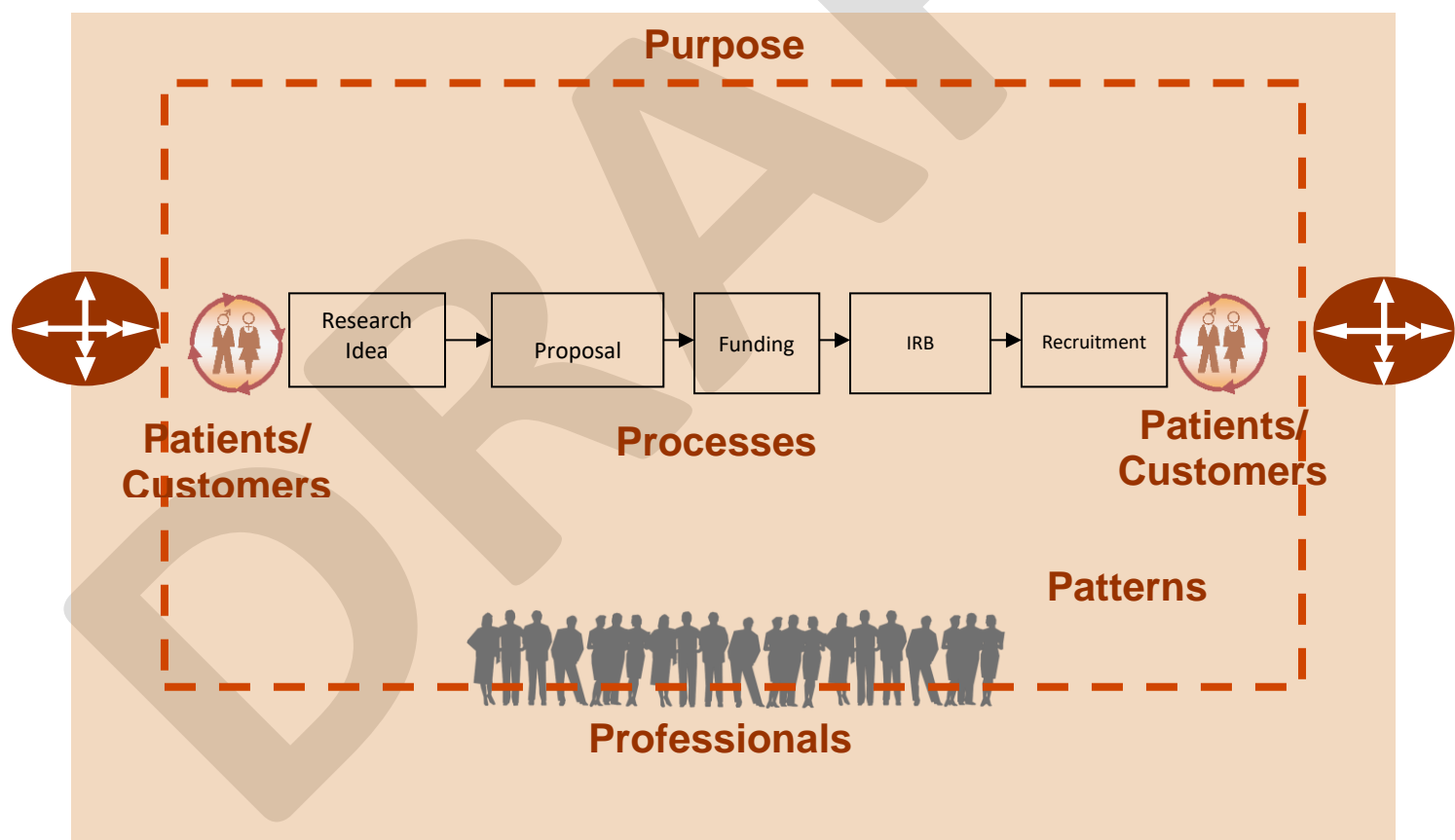


# Research Supporting Microsystems

“The Place Where Patients, Customers, Families, and Professionals Meet”

## Assessing, Diagnosing and Treating Your Research Microsystem



[www.clinicalmicrosystem.org](http://www.clinicalmicrosystem.org)

# Strategies for Improving “The place where patients, customers, families and professionals meet.”

## A Supporting Microsystem Self-Assessment, Diagnosis and Treatment Plan

Research consists of supporting microsystems and often clinical microsystems. These are the units that provide support and services to research activities, clinical microsystems, including patients and families. They are the places where patients, customers, families and professionals meet. Research supporting microsystems also include support staff, processes, technology and recurring patterns of information, behavior and results. Central to every supporting microsystem is the customer and patient.

The research supporting microsystem is the place where:

- Services are made and delivered
- Quality, safety, reliability, efficiency and innovation are made
- Staff morale and patient/customer satisfaction are made

Research supporting microsystems are the building blocks that support clinical microsystems. The quality of care can be no better than the quality produced by the small systems that come together to provide care. Here is the quality equation:

$$\text{Health System Quality} = \text{Quality of Microsystem}_1 + \text{Quality of Microsystem}_2 + \text{Quality of Microsystem}_{3-n}$$

***All health care professionals—and we believe all front line and support staff are professionals—have 2 jobs. Job 1 is to provide services and care. Job 2 is to improve services and care.***

Finding time to improve care can be difficult, but the only way to improve and maintain quality, safety, efficiency and flexibility is by blending analysis, change, measuring and redesigning into the regular patterns and the daily habits of clinicians and staff. Absent the intelligent and dedicated improvement work by all staff in all units, the quality, efficiency and pride in work will not be made nor sustained.

This workbook provides tools and methods that busy interdisciplinary research microsystems can use to improve the quality and value of customer and patient care and services as well as the work-life of all staff who contribute to research and services. These methods can be adapted to a wide variety of settings, large and small, urban and rural, community-based and academic.

## The Path Forward

This workbook provides a guide for making a path forward towards higher performance. Just as you can assess, diagnose and treat patients; you can assess, diagnose and treat your research microsystem. This workbook is designed to guide your research microsystem on a journey to develop better performance. There are many good ways to improve performance; research shows that this is one of those good ways.

You can access more examples, tools and blank forms to customize at **[www.clinicalmicrosystem.org](http://www.clinicalmicrosystem.org)**

**Note:** We have developed this workbook with tools to give ideas to those interested in improving healthcare. “The Dartmouth Institute Microsystem Academy and the developers of this workbook are pleased to grant use of these materials without charge, providing that recognition is given for their development, that any alterations to the documents for local suitability and acceptance are shared in advance, and that the uses are limited to their own use and not for re-sale.”

# The Path Forward

## A Research Microsystem Self-Assessment, Diagnosis and Treatment Plan

### Step 1: Organize a “Lead Interdisciplinary Improvement Team”

Successful, sustainable cultural change requires the commitment and active involvement of all members of the research microsystem. To keep the research microsystem on track and focused, a “Lead Interdisciplinary Improvement Team” of representatives of all roles should be formed.

### Step 2: Do the Assessment

Assess your research microsystem using the “5Ps” as your guide. Review your current performance metrics.

- Purpose
- Patients/Customers
- Professionals
- Processes (Core and supporting processes)
- Patterns
- Metrics That Matter

### Step 3: Make a Diagnosis

Based on Step 2, review your assessment and Metrics That Matter to make your diagnosis. You should select a “Theme and Aims” for improvement based on this diagnosis and your organization strategic priorities. This process will aid you to take action based on knowledge and data and not just experiences alone.

### Step 4: Treat Your Research Microsystem

Use scientific improvement methods and tools. Besides the usual improvement model of The Dartmouth Microsystem Improvement Curriculum which uses Plan-Do-Study-Act & Standardize-Do-Study-Act (PDSA-SDSA) supporting microsystems often benefit from tools such a LEAN and six sigma when reviewing production and standardized processes.

### Step 5: Follow-up & Sustain

Design and execute monitoring processes, outcomes and results. Ensure improved and newly designed processes are tracked over time and included in staff and improvement meetings to ensure the new processes are sustained over time. Move to your next improvement themes.

## STEP 1: Organize a “Lead Interdisciplinary Improvement Team”

Assemble a “Lead Interdisciplinary Improvement Team” to represent all disciplines and roles in your research microsystem. Include managers, supervisors, leads and clerical staff, customers (units, clinics, providers), patients and families along with any other professionals who are regularly in the research microsystem providing a service.

Must dos:

- Lead Team should meet weekly to maintain focus, make plans and oversee improvement work
- Effective meeting skills should be used in the weekly meetings (see [www.clinicalmicrosystem.org](http://www.clinicalmicrosystem.org))
- Monthly ALL staff meetings should be held to engage and inform all members of the supporting microsystem
- Explore creative ways to communicate and stay engaged with all staff on all shifts and all days of the week  
Use email, newsletters, listservs, paper, verbal, visual displays, communication boards and buddy systems
- Remember true innovation is achieved through active engagement of the customers, patient and family with the Lead Team

## STEP 2 Assess Your Research Microsystem

*Complete the “5Ps” assessment.* This process needs to be completed by the Lead interdisciplinary improvement team. Building common knowledge and insight into the research microsystem by all members will create a sense of equal value and ability to contribute to the improvement activities.

**Start with Purpose.** Why does your research microsystem exist?

Raise this question to EVERYONE in your research microsystem to create the best statement of purpose that everyone can support and live.

*Assess Your Patients/Customers, Professionals, Processes and Patterns* using the worksheets in this action guide.

The aim is to create the “Big picture” of your system to see beyond one patient/one sample/one test at a time.

Assessing the “5Ps” and then reflecting on their connections and interdependence often reveals new improvement and redesign opportunities.

*Create a timeline for the assessment process.* The whole workbook DOES NOT need to be completed within 2 weeks. Some supporting microsystems have the capacity and resources to move quickly through the workbook in a short period of time. Many supporting microsystems need to pace themselves through the workbook and complete the worksheets and assessment through a longer timeline. Some supporting microsystems may need to start an important improvement immediately while starting the assessment process. In this case, the ongoing assessment will give you needed context and will help you make better improvements.

**Remember however you choose to progress through the workbook, it MUST be done within the context of your interdisciplinary team.**

Use the Data Review sheet to help outline and track which data and information will be retrieved in current systems and which data/info will be measured through a worksheet. Review the worksheets of the Assess, Diagnose and Treat Your Supporting Microsystem Practice workbook. Determine which worksheets you will copy and use to collect new data and information. Which worksheets will you NOT use because you have data systems that can provide useful, timely data for you without a special effort? What new data and information do you discover outside of this workbook that will help your improvement efforts?

## Microsystem Assessment of Data Sources and Data Collection Actions

- With your interdisciplinary team, review the Assess, Diagnose and Treat workbook. Use this form to identify and determine which measures you can obtain from your organization and therefore, don't need to use the worksheets. Be sure the data is current and not months old.
- Determine which worksheets will be used. Plan who, when and how the worksheets will be completed.
- Decide who oversees the compilation of each worksheet or alternative data source.

Page/Type of Data	Data Source/Data Collection Action	Date/Owner
Page 6 B Know Your Patients/Products		
B1. Estimated number of customers		
B2. Mix of services		
B3. List Your Top Requested Services		
B4. Top Sources of work requests		
B5. Volume of work from top 10 customers/units		
B6. Work request method/process		
B7. Data Management System		
B8. Frequent high volume customers		
B9. Customer Satisfaction Scores		
B11. Through the Eyes of the Customer		
Page 6 C Know Your Professionals		
C1. Current Staff		
Float Pool		
On-Call		
Per Diem Staff		
C2. Days of Operation		
C3. Hours of Operation		
C7. Staff Satisfaction Scores		
Personal Skills Assessment		
Activity Survey		
Page 6 D Know Your Processes		
D1. Create Flow Charts of Routine Processes		
D2. Cycle Time Tool		
D3. Core and Supporting Processes		
D4. High Level Flow Charts		
D5. Use of Data management software		
D6. Work Flow: Spaghetti Diagrams		
Page 6 E Know Your Patterns		
E1. Most Significant Pattern		
E2. Successful Change		
E3. Most Proud of		
E4. Patterns of Errors		
Unplanned Activity Tracking Card		

# Research Microsystem Profile

## A. Purpose: Why does your microsystem exist?

Name of Service:	Site Contact:	Date:
PI/Leader	Coordinator/Manager:	

## B. Know Your Customers: Take a close look into your microsystem; create a "high-level" picture of the Customers that you serve. Who are they? What resources do they use/request? How do customers view the services they receive?

Est. Distribution of workload	%	List Your Top 10 Work type requests		Top requesting Customers	Customer Satisfaction Scores		% Excellent
Source-		1.	6.		Experience via phone		
Source-		2.	7.		Length of time to get complete work		
Source-		3.	8.		Accuracy of work		
Source-		4.	9.		Satisfaction with personal manner		
Source-		5.	10.		Satisfaction with work product		
		Customers who are frequent users of your service and their reasons for interacting with your microsystem		Other services you interact with regularly as part of your normal work processes.	Work load distribution: Do these numbers change by season? (Y/N)		# Y/N
Est. # of work requests in last month					Work load in a day		
					Work load in last week		
Top Payors					Work load in last month		
					Other		

## \*Complete "Through the Eyes of Your Customer"

## C. Know Your Professionals: Use the following template to create a comprehensive picture of your microsystem. Who does what and when? Is the right person doing the right activity? Are roles being optimized? Are all roles who contribute to the patient experience listed? What hours are you open for business? What is the morale of your staff?

Current Staff	FTEs	Role/Function	Days of Operation	Hours of Operation
Enter names below totals (Use separate sheet if needed)			Monday	
			Tuesday	
Microsystem Total			Wednesday	
Title:			Thursday	
			Friday	
Title:			Saturday	
			Sunday	
			Which activities are you involved in? Check all that apply.	
Title:			<input type="checkbox"/> Electronic Work Request <input type="checkbox"/> E-Mail (with customers)	
			<input type="checkbox"/> Data Management <input type="checkbox"/> Website	
Title:			<input type="checkbox"/> Certification <input type="checkbox"/> Other-	
			<input type="checkbox"/> Regularly attend clinical microsystem meetings you are supporting <input type="checkbox"/> Other-	
Title:			<input type="checkbox"/> Leadership meets regularly with clinical microsystems being supported	
Managers				
Other:				

Work Type	Cycle Time	Comment	Do you use a Float Pool?	<input type="checkbox"/> Yes <input type="checkbox"/> No
			Do you use On-Call?	<input type="checkbox"/> Yes <input type="checkbox"/> No
			Do you use Per Diems?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Staff Satisfaction Scores		%		
How stressful is this microsystem?		% Very stressed		
Would you recommend it as a good place to work?		% Strongly Agree		

## \*Each staff member should complete the Personal Skills Assessment and "The Activity Survey"

## D. Know Your Processes: How do things get done in the microsystem? Who does what? What are the step-by-step processes? How long does it take to complete the work here, are the delays? What are the "between" microsystems hand-offs? Have you discussed a shared purpose with clinical microsystems and other supporting microsystems?

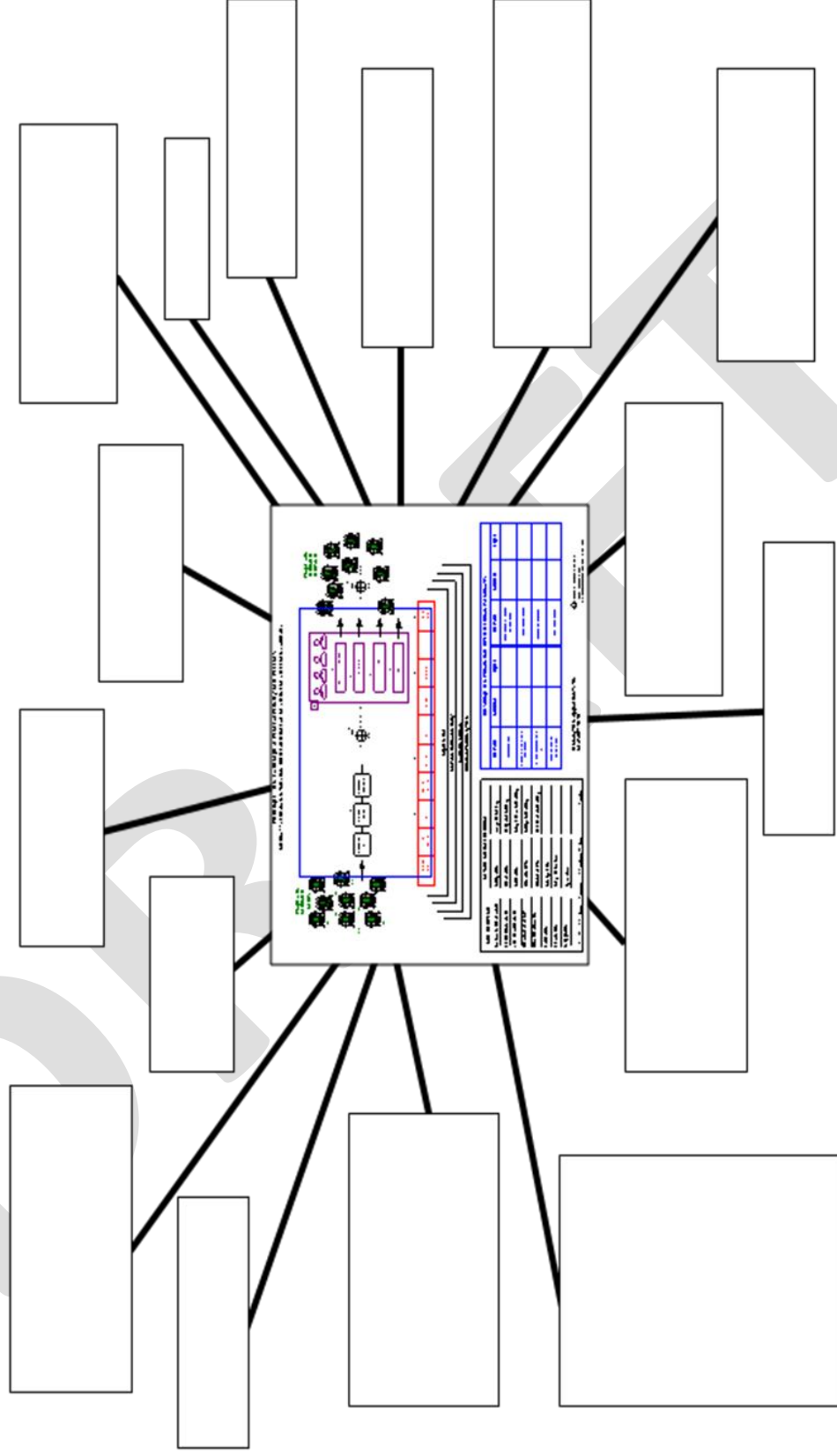
1. Track cycle time from work requested, work assigned, work completed, final product sent to customer.

2. Complete the Core and Supporting Process Assessment Tool

## E. Know Your Patterns: What patterns are present but not acknowledged in your microsystem? What is the leadership and social pattern? How often does the microsystem meet to discuss processes? Are customers involved? What are your results and outcomes?

<ul style="list-style-type: none"> <li>Does every member of the microsystem meet regularly as a team?</li> <li>How frequently?</li> <li>What is the most significant pattern of variation?</li> </ul>	<ul style="list-style-type: none"> <li>Do the members of the microsystem regularly review and discuss errors, safety and reliability issues?</li> </ul>	<ul style="list-style-type: none"> <li>What have you successfully changed?</li> <li>What are you most proud of?</li> <li>What is your financial picture?</li> </ul>
*Complete "Metrics that Matter"		

## Exploring the External Context of the Research Microsystem



*Name the clinical microsystems you support. Note satellite pharmacies and other inpt/outpt microsystems. Place an arrow head showing the direction of the relationship (one way-two ways). If the relationship can be significantly improved, use red for the line if the relationship is strong, bold the line.*

# Customers

- Customers have valuable insight into the quality of the work we provide. **Real time feedback** can pave the way for rapid responses and quick tests of change. This “Point of Service” Survey can be completed at the time of the encounter to give real time measurement of satisfaction.
- Use the Microsystem “Point of Service” to review “*Know Your Customers.*” Determine if there is information you need to collect or if you can obtain this data within your organization. Remember the aim is to collect and review data and information about your patients and customers that might lead to a new design of process and services.
- Conduct the Customer Satisfaction Survey for 2 weeks with your customers.

Customer Satisfaction “Point of Service”				
				Date: _____
Think about this encounter.				
1. How would you rate your satisfaction with getting through by phone?				
<input type="checkbox"/> Excellent	<input type="checkbox"/> Very Good	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
2. How would you rate your satisfaction with the length of time before receiving the service requested?				
<input type="checkbox"/> Excellent	<input type="checkbox"/> Very Good	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
3. How would you rate the quality of the product or service provided?				
<input type="checkbox"/> Excellent	<input type="checkbox"/> Very Good	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
4. How would you rate your satisfaction with the personal manner of the person you dealt with? (courtesy, respect, sensitivity, friendliness)?				
<input type="checkbox"/> Excellent	<input type="checkbox"/> Very Good	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
5. How would you rate your overall satisfaction with the product or service requested?				
<input type="checkbox"/> Excellent	<input type="checkbox"/> Very Good	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Comments:				
_____				
_____				
_____				
_____				
Thank You For Completing This Survey				



# Patients/Customers

## Research Microsystem Patient/Staff Viewpoint Survey

Please rate the following questions about this supporting microsystem.

	Excellent	Very Good	Good	Fair	Poor
1. The time from request to completion by supporting microsystem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Convenience of the location of this supporting microsystem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Getting through to the microsystem by phone.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Length of time waiting at the microsystem (if applicable).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Satisfaction with the person you interact with.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Explanation of what was done.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The technical skills (thoroughness, carefulness, competence) of the person you saw.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The personal manner (courtesy, respect, sensitivity, friendliness) of the person you saw.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. The staff sensitivity to your special needs or concerns.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Your satisfaction with getting your questions answered.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Your feeling about the overall quality of the staff interaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### General Questions

Please answer the general questions about your satisfaction with this microsystem.

12. If you could go anywhere to have your needs met, would you choose this center or would you prefer to go someplace else?

- ☐ Would choose this center    ☐ Might prefer someplace else    ☐ Not sure

13. I am delighted with everything about this support microsystem because my expectations for service and quality of care are exceeded.

- ☐ Agree    ☐ Disagree    ☐ Not sure

14. In the last 12 months, how many times have you depended on this microsystem?

- ☐ None    ☐ One time    ☐ Two times    ☐ Three or more times

15. Is there anything the microsystem can do to improve the care and services for you?

- ☐ No, I'm **satisfied** with everything    ☐ Yes, **some things** can be improved    ☐ Yes, **many things** can be improved

Please specify improvement: \_\_\_\_\_

16. Did you have any good or bad surprises with this microsystem?

- ☐ Good    ☐ Bad    ☐ No surprises

Please describe: \_\_\_\_\_

Sources: Medical Outcomes Study (MOS) Visit-Specific Questionnaire (VSQ), 1993  
Patient Utilization Questions, Dartmouth Medical School

# Patients/Customers

- Gain insight into how your patients/customers experience your service delivery. One simple way to understand the patient/customer experience is to experience the process. Members of the staff should do a "Walk Through" in your department. Try to make this experience as real as possible. This form can be used to document the experience. You can also capture the customer experience by making an audio or videotape.

## Through the Eyes of Your Patients/Customers

### Tips for making the "Walk Through" most productive:

- Determine with your staff where the starting point and ending points should be, taking into consideration obtaining the work request, assignment of work and completion.
- Two members of the staff should role play with each playing a role: requesting person, receiving person.
- Other members of the staff could follow the work request through all the steps.
- Set aside a reasonable amount of time to experience the customer/work journey. Consider doing multiple experiences along the customer journey at different times.
- Make it real. Include time from work request to work assignment to final completion.
- During the experience note both positive and negative experiences, as well as any surprises. What was frustrating? What was gratifying? What was confusing? Again, an audio or video tape can be helpful.
- Debrief your staff on what you did and what you learned.

Date: \_\_\_\_\_

Staff Members: \_\_\_\_\_

Walk Through Begins

When: \_\_\_\_\_

Ends When: \_\_\_\_\_

Positives	Negatives	Surprises	Frustrating/Confusing	Gratifying

# Professionals

- Development of each member is a key to success for staff and the supporting microsystem. The Personal Skills Assessment tool helps determine the education and training needs of staff. All staff members complete this survey and then discuss the action plan with leadership and other staff. A plan is developed to help members achieve goals so they can become the best they can be.
- This tool provides guidance for individual development plans along with assessing the “group” needs to plan larger learning and training sessions.

Personal Skills Assessment														
Name: _____				Unit: _____										
Role: _____				Date: _____										
<b>Competencies:</b>														
<i>Please create your list of competencies and evaluate.</i>				<b>Want to Learn</b>	<b>Never Use</b>			<b>Occasionally</b>				<b>Frequently</b>		
				<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
<b>Data Base/Information/Computer System Used:</b>														
<i>What features and functions do you use? Enter them in each row below then evaluate.</i>				<b>Want to Learn</b>	<b>Never Use</b>			<b>Occasionally</b>				<b>Frequently</b>		
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				<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	

## Personal Skills Assessment page 2

Name: \_\_\_\_\_ Unit: \_\_\_\_\_

### Technical Skills cont'd:

<i>Please rate the following on how often you use them.</i>	<b>Want to Learn</b>	<b>Never Use</b>			<b>Occasionally</b>				<b>Frequently</b>		
Word Processing (e.g. Word)	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Spreadsheet (e.g. Excel)	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Presentation (e.g. Power Point)	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Database (e.g. Access or File Maker Pro)	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Database/Statistics	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Internet/Intranet	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Printer Access	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Fax	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Copier	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Telephone System	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Voice Mail	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Pagers	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10

<b>Meeting &amp; Interpersonal Skills:</b>	<b>Want to Learn</b>	<b>Never Use</b>			<b>Occasionally</b>				<b>Frequently</b>		
<i>What skills do you currently use?</i>	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Effective Meeting Skills (brainstorm/multi-vote)	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Timed Agendas	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Role Assignments During Meetings	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Delegation	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Problem Solving	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Patient Advocacy Process	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Open and Effective Communication	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Feedback – provide and receive	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Managing Conflict/Negotiation	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Emotional/Spiritual Support	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10

<b>Improvement Skills and Knowledge:</b>	<b>Want to Learn</b>	<b>Never Use</b>			<b>Occasionally</b>				<b>Frequently</b>		
<i>What improvement tools do you currently use?</i>											
Flowcharts/Process Mapping	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Trend Charts	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Control Charts	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Plan/Do/Study/Act (PDSA) Improvement Model	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Aim Statements	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Fishbones	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Measurement and Monitoring	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
Surveys- Customers and Staff	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10
StAR Relationship Mapping	<input type="checkbox"/>	1	2	3	4	5	6	7	8	9	10

# Professionals

- What do you spend YOUR time doing? What is your best estimation of how much time you spend doing it? The goal is to have the right person doing the right thing at the right time. The group can discuss which activities are or are not appropriate for the individual's level of education, training, and licensure.
- You can start with one group of professionals such as Medical Technologist, Medical Technicians or clerical staff, assessing their activities using the Activity Survey. This estimate of who does what is intended to reveal, at a high level, where there might be mismatches between education, training, licensure and actual activities. It is good to eventually have all roles and functions complete this survey for review and consideration. Be sure to create the same categories for each functional role. Some groups may hesitate to make time estimates; if this happens, just ask them to list their activities for the first review.

## Practice Activity Survey Sheet Example

Position: Medical Technologist	% of Time	Position: Laboratory Clerk	% of Time
Activity: <u>Perform Laboratory Tests</u> Specific Items Involved: • Pulling patient test list • Receiving Specimens • Setting up testing procedures	30%	Activity: Answering Phone • List Categories of questions • •	15%
Activity: <u>Run Quality Controls</u>	9%	Activity: Specimen Receipt Specific Items Involved: • Accessioning	3%
Activity: <u>Resolve Control Issues</u>	2%	Activity: <u>Direct Patient Care</u> • See patients in clinic • Injections • Assist provider with patients •	30%
Activity: <u>Perform Test</u> Specific Items Involved: • Manual or Automated testing	10%	Activity: <u>Follow-up Phone Calls</u> Specific Items Involved: •	22%
Activity: <u>Resulting of Tests</u> Specific Items Involved: • Evaluating Test Results • Reporting abnormal test results	25%	Activity: <u>Review and Notify Patients of Lab Results</u> Specific Items Involved: • Normal with follow-up • Drug adjustments	5%
Activity: Critical Value Reporting Specific Items Involved: • Pathology Review • Contacting Ordering provider/Documenting	5%	Activity: <u>Complete Forms</u> Specific Items Involved: • Referrals • Camp/school physicals	18%
Activity: Making Reagents Specific Items Involved: • Making Stock/Working Reagents	5%	Activity: <u>Call in Prescriptions</u> Specific Items Involved: •	5%
Activity: Stocking of Supplies/Reagents	5%	Activity: <u>Miscellaneous</u> Specific Items Involved: • CME; attend seminars; attend meetings	2%
Activity: <u>Test/Quality Control Correlations</u> Specific Items Involved: • Review results and determine next actions	5%	<b>Total</b>	<b>100%</b>
Activity: <u>Student Teaching</u>	2%		
Activity: <u>Miscellaneous</u> Specific Items Involved: • CME; attend seminars; attend meetings	2%		
<b>Total</b>	<b>100%</b>		

### Activity Occurrence Example:

*What's the next step? Insert the activities from the Activity Survey Here.*

Activities are combined by role from the data collected above. This creates a master list of activities by role. Fill-in THE NUMBER OF TIMES PER SESSION (AM and PM) THAT YOU PERFORM THE ACTIVITY. Make a mark by the activity each time it happens, per session. Use one sheet for each day of the week. Once the frequency of activities is collected, the practice should review the volumes and variations by session, day of week, and month of year. This evaluation increases knowledge of predictable variation and supports improved matching of resources based on demand.

Role: Pharmacist	Date:	Day of Week:	
Visit Activities	AM	PM	Total
Triage Patient Concerns			14
Family/Patient Education			11
Direct Patient Care			42
Non-Visit Activities			
Follow-up Phone Calls			26
Complete Forms			19
Call in Prescriptions			16
Miscellaneous			15
<b>Total</b>	<b>63</b>	<b>65</b>	<b>128</b>

# Processes

- Beginning to have all staff understand the processes and services is a key to developing a common understanding and focus for improvement. Start with the high level process and use the Cycle Time tool. You can assign someone to track all work requests for a week to get a sample, or the cycle time tool can be initiated for all requests 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.

## Cycle Time

Day: \_\_\_\_\_ Date: \_\_\_\_\_

Work Request Arrived: ☐ Fax ☐ Electronic ☐ In Person ☐ Phone

Time

1. Time Request Arrived.

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. Total Time

Comments:

# Processes

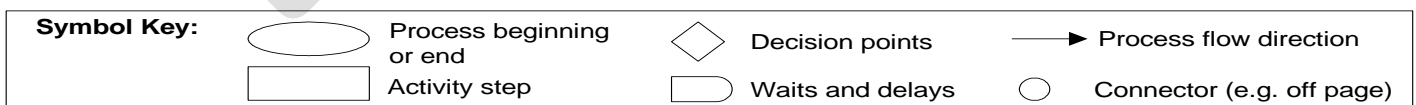
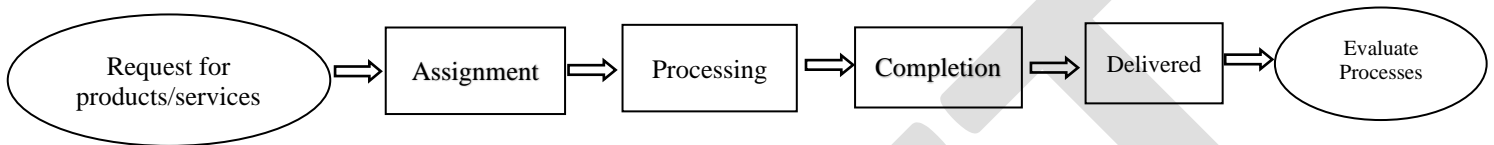
- Review, adapt and distribute the Core and Supporting Processes evaluation form to ALL staff. Be sure the list is accurate for your research microsystem and then ask staff to evaluate the **CURRENT** state of these processes. Rate each process by putting a tally mark under the heading which most closely matches your understanding of the process. Also mark if the process is a source of customer complaints. Tally the results to give the Lead Team an 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 flowcharted 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.

Microsystem Know Your Processes Core and Supporting Processes								
Processes	Works Well	Not a Problem	Small Problem	Somewhat a Problem	Totally Broken	Cannot Rate	We're Working On It	Source of Patient/ Customer Complaint
Answering Phones								
Assigning Work Roles								
Receiving requests								
Processing requests								
Delivering request products/services								
Scheduling Requests								
Interacting with Clinical and Supporting Microsystems								
Email communication								
Tracking performance measures specific to cycle time								
Tracking errors in processing								
Add specifics to supporting microsystem:								

# Processes

- Deming has said, “If you can’t draw a picture of your process you can’t improve anything.” He is referring to the improvement tool of process mapping. With your interdisciplinary team, create a high level flow chart of the appointment process or the entire treatment experience. Start with just ONE flow chart. Eventually you will wish to create flowcharts for many different processes in-and-between your practice. Keep the symbols simple!
- Review the flowchart to identify unnecessary rework, delays and opportunities to streamline and improve.

## Microsystem High Level Flowchart





# Patterns

- Collect total data using this worksheet to see the patterns and volumes of prescriptions hourly and daily.
- Use one worksheet per shift.

Workload Tracking											
<div>AM      PM      Date: _____</div>											
											TOTAL
7:00 – 8:00											
8:00 – 9:00											
9:00 – 10:00											
10:00 – 11:00											
11:00 – 12:00											
12:00 – 1:00											
1:00 – 2:00											
2:00 – 3:00											
3:00 – 4:00											
4:00 – 5:00											
5:00 – 6:00											
6:00 – 7:00											
<b>TOTAL</b>											

# Professionals

- What do you spend YOUR time doing? What is your best estimation of how much time you spend doing it? The goal is to have the right person doing the right thing at the right time. The group can discuss which activities are or are not appropriate for the individual's level of education, training, and licensure.
- You can start with each subgroup of staff, assessing their activities using the Activity Survey. This estimate of who does what is intended to reveal, at a high level, where there might be mismatches between education, training, licensure and actual activities. It is good to eventually have all roles and functions complete this survey for review and consideration. Be sure to create the same categories for each functional role. Some groups may hesitate to make time estimates; if this happens, just ask them to list their activities for the first review.

**Research Activity Survey Sheet Example**

Position: Pharmacist	% of Time	Position:	% of Time
Activity: <u>Intake</u> Specific Items Involved: • • •	30%	Activity: <u>Interact with Patient/Customers</u> • Phone • Face to Face • Electronic mail	15%
Activity: <u>Unit Based Interdisciplinary Rounds</u>	9%	Activity: <u>Patient/Family or Customer Education</u> Specific Items Involved: •	3%
Activity: <u>Transcribe Orders</u>	2%	Activity: <u>Intake</u> •	30%
Activity: <u>Follow up Phone Calls</u> Specific Items Involved: • Answer patient messages and requests • Answer provider and customer messages	10%	Activity: <u>Inventory</u>	
Activity: <u>Advise/Support Staff</u> Specific Items Involved: •	25%	Activity: <u>Ordering supplies/medications</u> •	22%
Activity: <u>Attend Organization wide safety meetings</u>		Activity: <u>Follow-up Phone Calls</u> Specific Items Involved: Activity: <u>Documentation</u>	
Activity: <u>Fill Prescriptions</u> Specific Items Involved: • •	5%	Activity: <u>Review and Notify Patients/Customers of order completion</u> Specific Items Involved: • New • Refills	5%
Activity: <u>Write Prescriptions</u> Specific Items Involved: •	5%	Activity: <u>Transcribe</u> Specific Items Involved: • •	18%
Activity: <u>Dispense Medications</u>	5%	Activity: <u>Dispense</u>	5%
Activity: <u>Monitor</u> Specific Items Involved: •	5%	Activity: <u>Monitor</u>	2%
Activity: <u>Review Error Reporting</u>	2%	Activity: <u>Miscellaneous</u> Specific Items Involved: • CME; attend seminars; attend meetings	
Activity: <u>Miscellaneous</u> Specific Items Involved: • CME; attend seminars; attend meetings	2%		
<b>Total</b>	<b>100%</b>	<b>Total</b>	<b>100%</b>

**Activity Occurrence Example:**

*What's the next step? Insert the activities from the Activity Survey Here.*

Activities are combined by role from the data collected above. This creates a master list of activities by role. Fill-in THE NUMBER OF TIMES PER SESSION (AM and PM) THAT YOU PERFORM THE ACTIVITY. Make a mark by the activity each time it happens, per session. Use one sheet for each day of the week. Once the frequency of activities is collected, the practice should review the volumes and variations by session, day of week, and month of year. This evaluation increases knowledge of predictable variation and supports improved matching of resources based on demand.

Role: Pharmacist	Date:	Day of Week:	
Activities	AM	PM	Total
Intake			14
Family/Patient Education			11
Direct Patient Care and Advise			42
Follow-up Phone Calls			26
Complete Forms			19
Monitor			16
Miscellaneous			15
<b>Total</b>	<b>63</b>	<b>65</b>	<b>128</b>

# Patterns

## WORKFLOW-Spaghetti movement diagram

Observation of usual work flow within your research microsystem can often reveal many opportunities for improvement due to the amount of waste identified in movement, materials, waiting, rework, missing information and data, inefficiency and other wasteful activities.

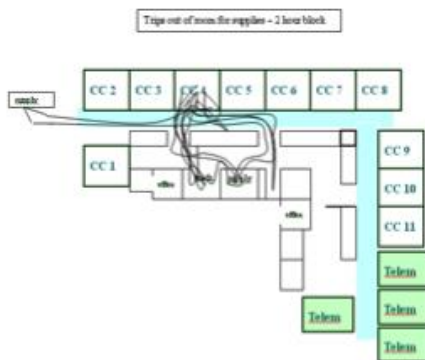
Identify what process to be observed, outline the physical layout where the work process is conducted, observe the staff performing the work and notice retracing of steps, extra work. Use of multiple colored pencils allows the tracking of each staff member. Make note of time to complete the task. Some individuals find wearing a pedometer is helpful in measuring physical steps taken in the current state to then compare to redesigned processes.

Example:

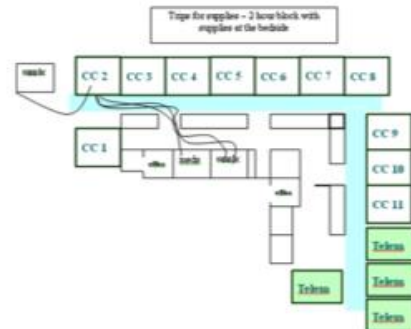
Before

After

### Spaghetti Diagram



### Spaghetti Diagram



# Patterns

- Patterns can be found through tracking the volumes and types of telephone calls. Review the categories on the telephone tracking list to ensure they reflect the general categories of calls your research microsystem 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 tally mark 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 in volume by the day of the week and am/pm.

Research Telephone Tracking Log Example																
Week of _____		Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Week Total
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
	Total															
	Total															
	Total															
	Total															
	Total															
	Message for Staff															
	Total															
	Total															
	Total															
	Total															
	Total															
	DAY TOTAL															

# Metrics That Matter

- Measures are essential for microsystems to make and sustain improvements and to attain high performance. All microsystems are awash with data but relatively few have rich information environments that feature daily, weekly and monthly use of Metrics That Matter (MTM). The key to doing this is to get started in a practical, doable way; and to build out your Metrics That Matter and their vital use over time. Some guidelines for your consideration are listed below. Remember these are just guidelines and your microsystem should do what makes sense in the way of collecting, displaying and using Metrics That Matter.

## Supporting Microsystem Metrics That Matter

- What?** Every microsystem has vital performance characteristics, things that must happen for successful operations. Metrics That Matter (MTMs) should reflect your supporting Pharmacy microsystem's vital performance characteristics.
- Why?** The reason to identify, measure and track MTMs is to ensure that you are not "flying blind." Safe, high quality and efficient performance will give you specific, balanced and timely metrics that show:
  - When improvements are needed
  - If improvements are successful
  - If improvements are sustained over time, and
  - The amount of variation in results over time
- How?** Here are steps you can make to take advantage of MTMs.

### Lead Team

Work with your Lead Team to establish the need for metrics and their routine use. Quality begins with the intention to achieve measured excellence.

### Balanced Metrics

Build a balanced set of metrics to provide insight into what's working and what's not working. Some categories to consider are: process flow, clinical, safety, patient perceptions, staff perceptions, operations, and finance/costs. Avoid starting with too many measures. Every metric should have an operational definition, data owner, target value and action plan. Strongly consider using the "national" NQF\*, JCAHO\* and CMS\* metrics whenever they are relevant to your supporting microsystem. Consider other "vital" metrics based on your own experience, strategic initiatives and other "gold standard" sets such as measures from NQF\* and professional organizations.

### Data Owner

Start small and identify a data wall owner(s) who is guided by the Lead Team. Identify a data owner(s) for each metric. The owner will be responsible for getting this measure and reporting it to the Lead Team. Seek sources of data from organization wide systems. If the needed data is not available, use manual methods to measure. Strive to build data collection in the flow of daily work.

### Data Wall Displays

Build a data wall and use it daily, weekly, monthly, and annually. Gather data for each metric and display it on the "data wall" reporting:

- Current value
- Target Value
- Action Plan to improve or sustain level

Display metrics as soon as possible—daily, weekly, monthly metrics are most useful—using visual displays such as time trend charts and bar charts.

### Review and Use

Review your set of metrics on a regular basis—daily, weekly, monthly, quarterly, annually. Use metrics to make needed improvements whenever possible.

Make metrics fun, useful and a lively part of your microsystem development process. Discuss Metrics That Matter frequently and take action on them as needed.

\* JCAHO, Joint Commission on Accreditation of Healthcare Organizations  
CMS, Centers for Medicare and Medicaid Services  
NQF, National Quality Foundation

## Metrics That Matter

- Review the currently determined “best metrics” your pharmacy should be monitoring.
- List your current performance in these metrics and what the targets are.

[illegible]

## Metrics That Matter

[illegible]

## Step 3 Diagnose

With the Interdisciplinary Lead Team review the 5Ps assessment, Metrics That Matter, and with consideration of your organizational strategic plan, select a first “theme,” (e.g., access, safety, flow, reliability, customer satisfaction, staff morale, prevention, supply and demand) for improvement.

- The purpose of assessing is to make an informed and correct overall diagnosis of your supporting microsystem.
- First, identify and celebrate the strengths of your system.
- Second, identify and consider opportunities to improve your system.
  - The opportunities to improve may come from your own microsystem—based on assessment, staff suggestions and/or patient and family needs and complaints.
  - The opportunities to improve may come from outside your microsystem—based on a strategic project or external performance/quality measures.
  - Look not only at the detail of each of the assessment tools, but also synthesize all of the assessments and Metrics That Matter to “get the big picture” of the microsystem. Identify linkages within the data and information. Consider:
    - Waste and delays in the process steps. Look for processes that might be redesigned to result in better functions for roles and better outcomes for patients.
    - Patterns of variation in the microsystem. Be mindful of smoothing the variations or matching resources with the variation in demand.
    - Patterns of outcomes you wish to improve.
- It is usually smart to pick or focus on one important “theme” to improve at a time, and work with all the “players” in your system to make a big improvement in the area selected.
- Suggestions on how to make your diagnosis and select a theme follow next.

### Diagnose Your Research Microsystem

#### Write your Theme for Improvement

#### Overall Theme “Global” Aim Statement

Create an aim statement that will help keep your focus clear and your work productive:

*We aim to improve:* \_\_\_\_\_  
(Name the process)

*In:* \_\_\_\_\_  
(Clinical location in which process is embedded)

*The process begins with:* \_\_\_\_\_  
(Name where the process begins)

*The process ends with:* \_\_\_\_\_  
(Name the ending point of the process)

*By working on the process, we expect:* \_\_\_\_\_  
(List benefits)

*It is important to work on this now because:* \_\_\_\_\_  
(List imperatives)



## Step 4 Treat

Draft a clear aim statement and way to measure the aim using improvement models—PDSA (Plan-Do-Study-Act) and SDSA (Standardize-Do-Study-Act).

- Now that you've made your diagnosis and selected a theme worthy of improving, you are ready to begin using powerful Change Ideas, improvement tools, and the scientific method to change your microsystem.
- This begins with making a specific aim and using Plan-Do-Study-Act (PDSA), which is known as the “model for improvement.”
- After you have run your tests of change and have reached your measured aim, the challenge is to maintain the gains that you have made. This can be done using Standardize-Do-Study-Act (SDSA), which is the other half of making improvement that has “staying power.”
- You will be smart to avoid totally reinventing the wheel by taking into consideration best known practices and Change Ideas that other clinical teams have found to really work. A list of some of the best “Change Ideas” that might be adapted and tested in your practice follows the aim statement worksheet.

### Specific Aim Statement

Create a specific aim statement that will help keep your focus clear and your work productive.

We will ☐ improve ☐ increase ☐ decrease

The ☐ quality ☐ number/amount of ☐ percentage of:

\_\_\_\_\_

*(process)*

By: \_\_\_\_\_

*(percentage)*

**OR**

From: \_\_\_\_\_

*(baseline/state/number/amount/percentage)*

To/By: \_\_\_\_\_

*(describe the change in quality or state the number/amount/percentage)*

By: \_\_\_\_\_

*(date)*

Example: We will increase the number of patients who receive Flu vaccinations from 24% to 100%  
By May 1<sup>st</sup>.

# Treat Your Research Microsystem

- Once you have completed the assessment and diagnosis of your research microsystem and have a clear theme to focus on, review current best practice and Change Ideas to consider.
- The Change Ideas will continue to develop as more field testing is done and more colleagues design improvements.

## Research Practice Change Ideas to Consider:

You will find additional support and tools at the websites listed below

Change Ideas to Improve Access to Care <http://www.clinicalmicrosystem.org/access.htm>

1. Shape Demand
2. Match Supply and Demand
3. Redesign the System

Change Ideas to Improve Interaction

4. Design group visits or Shared Medical Appointments <http://www.clinicalmicrosystem.org/sma.htm>
5. Utilize email care
6. Create a practice website
7. Optimize professional roles to subpopulation care management

Change Ideas to Improve Reliability

Change Ideas to Improve Vitality

8. Engage all staff in continuous improvement and research
9. Develop strategies to actively develop individual staff
10. Create a favorable financial status which supports investments in the practice
11. Utilize “daily huddle” process with Pharmacists, Pharmacy Techs and clerical staff to review yesterday, plan for today, tomorrow and the coming week (pg28)

\*visit [www.ihl.org](http://www.ihl.org) and [www.clinicalmicrosystem.org](http://www.clinicalmicrosystem.org) for the latest ideas

**Consider the Change Concepts on page 295 of *The Improvement Guide* by Langley, Nolan, Nolan, Norman and Provost (1996). The main change categories are listed below.**

- A. Eliminate Waste
- B. Improve Workflow
- C. Optimize Inventory
- D. Change the Work Environment
- E. Enhance the Producer/Customer Relationship
- F. Manage Time
- G. Manage Variation
- H. Design Systems to Avoid Mistakes
- I. Focus on the Product or Service

Langley G, Nolan K, Nolan T, Norman T, Provost L. *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance*. 1<sup>st</sup> ed. The Jossey-Bass Business & Management Series. San Francisco, CA: Jossey-Bass Publishers; 1996: xxix, 370.

# Huddle Sheet

- What can we proactively anticipate and plan for in our work day/week? At the beginning of the day, hold a review of the day, review of the coming week and review of the next week. Frequency of daily review is dependent on the situation, but a mid-day review is also helpful.
- This worksheet can be modified to add more detail to the content and purpose of the huddles.

## Huddle Sheet

Practice: \_\_\_\_\_ Date: \_\_\_\_\_

**Aim:** Enable the Supporting Microsystem to proactively anticipate and plan actions based on patient/customer need and available resources, and contingency planning.

### Follow-ups from Yesterday

**“Heads up” for Today: (include special customer needs, sick calls, staff flexibility, contingency plans)**

Meetings:

### Review of Tomorrow and Proactive Planning

Meetings:

# Treat Your Supporting Microsystem

## Plan-Do-Study-Act PDSA

Complete the Plan-Do-Study-Act worksheet to execute the Change Idea in a disciplined measured manner, to reach the specific aim.

**Plan** → How shall we PLAN the pilot? Who? Does what? When? With what tools? What baseline data will be collected?

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

**Do** → What are we learning as we DO the pilot? What happened when we ran the test? Any problems encountered? Any surprises?

**Study** → As we study what happened, what have we learned? What do the measures show?

**Act** → As we ACT to hold the gains or abandon our pilot efforts, what needs to be done? Will we modify the change? Make a PLAN for the next cycle of change.

The Lead Team should continue to meet weekly to review progress in the design of the PDSA and then during the execution of the test of change in a pilot format to observe and learn about the Change Idea implementation. Remember to always test Change Ideas in small pilots to learn what adaptations and adjustments need to be made before implementing on a larger scale. Data collection and review during the testing is important to answer the question: How will we know if the Change Idea is an improvement?

Once the PDSA cycle is completed and the Lead Team reviews the data and qualitative findings, the plan should be revised or expanded to run another cycle of testing until the aim is achieved.

When the Change Idea has been tested and adapted to the context of the clinical microsystem and the data demonstrates that the Change Idea makes an improvement, the Lead Team should design the Standardize-Do-Study-Act (SDSA) process to ensure the process is performed as designed. During this process it is important to continually learn and improve by monitoring the steps and data to identify new opportunities for further improvement. You will realize you will move from “PDSA” to “SDSA” and back to “PDSA” in your continuous improvement environment. New methods, tools, technology or best practice will often signal the need to return to PDSA to achieve the next level of high performance. You want to be able to go from “PDSA” to “SDSA” and back to “PDSA” as needed. The Scientific method is a two-way street that uses both experimentation (i.e., PDSA) as well as standardization (i.e., SDSA).

# Standardizing Current Best Process and Holding the Gains

## Standardize-Do-Study-Act SDSA

**Standardize** the process (specify what roles do what activities in what sequence with what information flow). A good way to track and standardize process is through the creation of a Pharmacy Practice Playbook. The Playbook is the collection of process maps to provide care and services that all staff are aware of and accountable for. The Playbook can be used to orient new staff, document current processes and contribute to performance appraisals.

**Do** the work to integrate the standard process into daily work routines to ensure reliability and repeatability.

**Study** at regular intervals. Consider if the process is being “adhered” to and what “adjustments” are being made. Review the process when new innovations, technology or roles are being considered. Review what the measures of the process are showing.

**Act** based on the above, maintain or “tweak” the standard process and continue doing this until the next “wave” of improvements/innovations takes place with a new series of PDSA cycles.

**STANDARDIZE** → How shall we **STANDARDIZE** the process and embed it into daily practice? Who? Does what? When? With what tools? What needs to be “unlearned” to allow this new habit? What data will inform us if this is being standardized daily?

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

\*Playbook-Create standard process map to be inserted in your Playbook.

**DO** → What are we learning as we **DO** the standardization? Any problems encountered? Any surprises? Any new insights to lead to another PDSA cycle?

**STUDY** → As we **STUDY** the standardization, what have we learned? What do the measures show? Are there identified needs for change or new information or “tested” best practice to adapt?

**ACT** → As we **ACT** to hold the gains or modify the standardization efforts, what needs to be done? Will we modify the standardization? What is the Change Idea? Who will oversee the new PDSA? Design a new PDSA cycle. Make a PLAN for the next cycle of change. Go to PDSA Worksheet.

## Step 5 Follow-Up

- Monitor the new patterns of results and select new themes for improvement.
- Embed new habits into daily work: daily huddles, weekly Lead Team meetings, monthly “town hall” meetings, datawalls, and storyboards.

### Follow-Up

Improvement in health care is a continuous journey.

The new patterns need to be monitored to ensure the improvements are sustained. Embedding new habits into daily work with the use of “huddles” to review and remind staff, as well as weekly Lead Team meetings keeps everyone focused on improvements and results that can lead to sustained and continuous improvements.

Datawalls, storyboards and monthly all-staff meetings are methods to embed new habits and thinking for improvement.

The Lead Team should repeat the process for newly recognized themes and improvements that are identified in the assessment and Metrics That Matter.

## Assessing Your Practice Discoveries and Actions

Know Your Patients	Discoveries	Actions Taken
1. Age Distribution	1. 30% of our patients > 65 years old	1. Designated special group visits to review specific needs of this age group including physical limitations, dietary considerations.
2. Disease Identification	2. We do not know what percent our patients have diabetes.	2. Staff reviewed coding/ billing data to determine approximate numbers of patients with diabetes.
3. Health Outcomes	3. We do not know what the range of HgA1C is for our patients with diabetes or if they are receiving appropriate ADA recommended care in a timely fashion.	3. Staff conducted a chart audit with 50 charts during a lunch hour. Using a toll designed to track outcomes; each member of the staff reviewed 5 charts and noted their findings on the audit tool.
4. Most Frequent Diagnosis	4. We learned we had a large number of patients with stable hypertension and diabetes, seeing the physician frequently. We also learned that during certain season we had huge volumes of acute diseases such as URI, Pharyngitis and poison ivy.	4. Designed and tested a new model of care delivery for stable hypertension and diabetes optimizing the RN role in the practice using agreed upon guidelines, protocols and tools.
5. Patient Satisfaction	5. We don't know what patients think unless they complain to us.	5. Implemented the "point of service" patient survey that patients completed and left in a box before leaving the practice.
Know Your Professionals	Discoveries	Actions Taken
1. Provider FTE	1. We were making assumptions about provider time in the clinic without really understanding how much time providers are OUT of the Clinic with hospital rounds, nursing home rounds, etc.	1. Changed our scheduling processes, utilized RNs to provide care for certain subpopulations.
2. Schedules	2. Several providers are gone at the same time every week, so one provider is often left and the entire staff works overtime that day.	2. Evaluated the scheduling template to even out each provider's time to provide consistent coverage of the clinic.
3. Regular Meetings	3. The doctors meet together every other week. The secretaries meet once a month.	3. Entire practice meeting every other week on Wednesdays.
4. Hours of Operation	4. The beginning and the end of the day are always chaotic. We realized we are on the route for patients between home and work and want to be seen when we are not open.	4. Opened one hour earlier and stayed open one hour later each day. The heavy demand was managed better and overtime dropped.
5. Activity Surveys	5. All roles are not being used to their maximum. RNs only room patients and take vital signs, medical assistants doing a great deal of secretarial paperwork and some secretaries are giving out medical advice.	5. Roles have been redesigned and matched to individual education, training and licensure.
Know Your Processes	Discoveries	Actions Taken
1. Cycle Time	1. Patient lengths of visits vary a great deal. There are many delays.	1. The staff identified actions to eliminate, steps to combine, and learned to prepare the charts for the patient visit before the patient arrives. The staff also holds daily "huddles" to inform everyone on the plan of the day and any issues to consider throughout the day.
2. Key Supporting Processes	2. None of us could agree on how things get done in our practice.	2. Detailed flow charting of our practice to determine how to streamline and do in a consistent manner.
3. Indirect Patient Pulls	3. The providers are interrupted in their patient care process frequently. The number one reason is to retrieve missing equipment and supplies from the exam room.	3. The staff agreed on standardization of exam rooms and minimum inventory lists that were posted inside the cabinet doors. A process was also determined on WHO and HOW the exam rooms would be stocked regularly and through the use of an assignment sheet, a person was identified and held accountable.
Know Your Patterns	Discoveries	Actions Taken
1. Demand on the Practice	1. There are peaks and lows of the practice depending on day of the week, session of the day or season of the year.	1. Resources and role are matched to demand volumes. Schedules are created which match resources to variation.
2. Communication	2. We do not communicate in a timely way, nor do we have a standard form to communicate.	2. Every other week practice meeting to help communication and e-mail use of all staff to promote timely communication.
3. Cultural	3. The doctors don't really spend time with non-doctors.	3. The staff meetings heightened awareness of behaviors has helped improve this.
4. Outcomes	4. We really have not paid attention to our practice outcomes.	4. Began tracking and posting on a data wall to keep us alert to outcomes.
5. Finances	5. Only the doctors and the practice managers know about the practice money.	5. Finances are discussed at the staff meetings and everyone is learning how we make a difference in our financial performance.

Assessing Your Practice Discoveries and Actions		
Common High Yield Wastes	Recommended Method to Reduce Waste	Traps to Avoid
1. Exam rooms not stocked or standardized – missing supplies or equipment	<ul style="list-style-type: none"> <li>- Create Standard Inventory supplies for all exam rooms.</li> <li>- Design process for regular stocking of exam rooms with accountable person</li> <li>- Standardize and utilize all exam rooms</li> </ul>	<ul style="list-style-type: none"> <li>- Don't assume rooms are being stocked regularly – track and measure.</li> <li>- Providers will only use "their own" rooms</li> <li>- Providers cannot agree on standard supplies; suggest "testing"</li> </ul>
2. Too many appointment types which create chaos in scheduling	<ul style="list-style-type: none"> <li>- Reduce appointment types to 2-4</li> <li>- Utilize standard building block to create flexibility in schedule.</li> </ul>	<ul style="list-style-type: none"> <li>- Frozen schedules of certain types</li> <li>- Use one time (e.g. 10-15 minute "building blocks")</li> </ul>
3. Poor communication amongst the providers and support staff about clinical sessions and patient needs.	<ul style="list-style-type: none"> <li>- Conduct daily morning "huddles" to provide a forum to review the schedule, anticipate needs of patients, plan supplies/ information needed for a highly productive interaction between patient and provider.</li> </ul>	<ul style="list-style-type: none"> <li>- People not showing up for scheduled huddles. Gain support of providers who are interested, test ideas and measure results</li> <li>- Huddles last longer than 15 minutes, use a work sheet to guide huddle</li> <li>- Don't sit down</li> </ul>
4. Missing information or chart for patient visit.	<ul style="list-style-type: none"> <li>- Review patient charts BEFORE the patient arrives – recommended the day before to ensure information and test results are available to support the patient.</li> </ul>	<ul style="list-style-type: none"> <li>- Avoid doing chart review when patient is present</li> <li>- If you have computerized test results, don't print the results</li> </ul>
5. Confusing messaging system	<ul style="list-style-type: none"> <li>- Standardize messaging processes for all providers</li> <li>- Educate/ train messaging content</li> <li>- Utilize a process with prioritizing methods such as a "bin" system in each provider office.</li> </ul>	<ul style="list-style-type: none"> <li>- Providers want their "own" way – adding to confusion to support staff and decreases ability for cross coverage</li> <li>- Content of message can't be agreed upon – test something</li> </ul>
6. High prescription renewal request via phone.	<ul style="list-style-type: none"> <li>- Anticipate patient needs</li> <li>- Create "reminder" systems in office, e.g. posters, screensavers</li> <li>- Standardize information that</li> </ul>	<ul style="list-style-type: none"> <li>- Doesn't need to be the RN – Medical assistants can obtain this information</li> </ul>
7. Staff frustrated in roles and unable to see new ways to function.	<ul style="list-style-type: none"> <li>- Review current roles and functions using activity survey sheets</li> <li>- Match talent, education, training, licensure to function</li> <li>- Optimize every role</li> <li>- Eliminate functions</li> </ul>	<ul style="list-style-type: none"> <li>- Be sure to focus on talent, training and scope of practice not individual people.</li> </ul>
8. Appointment schedules have limited same day appointment slots.	<ul style="list-style-type: none"> <li>- Evaluate follow-up appointments and return visit necessity.</li> <li>- Extend intervals of standard follow-up visits</li> <li>- Consider RN visits</li> <li>- Evaluate the use of protocols and guidelines to provide advice for homecare- <a href="http://www.icsi.org">www.icsi.org</a></li> <li>- Consider phone care</li> </ul>	<ul style="list-style-type: none"> <li>- Don't set a certain number of same day appointments without matching variations throughout the year.</li> </ul>
9. Missed disease-specific/ preventive interventions and tracking.	<ul style="list-style-type: none"> <li>- Utilize the flow sheets to track preventative activities and disease-specific interventions.</li> <li>- Utilize "stickers" on charts to alert staff to preventative/ disease specific needs</li> <li>- Review charts before patient visits</li> <li>- Create registries to track subpopulation needs.</li> </ul>	<ul style="list-style-type: none"> <li>- Be alert to creating a system for multiple diseases and not have many stickers and many registries.</li> </ul>
10. Poor communication and interactions between members.	<ul style="list-style-type: none"> <li>- Hold weekly staff meetings to review practice outcomes, staff concerns, improvement opportunities.</li> <li>- Education and Development</li> </ul>	<ul style="list-style-type: none"> <li>- Hold weekly meetings on a regular day, time and place</li> <li>- Do not cancel – make the meeting a new habit</li> </ul>
11. High no-show rate	<ul style="list-style-type: none"> <li>- Consider improving same day access</li> <li>- Reminder systems</li> </ul>	<ul style="list-style-type: none"> <li>- Automated reminder telephone calls are not always well received by patients</li> </ul>
12. Patient expectations of visit not met, resulting in phone calls and repeat visits.	<ul style="list-style-type: none"> <li>- CARE vital sign sheet- <a href="http://www.howsyourhealth.org">www.howsyourhealth.org</a></li> <li>- Evaluating patient at time of visit if their needs were met</li> </ul>	<ul style="list-style-type: none"> <li>- Use reminders to question patient about needs being met</li> <li>- New habits not easily made.</li> </ul>

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