soheduled Appointmen	t Time	Provide	r you are Seeing Today	
Time				
	1. Time you oh	eoked In.		
	2. Time you sa	t in the waiting roo	om.	
	8. Time staff o	ame to get you.		
	4. Time staff m	ember left you in (exam room.	
	6. Time provid	er came in room.		
	8. Time provid	er left the room.		
	7. Time you lef	t the exam room.		
	8. Time you an	rived at oheok out.		
	9. Time you lef	t praotice.		
Comments:				

Process Assessment – Cycle time data from the Greenbook



What we "just do"



Patterns

- Patterns can be bund through tracking the volumes and types of telephone calls. Review the categories on
 the telephone tradking list to ensure they reflect the general categories of calls your practice receives. Ask
 clerical staff to track the telephone calls over the course of a week to find the patterns of each type of call and
 the volume peaks and valleys.
- Put a taily mak each time one of the phone calls is for one of the listed categories. Total the calls for each day
 and then total the calls in each category for the week. Note the changes involume by the day of the week and
 am/pm.

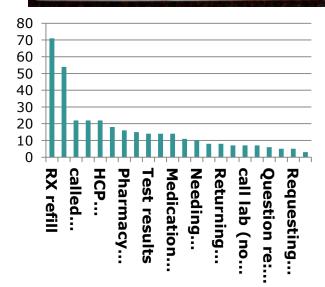
Primary Care Practice Telephone Tracking Log															
Week of	Mor	nday	Tue	Tuesday Wednewdwy		Thur	Thursday Fri		Friday Sa		Saturday		nday	Week Total	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Appointment for Today															
Total															
Appointment for Tomorrow															
Total															
Appointment for Future															
Total															
Test Results															
Total															
Nurse Care															
Total															
Presoription Refili															
Total															
Referral Information															
Total															
Need Information															
Total															
Message for Provider															
Total															
Talk with Provider															
Total															
DAY TOTAL															

Pattern Assessment – Phone call data from the Greenbook

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The Assessment Phase!

THE SHOW IN THE								0							
Patterns															
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am/pm.					and in			Con an	a crain	Person in a	Courte	s cy us	e cary c		
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for Tomorrow															
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Provider														-	30
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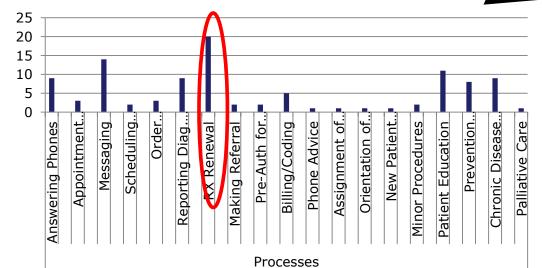


Processes

- Review, adapt and distribute the Core and Supporting Processes evaluation form to ALL practice staff. Be sure the list is accurate for your practice and then ask staff to evaluate the CURRENT state of these processes. Rate each process by putting ataily mark under the heading which most obsery maches your understanding of the process. Also mark if the process is a source of patient compliants. Taily the results to give the Lead Terma in Idea as to where to begin to focus improvement from the staff
- perspective. Steps for improvement: Explore improvements for each process based on the outcomes of this assessment tool. Each of the processes below should be <u>flowcharted</u> in its current state. Once you have flowcharted the current state of your processes and determined your Change Ideas, use the PDSA Cycle Worksheet to run tests of change and to measure.

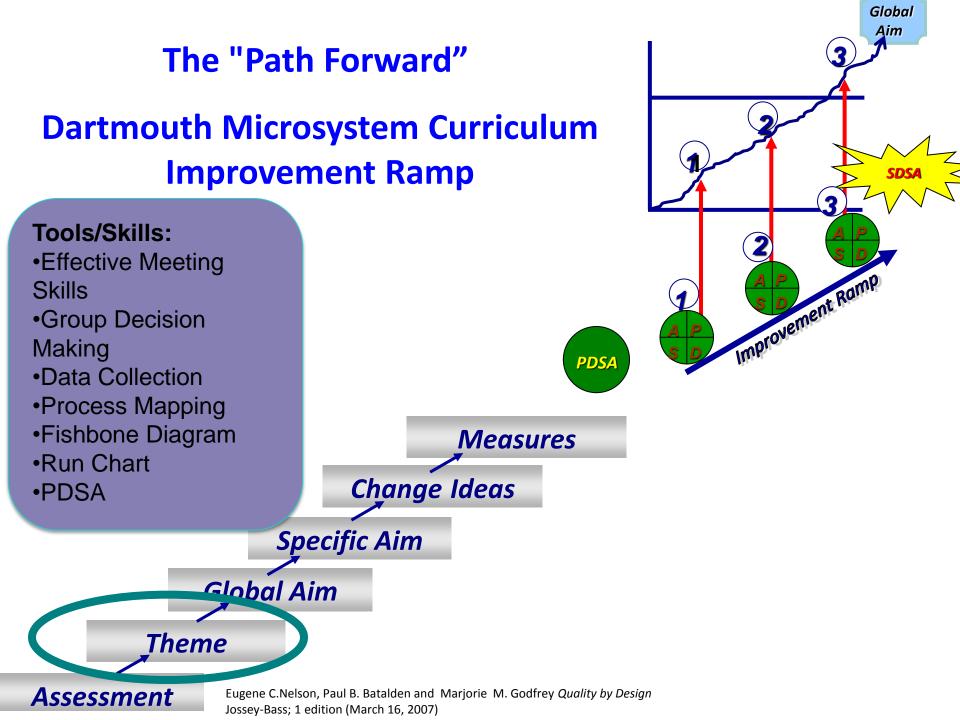
Specialty Care Practice Know Your Processes Core and Supporting Processes											
Processes	Works Well	Small Problem	Real Problem	Totally Broken	Cannot Rate	We're Working On It	Source of Patient Complain				
Answering Phones											
Appointment System											
Messaging											
Scheduling Procedures											
Scheduling OR Procedures											
OR Procedures											
Minor Procedures											
Diagnostics											
Reporting Diagnostic Test Results											
Prescription Renewal											
Receiving Referrals											
Pre-authorization for Services											
Billing/Coding											
Phone Advice											
Assignment of Patients to Your Specialists Orientation of Patients to											
Your Practice New Patient Work-ups											





5P Wall Chart





Theme Examples

Efficiency

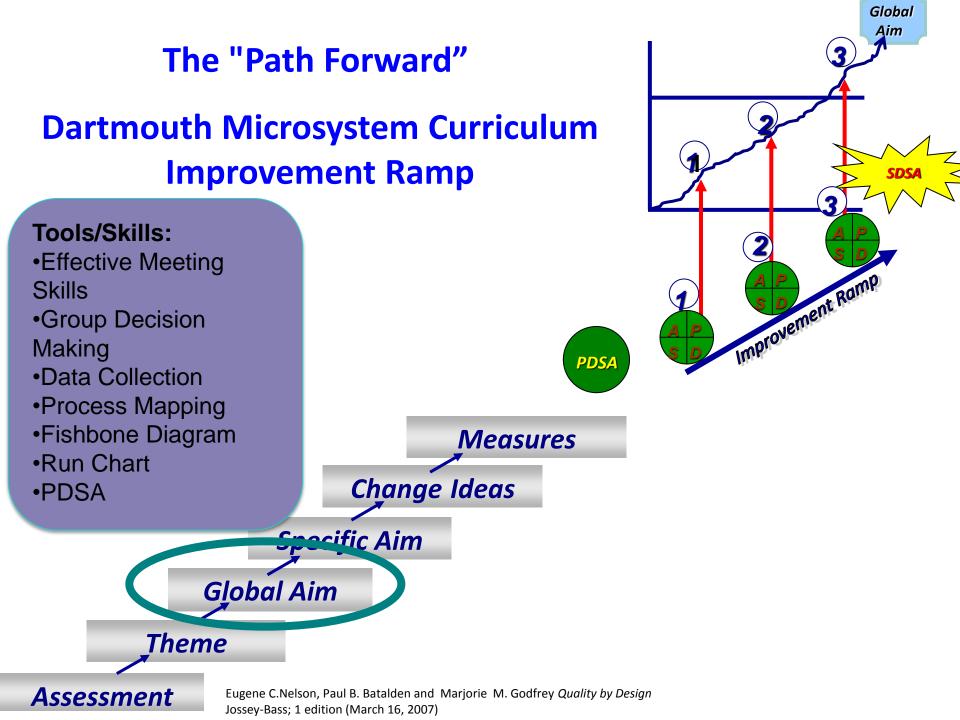
- Access
- Safety
- Patient Satisfaction



Theme Example – RAMCCC

Efficiency

- Prescription refill turn around
- Reducing hold times on the phone
- Reducing check-in procedure



Sample Global Aim

We aim to _____.

The process begins with _____ and ends with

By working on this process we expect_____.

It is important to work on this now because

Sample Global Aim

We aim to improve patient access to provider in the ABC Practice.

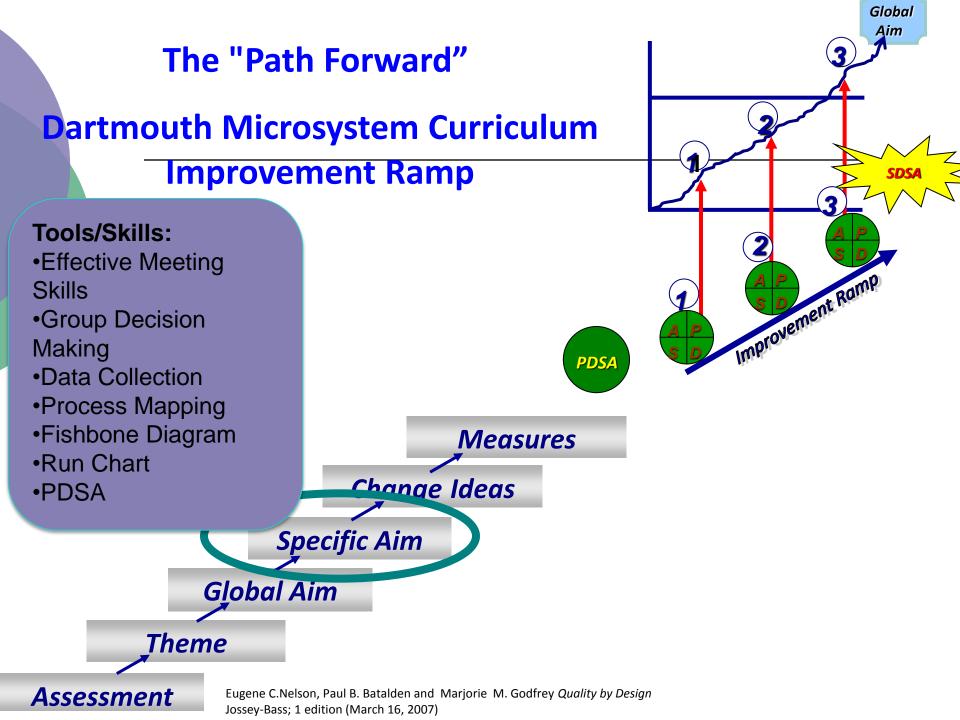
The process begins with the patient calling for an appointment and ends with the patient being scheduled with their provider of choice.

By working on this process we expect to increase patient satisfaction, provider satisfaction and increase availability to access provider of choice. It is important to work on this now because of the lengthy wait time of appointment being scheduled.

Principles of an Effective Global Aim Statement

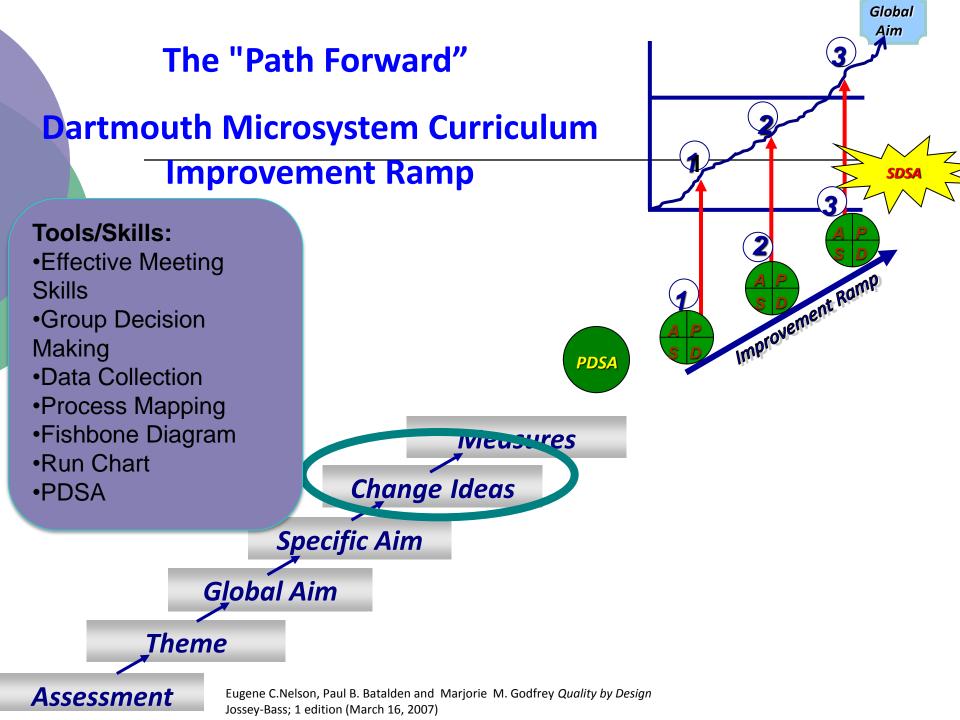
- State aim clearly
- Focus on a PROCESS improvement
- Focus on Patients/Families
- Follow template to determine boundaries
- Avoid aim drift
- Be prepared to fully shift aim if necessary

Global Aim S	Statement	what De	0
		what De gou Thin	K!
Team Me	mbers , C	Thoughts	1.
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Annote Respect (K.C) Remin Zeally, K.C Vision Antice Count Onlingther Many	us : ·		



Sample Specific Aim

We will decrease the number of days to 3rd next available for a complete physical exam from 63 days to 14 days by September 17, 2012.

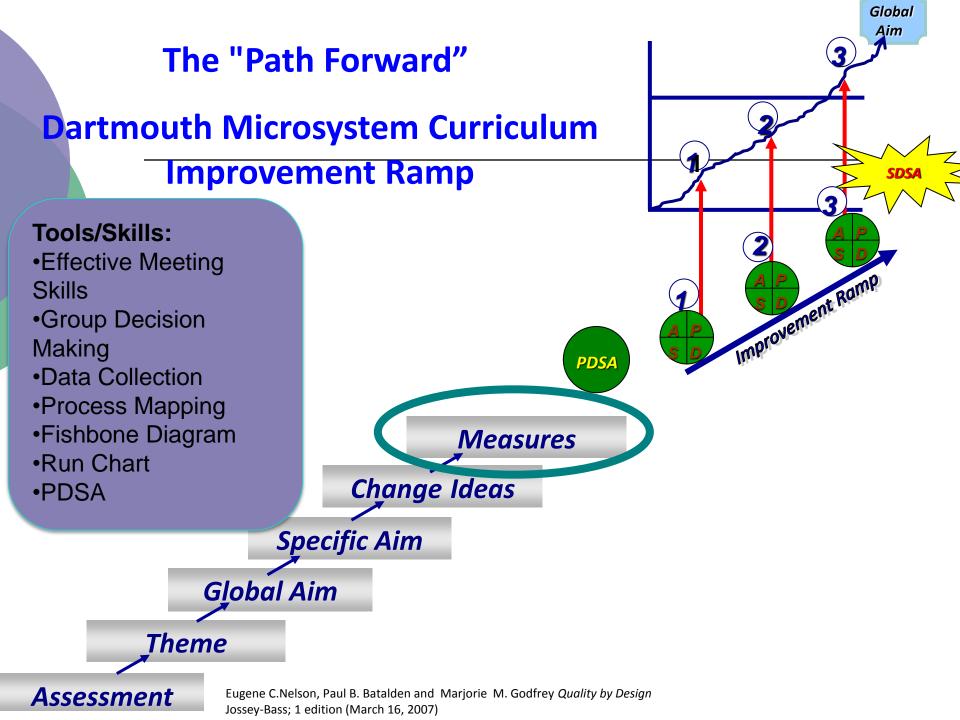


Where Do Change Ideas Come From?

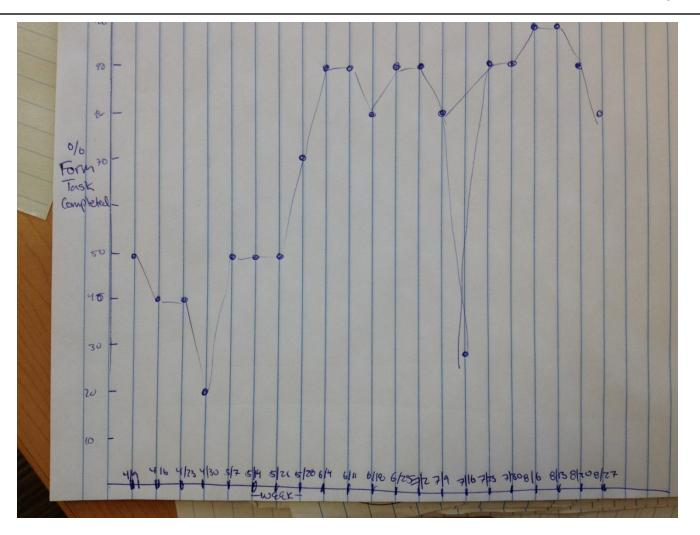
- Best evidence
- Change concepts (eliminate waste, improve flow, manage variation)
- "Pain Points"
- Brainstorming

Change Ideas – Brainstorming!

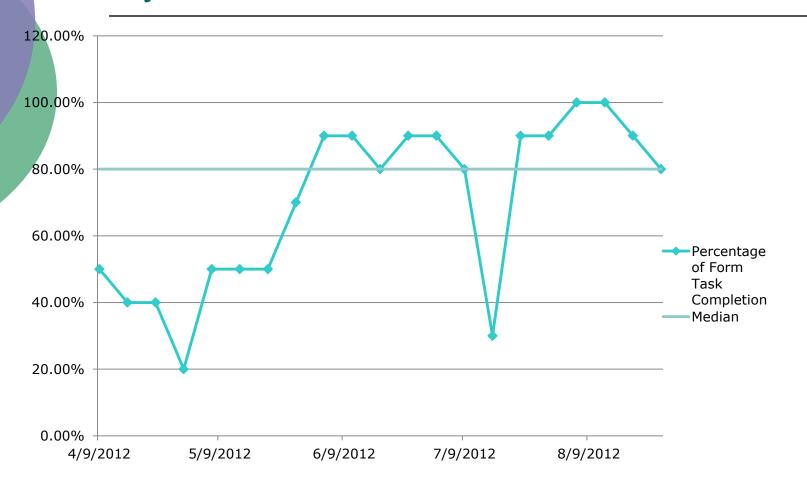
Mall providios reful all script @ every usit (10) Mildata not in scripts in a master list/ location 5 3 111 Ull ways refill can occur 1 8 give patient a list of medications 11 28 day prescriptions pt recieves mud list at start of usit + revious Streamline pt noquest process ash pt-their preference for refin have I nuise/Msponsilise/day Flassing system for NGII need (iteliminate green slip - use technology araw at dream flaw process : redesign, Updak phan uffax numbers, ask-f 1 expand protocal - so MD's dont have to sign of Phum - du zll scripts La all refulls to the point In patient education will polord Angle 50 only refill scripts it correct into siven - for using wong rate Mond list in each necord. when checked in have list of refills needed provided . Parking lot: "Inthate clinic point poron (2) 3 All scripts- policy authorize / document that RN send inder MD is "signed" I allow those in proper role to work on reful line D'- into not complete narobus have separate protect Better communication



Measures – simple tics and tallys



Percentage of Form Task Completion by Week



Baseline Measurement

) 🖬 🤊 - 🗠 - 🖨	→ → APD baseline data.xlsx -	Microsoft I	Excel	Chart Tools		
	Home Insert	Page Layout Formulas Data	Review	View	Design Layo	out I	ormat
	🚽 🖻 Copy	Calibri (Body) - 10 - A A	= = =		Wrap Text		General
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	A	В	С		D		E
	Request origin	# of requests/# daγs	N		request/daγ		thin 48 hrs
	Task list	19-34 requests q 2 hrs	23	26/day		60 %	
	Pharmac y fa x	17 requests over 6 days	17	2.8/day		75%	
4	Nurse line	7 requests over 5 days	7	1.4/day		86%	
5	Scriptline	11 requests over 6 days	11	1.8/day		99 %	
6							
7							
8							
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10		% filled wi	thin 4	8 hrs			
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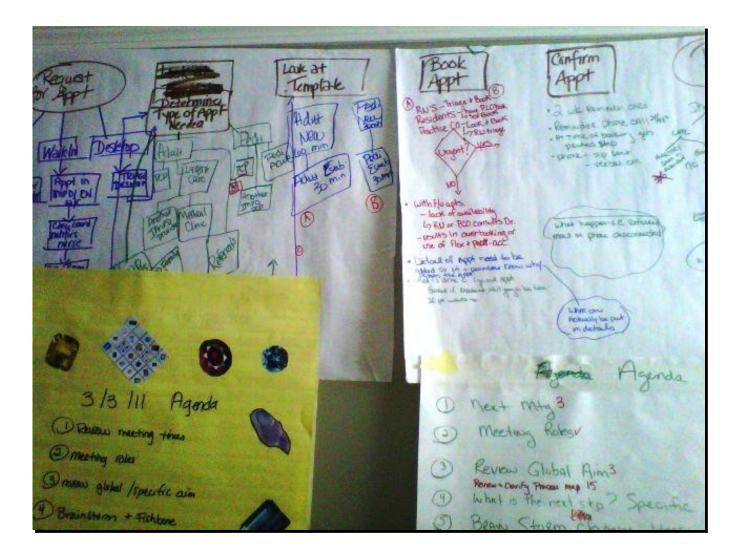
Improvement Tools



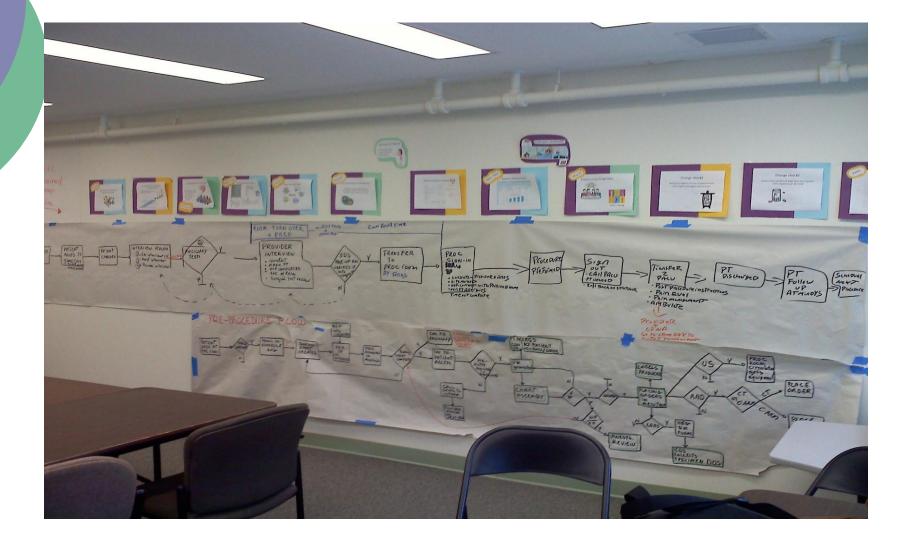
Process Maps

Help team members understand what is happening now in a process
It is important to flowchart the *current* process, not the desired process, unless...

Sample Process Map

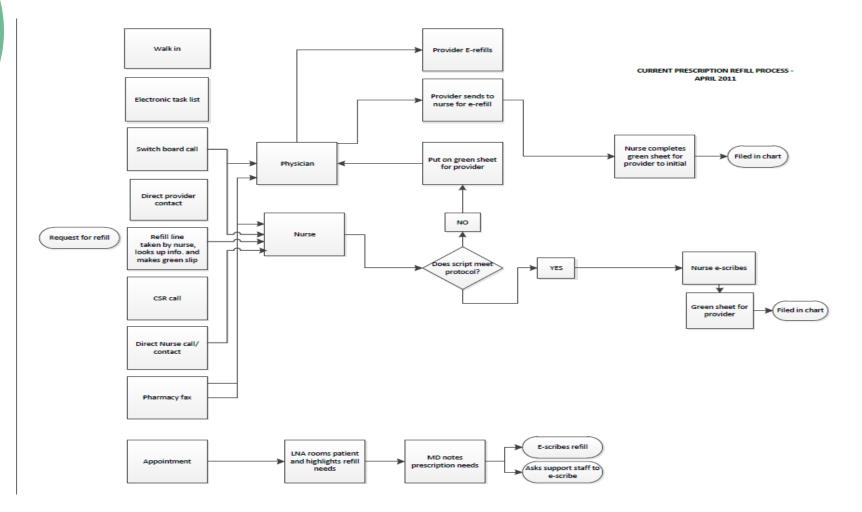


Sample Process Map



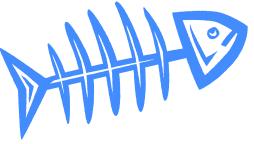


Flowcharting the process

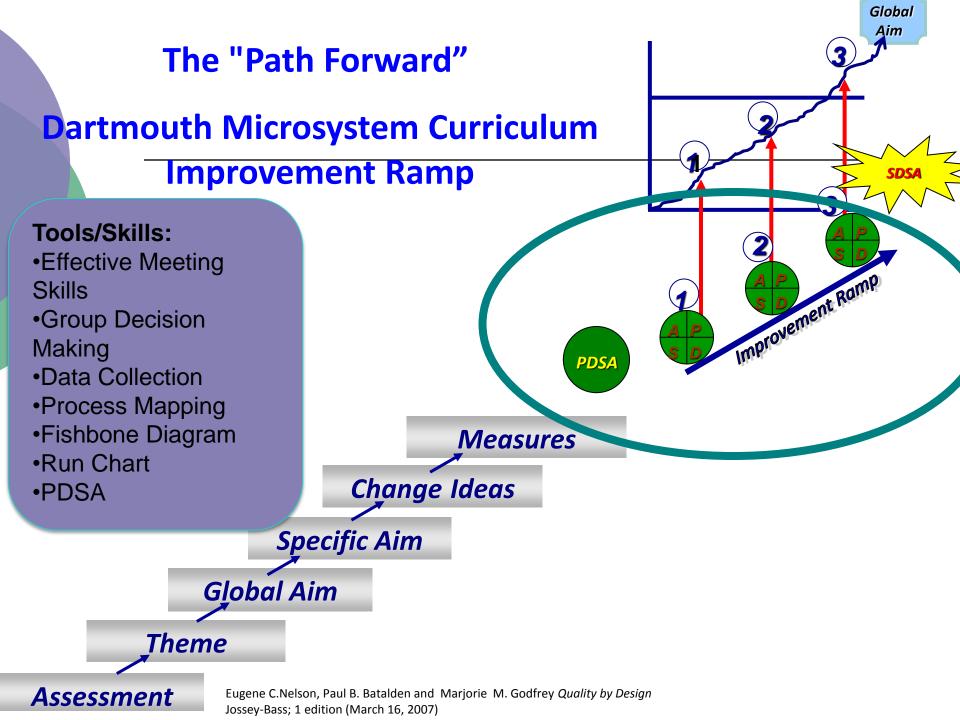


Fishbone (Cause & Effect) Diagrams

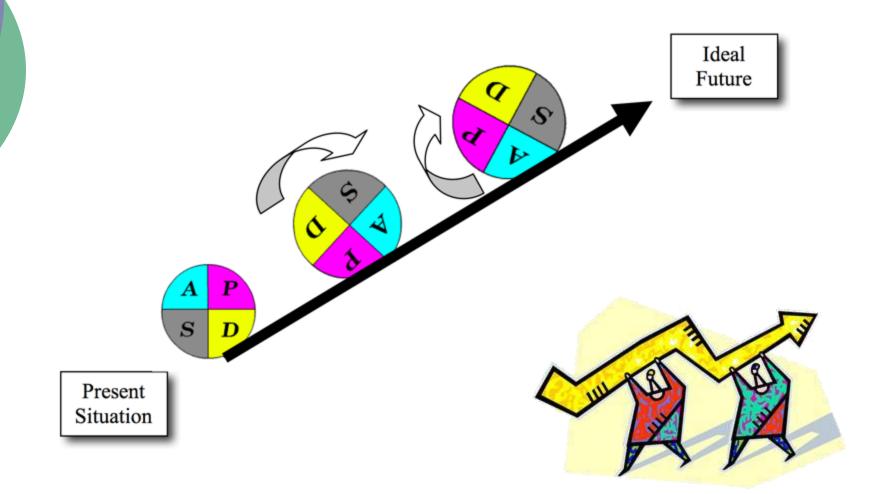
- Fishbone diagrams are a way to organize your thinking about the possible causes or solutions to a problem.
- The ideas generated by working on a fishbone need to be confirmed with data.
- The ideas from a fishbone can be used to generate one or more specific aims or change ideas.



MO 1:16 Pationts :5 24 P.II Counts. TEL ned before seen from 12. - New MD has sifteent as pectaling require a MO Taraputr . A MO conglisson with alternation - D. Amenad Comford level Enforter II Vacation There (3 Goming the system. & Fill Authori Juham Inconsistency true . Pap ! stees for no Early en Fill Rogan R. Frank · Established Porr Brunderics Git of 20 Narah ALC NO. ? Communication Achillus 30 11 -----Preseril pharm to ato 1e 6:11 Ain Sx. Vantomete . PL HEERS Pour Comminuter . Initial Nore Tura was 3-03 Hut Work . Insurance time for Pable lagert will set Com PMP Lepott 41-72hrs. enty ret: 11 Photo IO to pick up script Acuraly - zuhr rog fm Janne Fisk · Lack of Honesty Newsfor Script Prior Awalton Drug Testing Reporting Pharmacy a) inclanate Inadequate of ingroo Supply of med Par Camiby עשל /וואין א about Seriet Proversants Activity. ha office Phirmacy Lan In forcepter



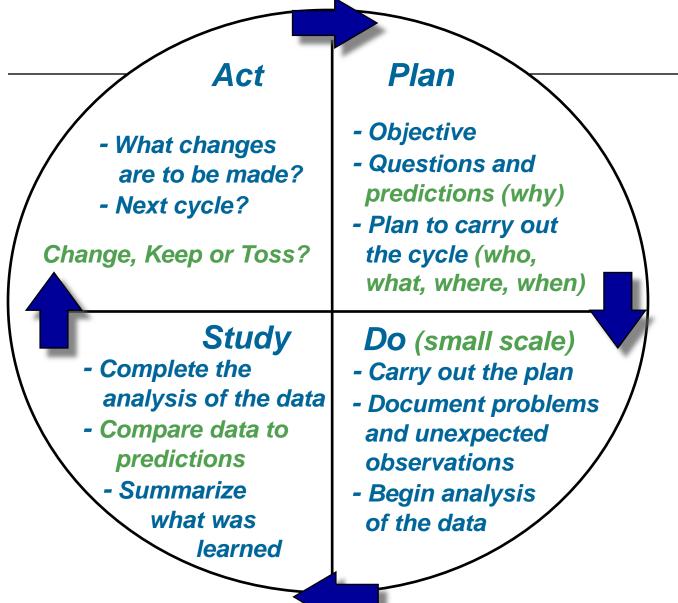
Plan Do Study Act



Why Test Changes?

- Increases belief that the change will result in improvements in your setting
- Learn how to adapt the change to conditions in your setting
- Evaluate the costs and "side-effects" of changes
- Minimize resistance when spreading the change throughout the organization

THE PDSA CYCLE



57

TIPS FOR SUCCESSFUL TESTS OF CHANGE



• Plan multiple cycles for a test of a change

- Think a couple of cycles ahead
- Scale down the size of the test (the number of patients or location)
- Test with volunteers
- Be innovative to make the test feasible
- Collect useful data during each test
- Test over a wide range of conditions. Test quickly; ask, "What change can we test by next Tuesday?"

The Three Faces of Performance Improvement

Aspect	Improvement	Accountability	Research
<u>Aim:</u>	Improve Care	Compare, reassure, spur change	New knowledge
Methods:			
Test observable	Yes	N/A –evaluate current performance	Test blind or controlled
• Bias	Accept stable bias	Adjust data to reduce bias	Design to eliminate
Sample size	Just enough data-small sequential samples	N/A – report 100%	Just in case data
• Hypothesis flexible	No-revised as learn and test	No hypothesis	Fixed hypothesis
How to determine improvement	Run or Shewhart control charts	No focus on change	Hypothesis, statistical tests: F- test, t-test, chi square, p value
 Testing strategy 	Small sequential tests	No tests	1 large test
Data confidential	Data used only by those involved in improvement	No subjects-data is for public	Subjects protected



PDSA Worksheet

Plan-Do-Study-Act	Act	Plan
Team/Practice Name:		
Objective:	Study	Do
Predictions (what do we think will happen and why?):		

PLAN for change or test and collection of data:

Tasks to be completed to run test of change	Who	When	Tools Needed	Measures

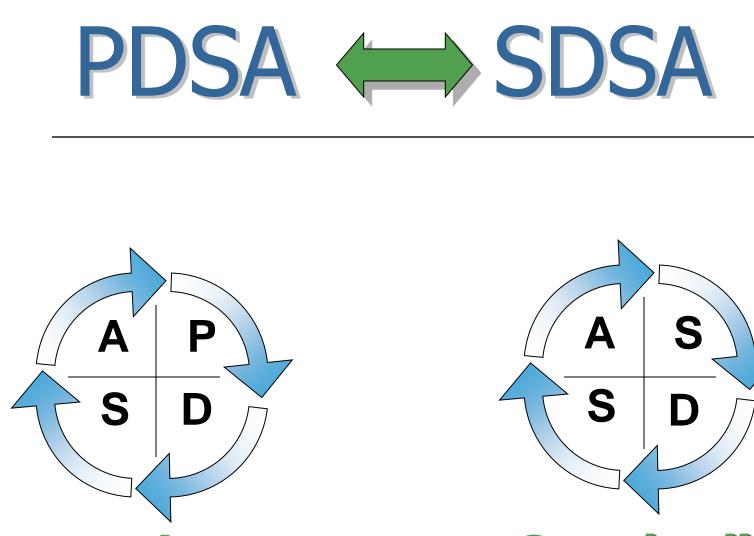
DO: Carry out the change or test; Collect data and begin analysis.

STUDY: Complete analysis of data and compare to your predictions; Summarize what was learned.

ACT: Refine the change based on what was learned from the test. Plan for the next cycle.



5/04/2010 Adapted from the Institute for Healthcare Improvement's Breakthrough Series - <u>www.ihi.org</u> ©1999 and Trustees of Dartmouth College, Godfrey, Nelson, Batalden, © 2001,





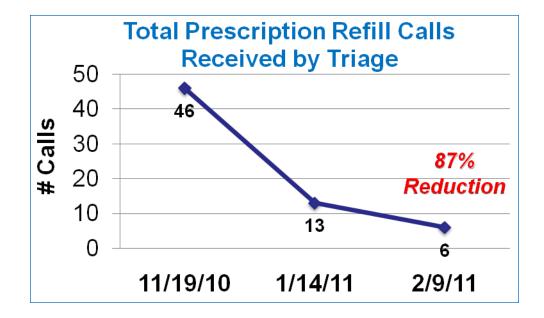


Outcomes



Improvements to Medication Refill Process

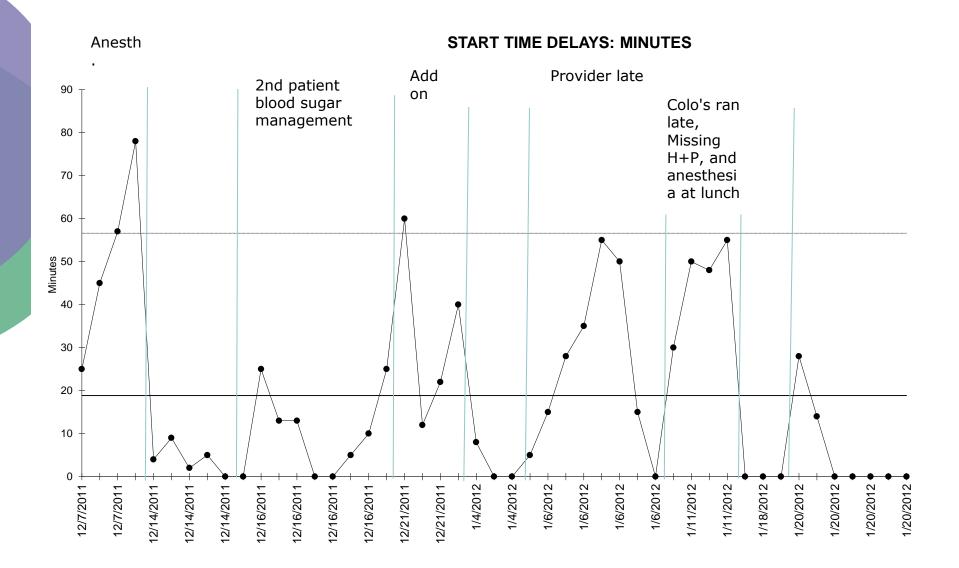
- 1. Collected data to measure
 - Number of inbound prescription refill calls
 - Average length of call (1.83 min)
- 2. Redesigned process for incoming faxes to segregate refill requests from all others
- 3. Changed message on automated refill line to set realistic expectations for patients
- Educated staff to direct refill requests to automated refill line rather than to triage staff
- 5. Re-sampled data to measure results of improvement
- 6. Next Step: Measure Patient Satisfaction



Total Triage Time Spent on Refill Calls (# calls x 1.83 min avg/call)

Reduced from *high* of 84 min/day To *low* of 11 min/day

Saved 6 hours/week!





Project focus vs. learning organization
Long-term commitment
Importance of context
Art vs. science



- Clinical Microsystems Website
 - clinicalmicrosystem.org
- Coaching Microsystems program <u>www.mpin.org</u>

http://clinicalmicrosystem.org/events/ctc/

o Literature

Quality by Design, Nelson, et al. Fifth Discipline, Peter Senge The Team Handbook

