The Health Information Technology Summit™

A Leading Forum on Electronic Health Record and Rapidly Emerging Health Information Technology Policy...both Nationally and Globally

HIT Clinical Process and Work-Flow Change

How to Make it Work

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Making it Work:
Change and its Challenges

- **Change is…**
  - Essential
  - Unsettling
  - Easily taken hostage
- **The <u>power</u> of the status quo**
- **Assessing organizational culture for change**
  - Values, beliefs, norms that shape behavior
- **Change leaders and champions are <u>vital</u>**

Making it Work:
Assessing Readiness for Change

- Innovation and risk-taking
- Attention to detail
- Outcome orientation
- People orientation
- Team orientation
- Aggressiveness
- Stability

Your Compass for Clinical Change Finding "True North"

What guides your decisions?

- Patient-centered
- System-centered
- Access to care
- Proactivity
- Quality
- Quantity
- Error detection
- Error prevention

- Safety
- Efficiency
- Data-driven
- Performance
- Cost-benefit
- Risk-reward
- Accountability

Making it Work:
A Framework for Leading Change

- Urgency
- Guiding coalitions
- Vision and strategy
- Communication

- Empowerment
- Short-term wins
- Consolidating and progressing
- Anchoring in culture

Leading Change
John P. Kotter

Kotter J: *Leading Change*; http://harvardbusinessonline.hbsp.harvard.edu

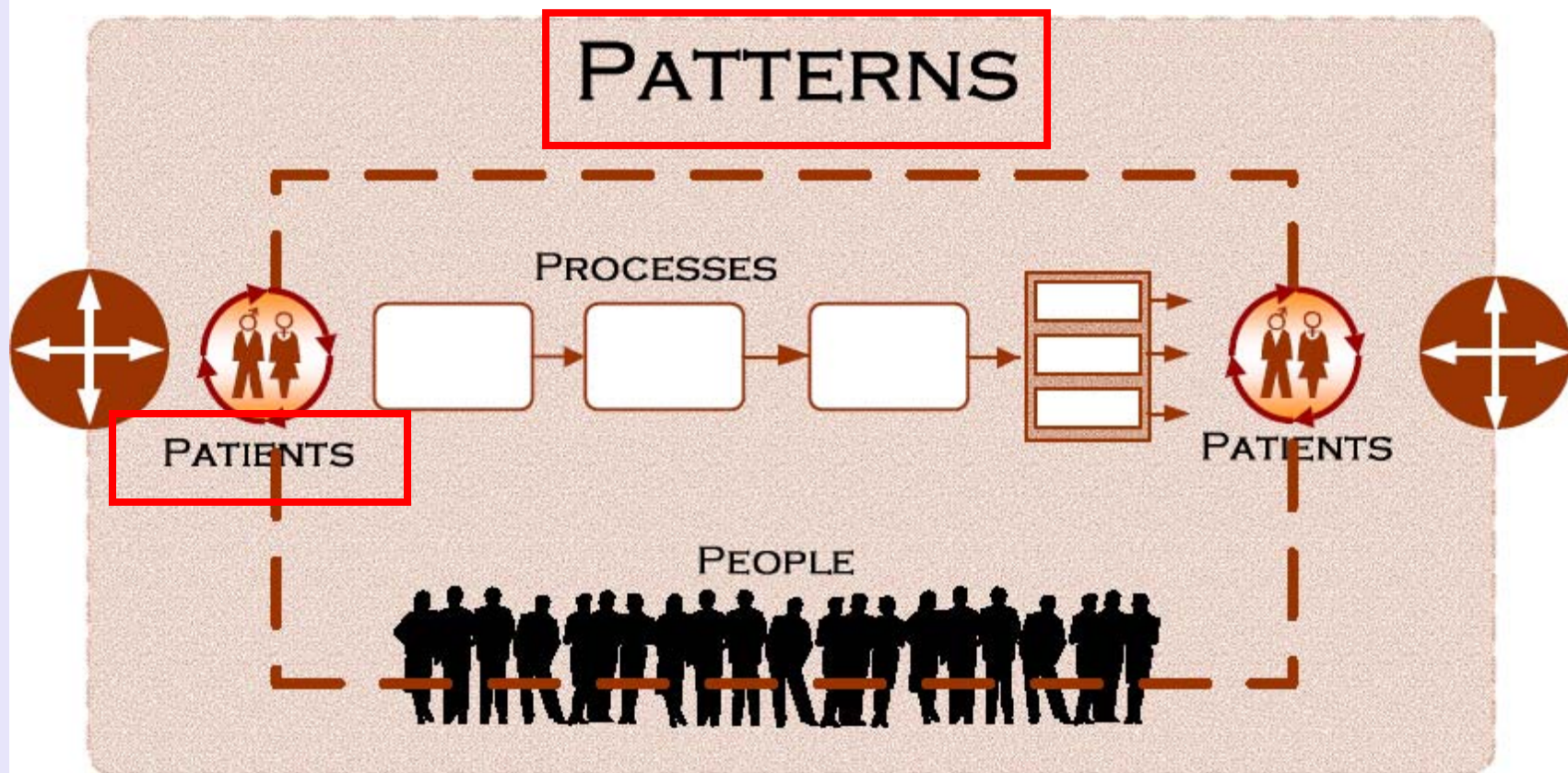# Making Change Work: What is Required?

- **Leadership**
  - Clinician-administrator synergy
  - Building a culture supportive of change
  - Establishing clear aims for improvement
- **Consumer focus**
- **Learning**
  - Systems
  - Measures
  - Evidence-based healthcare
  - Small-scale experimentation

http://www.hcqualitycommission.gov/final/chap12.html

Making Change Work: What is Required?
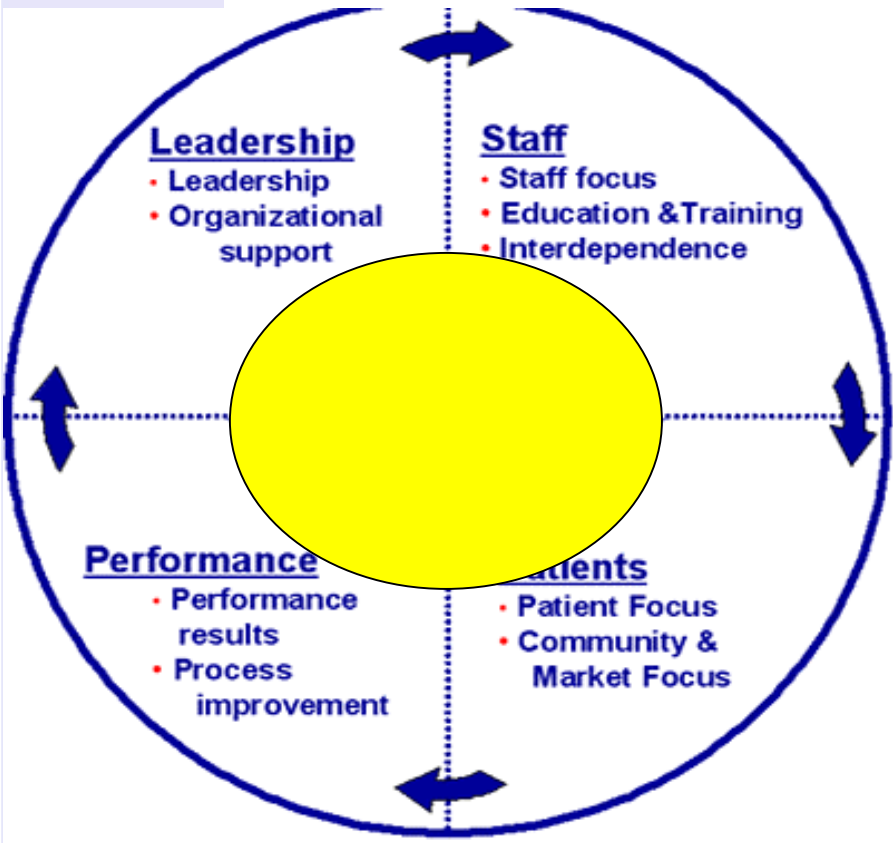
- **Organizational Change**
  - Process improvement and waste reduction
  - Error reduction
  - Building collaborative long-term relationships
  - Employee empowerment
- **Tools and techniques**

PRESIDENT'S ADVISORY COMMISSION ON
Consumer Protection AND
Quality IN THE
Health Care Industry

http://www.hcqualitycommission.gov/final/chap12.html

Washington, DC – October 20-23, 2004

Clinical Microsystems:
Data-driven Process/Workflow Change

PATTERNS

PROCESSES

PATIENTS

PATIENTS

PEOPLE

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www.clinicalmicrosystem.org

Clinical Microsystems Approach to Redesigning Care

Leadership
- Leadership
- Organizational support

Staff
- Staff focus
- Education & Training
- Interdependence

Performance
- Performance results
- Process improvement

Patients
- Patient Focus
- Community & Market Focus

The Systems of Healthcare

- Self-care System
- Individual caregiver & patient System
- Community, Market, Social Policy System
- Macro-organization System
- Microsystem
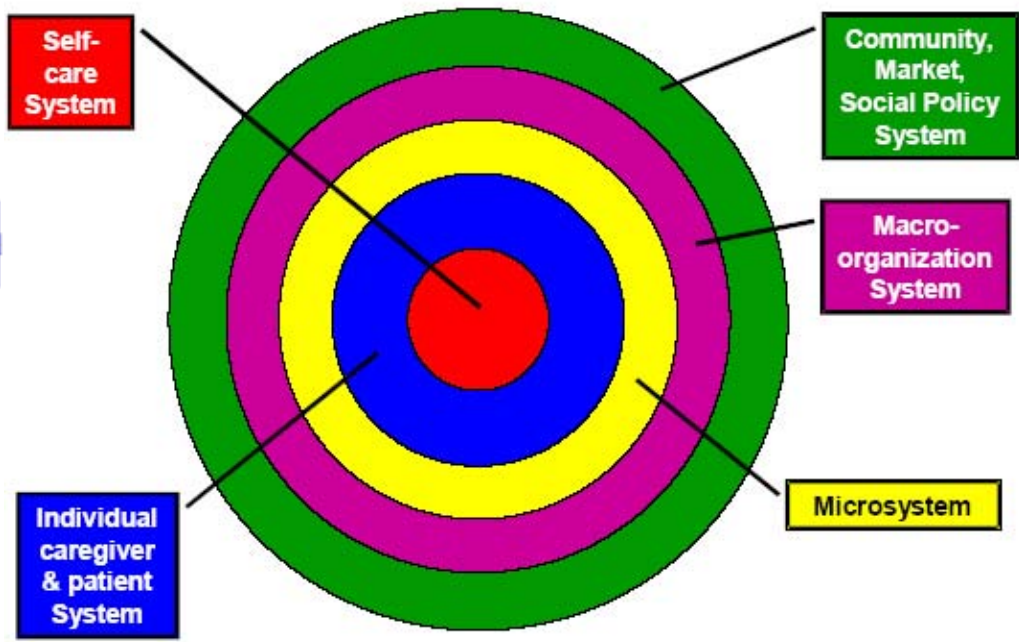
www.clinicalmicrosystem.org

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Clinical Microsystems Approach to Redesigning Care

- Small group working together regularly to provide care

- Often part of a health organization

- Clinical and business aims

- Linked processes

- Shared information environment

- Produces performance outcomes

Consumer Focus: Know Your Patients

- Number of patients in your practice
- Age and gender distribution
- Top 10 conditions seen
- Top 10 "high utilizers"
- Measure daily demand
- # of patients seen/day
- # of patients seen last week
- # of *NEW* patients last month
- Other clinical microsystems you interact with

PATIENTS

Consumer Focus:
Know Your Patients

- List health outcome measures

- # of dis-enrolling patients last month

- Encounters per provider per year

- Measure patient satisfaction

- # of "out of practice" visits each year

- Condition-sensitive hospital/ED rate

- Use www.howsyourhealth.com

PATIENTS

Know Your People:
Assess Your Staff

- Identify members of staff

- Identify FTE by member

- Define roles

- List hours of operation

- Measure daily capacity

- Measure backlog

  - 3rd available appt, by provider

Know Your People:
Assess Your Staff

◼ Current appointment types and duration

◼ Services currently offered

- Group visits, E-mail, Web portal, etc.

◼ Staff satisfaction

◼ Note if every member meets regularly

◼ Operating margin (*Revenue – Expense*)

◼ Evaluate individual skills and needs

PEOPLE

Know Your Processes: Activities, Logs, Walk-throughs

- Measure office visit cycle time

- Activity survey sheets

- Telephone tracking log

- Demand tracking log

- Nurse triage tracking sheet

PROCESSES

Know Your Processes: Activities, Logs, Walk-throughs

- Track visit and non-visit activities, occurrences

- Track unplanned activities

  - Sample one day for provider

- "Walk-through" your practice from patient perspective

- Core and supporting process assessment

PROCESSES

Know Your Patterns: Practice Profile, Patient Cycles

- 3rd available appt by provider (backlog)
- Office visit cycle time
- Daily demand
- Daily capacity
- Patient satisfaction
- Staff satisfaction
- Assessment tool for core/key processes

PATTERNS

Know Your Patterns:
Practice Profile, Patient Cycles

- Operating margin
- Note if every member meets regularly
- List things you are most proud of
- List successful changes
- How safety/reliability are discussed
- Outcome measures

Performance Data Reporting: An Example

Ad-Hoc Reports
Owner: Administrator
Modified: 9/15/04 4:12:19 PM

Demographics
Owner: Administrator
Modified: 9/15/04 4:12:46 PM

Diabetes Physician Recognition Program
Owner: Administrator
Modified: 9/15/04 4:13:58 PM

Disease Management
Owner: Administrator
Modified: 9/15/04 4:12:52 PM

Metadata Reports
Owner: Administrator
Modified: 9/15/04 4:13:24 PM

Patient Medications
Owner: Administrator
Modified: 9/15/04 4:13:51 PM

Patient Observation
Owner: Administrator
Modified: 9/15/04 4:13:52 PM

Patient Problems
Owner: Administrator
Modified: 9/15/04 4:13:55 PM

Time-Based Reports
Owner: Administrator
Modified: 9/15/04 4:14:25 PM

Medical Quality Improvement Consortium (MQIC); ©GE Healthcare Information Technologies

Performance Data Reporting: Drilling Down

Diabetes
Owner: Administrator
Modified: 9/15/04 4:12:48 PM

Hyperlipidemia Management
Owner: Administrator
Modified: 12/11/02 11:33:58 AM
Subscriptions   Export   PDF

Hypertension Management
Owner: Administrator
Modified: 9/15/04 4:23:08 PM
Subscriptions   Export   PDF

Secondary Prevention of Congestive Heart Failure
Owner: Administrator
Modified: 12/11/02 11:33:58 AM
Subscriptions   Export   PDF

Secondary Prevention of Stroke, IHD, PVD
Owner: Administrator
Modified: 12/11/02 11:33:58 AM
Subscriptions   Export   PDF

Secondary Prevention Post Myocardial Infarction
Owner: Administrator
Modified: 12/11/02 11:33:58 AM
Subscriptions   Export   PDF

Medical Quality Improvement Consortium (MQIC); ©GE Healthcare Information Technologies

Performance Data Reporting:
Key Quality Measures

Diabetes ACE Inhibitor Management
Owner: Administrator
Modified: 12/11/02 11:33:58 AM
Subscriptions   Export   PDF

Diabetes Aspirin Management
Owner: Administrator
Modified: 12/11/02 11:33:58 AM
Subscriptions   Export   PDF

Diabetes Blood Pressure Management
Owner: Administrator
Modified: 9/15/04 4:23:08 PM
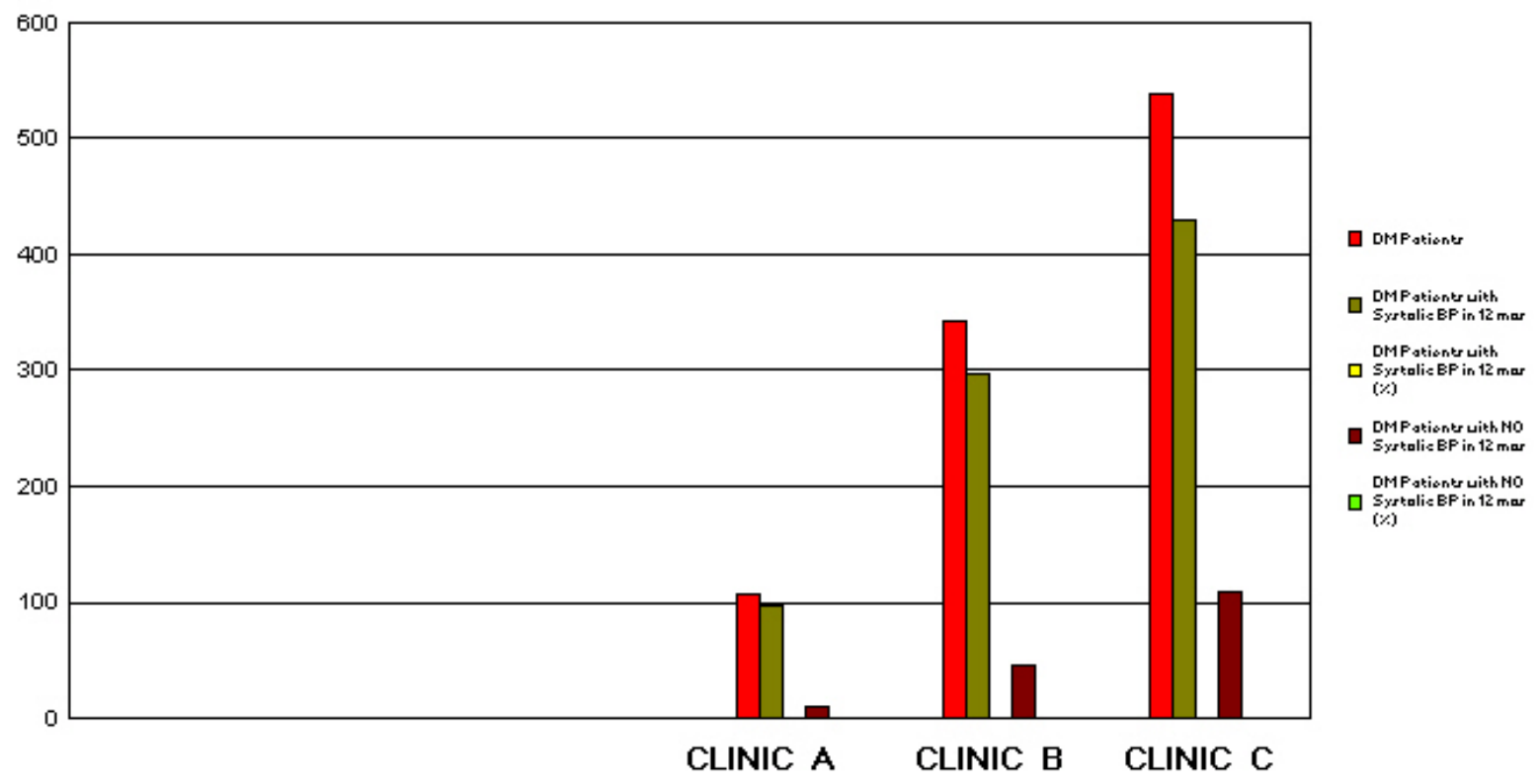Subscriptions   Export   PDF

Diabetes HgbA1c Management
Owner: Administrator
Modified: 12/11/02 11:33:58 AM
Subscriptions   Export   PDF

Diabetes LDL Management
Owner: Administrator
Modified: 12/11/02 11:33:58 AM
Subscriptions   Export   PDF

Medical Quality Improvement Consortium (MQIC); ©GE Healthcare Information Technologies

Diabetes Blood Pressure Management->Resp Provider Loc

Resp Provider Loc	Metrics	DM Patients	DM Patients with Systolic BP in 12 mos	DM Patients with Systolic BP in 12 mos (%)
CLINIC A		108	97	89.81%
CLINIC B		343	298	86.88%
CLINIC C		539	429	79.59%

Primary Care Practice Profile

Aim of Our Clinical Microsystem:

Site Name:	Site Contact:	Date:
Practice Manager:	MD Lead:	Nurse Lead:

A. *Know Your Patients:* Take a close look into your practice, create a "high-level" picture of your PATIENT POPULATION (panel) that you serve. Who are they? What resources do they use? How do the patients view the care they receive?

Est. Age Dist. of Pts:	%
birth - 10 years	
11 - 18 years	
19 - 45 years	
46 - 64 years	
65 - 79 years	
80+ years	
% Females	
Est. # (unique) pts. in Practice	

Disease Specific Health Outcomes (pg A21)

Diabetes HgA1c =

Hypertension B/P =

LDL <100 =

Patients who are Frequent Users of Your Practice Services and Their Reasons for Seeking Frequent Interactions and Visits	

10 Most Frequent Conditions/Diagnoses	

Other Clinical Microsystems we interact with regularly, as we provide care for our patients. (eg. OR, VNA)	

Top Referrals (e.g. GI, Cardiology)	

① Access/Pt. Satis. Scores (pg 5)	% Excellent
Experience via Phone	
Length of time to get your appointment	
Saw who I wanted to see	
Time spent with person saw today	

Pt. Population: Do these numbers change by season? (Y/N)	#	Y/N
# Patients seen in a day		
# Patients seen in last week		
# New patients in last month		
# Disenrolling patients in last month		
# Encounters per provider per year		

Out of Practice Visits	
Condition Sensitive Hospital Rate	
Emergency Room Visit Rate	

① Patient Satisfaction with Access Survey - "Point of Service"

Patients have valuable insight into the quality and process of care we provide. You can choose to measure patient feedback specific to "access" to care - how patients experience getting an appointment by using the *Patient Access Survey* below *(see Appendix page **A9** for a tally sheet)*. This point of service survey can be completed at the time of the visit to give a real time sense of satisfaction.

You can also choose to measure the total visit experience using the *Office Practice Patient Viewpoint Survey* on Page 6. There is a tally sheet available in the *Appendix on pages A10-A12.*

Patient Access Survey

1. How would you rate your satisfaction with getting through to the office by phone?

   ☐ Excellent   ☐ Very Good   ☐ Good   ☐ Fair   ☐ Poor

Washington, DC – October 20-23, 2004

Demand Tracking Log via Telephone

This tracking log will assist you in understanding the practice phone call volume and why patients are calling. Put a tally mark each time one of the phone calls is for one of the listed categories. Total the calls for the day, and then total for the week for each category. Note which days are "high volume" days and sessions which are high volume. Monday, Tuesday and Friday are typical high volume days in office practice. **See page 15 for an example.**

Week of: _____	Appointment for Today		Appointment for Tomorrow		Appointment for Future		Test Results		Nurse Care		Prescription Refill		Referral Information		Need Information		Message for Provider		Talk with Provider		Other		TOTAL
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	

Appointment Demand Tracking Log - Specialty Demand (Primary Care Version)

This tracking log will assist you in understanding the practice demand for appointments. Demand for appointments can originate from many sources. Put a tally mark in one of the listed categories each time the event occurs . Total the demand for the day, and then total for the week for each category. Note which days are "high volume" days and sessions which are high volume. Monday, Tuesday and Friday are typical high volume days in office practice.

Week of: _____	Calls to Admin. for Appointment		E-mail to MD for Appointment		Inpatient Consults		Ad lib MD Call Consults		Ad lib MD Consult for Appointment		Letters for Appointment		Voice Mail		Other		Other		TOTAL
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	

Nurse Triage Demand Tracking Log

This tracking log will assist you in understanding the nurse triage phone call volume, why patients are calling, and what actions the RNs are taking. These data can help identify opportunities to change processes and roles to support the RN to function in roles to support patient care. Put a tally mark each time one of the phone calls is for one of the listed categories. Total the calls for the day, and then total for the week for each category. Note which days are "high volume" days and sessions which are high volume. Monday, Tuesday and Friday are typical high volume days in office practice. **See page 15 for an example.**

Week of: _____	Phone Advice		Need to Check with Provider for Advice		Message for Provider		Appointment for Today		Appointment for Tomorrow		Appointment for Future		Test Results		Prescription Refill		Referral Information		Other		Other		TOTAL
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Monday																							
Total																							

Patient Cycle Tool

One key measure of clinical microsystem efficiency is the patient cycle time. It is important to understand that cycle time is a result of systems, processes and individual style. This is defined as the time a patient enters the practice until they leave. The Patient Cycle Tool can be administered in several ways: a) Patients can carry the clipboard through their visit and note the times, b) Staff can write the times as the patient travels through the practice, c) Patients can be "shadowed" by a person to document the times. There is space to write comments in along the way.

Instructions: Please fill in the time at each point during your visit.
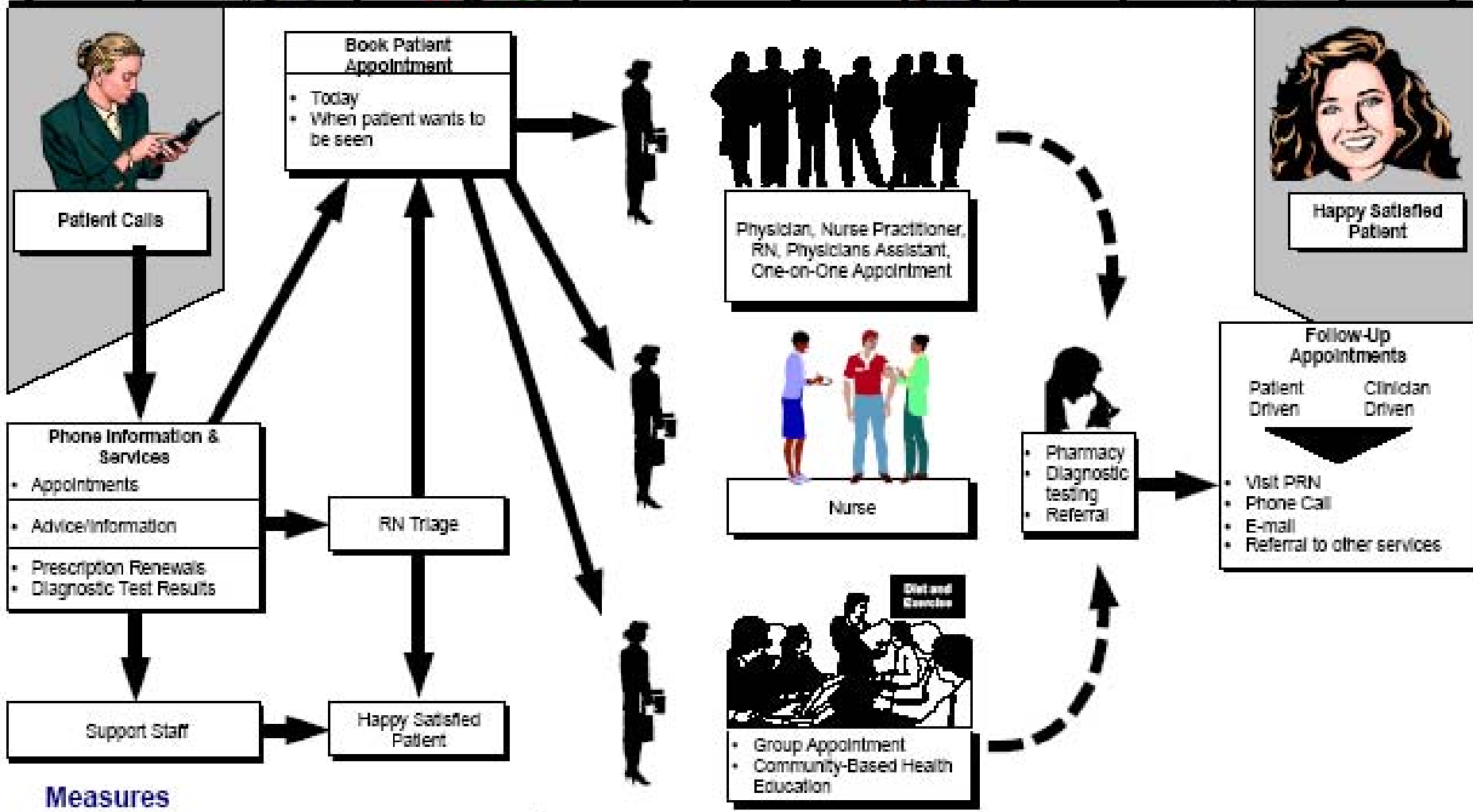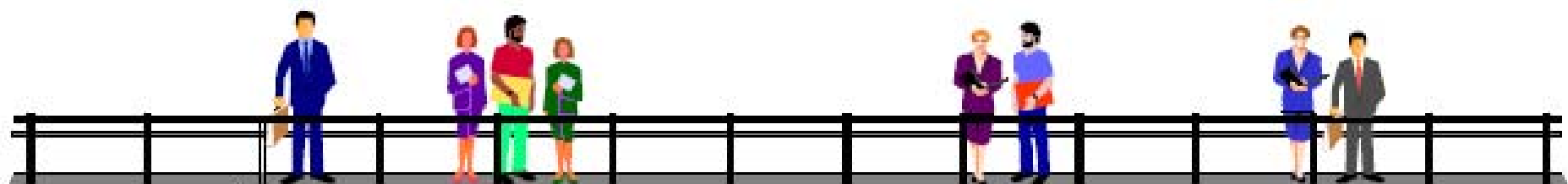
Date: _____

Scheduled appointment time:_____   Provider you are seeing today:_____

Time

	1. Time you checked in (e.g. 1:53 pm)
	2. Time you sat in the waiting room (e.g. 1:53 pm)

The Health Information Technology Summit™

Book Patient Appointment
- Today
- When patient wants to be seen

Patient Calls

Phone Information & Services
- Appointments
- Advice/Information
- Prescription Renewals
- Diagnostic Test Results

RN Triage

Support Staff

Happy Satisfied Patient

Physician, Nurse Practitioner, RN, Physicians Assistant, One-on-One Appointment

Nurse

- Group Appointment
- Community-Based Health Education

- Pharmacy
- Diagnostic testing
- Referral

Happy Satisfied Patient

Follow-Up Appointments

Patient Driven   Clinician Driven

- Visit PRN
- Phone Call
- E-mail
- Referral to other services

Measures

| Panel Size | Available SDA | Backlog | % of Patients seeing own PCP | Total Daily Visits | Number of Encounters/Yr. | Unarrived | Under/Over Volumes | Future Capacity | Patient Satisfaction |

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Rev: 3/27/02

Measuring and Improving Quality Six Sigma

"We measure what we value"

-- Mikel Harry, Richard Schroeder

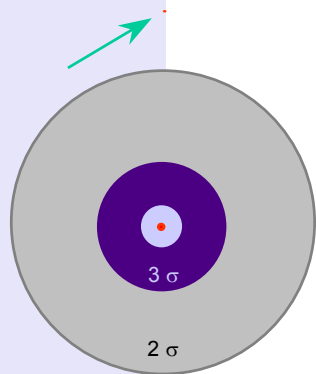"Whatever we measure, we tend to improve"

-- David Leach, MD, ACGME

- Defects per million opportunities
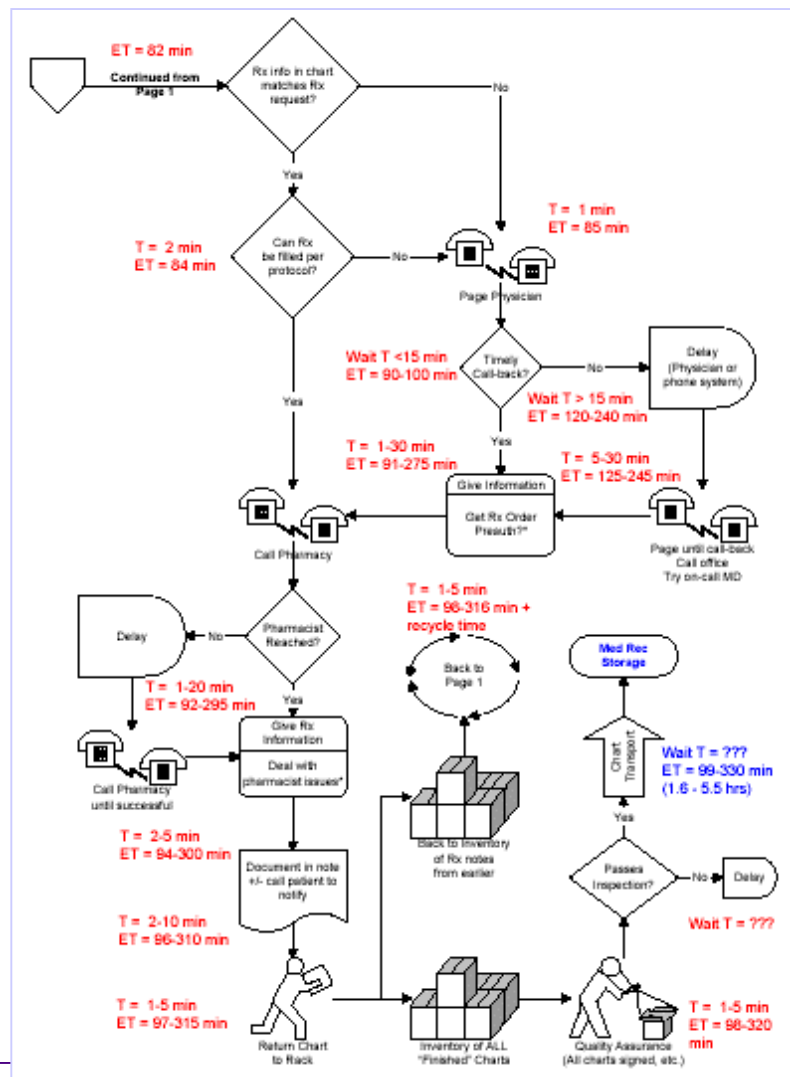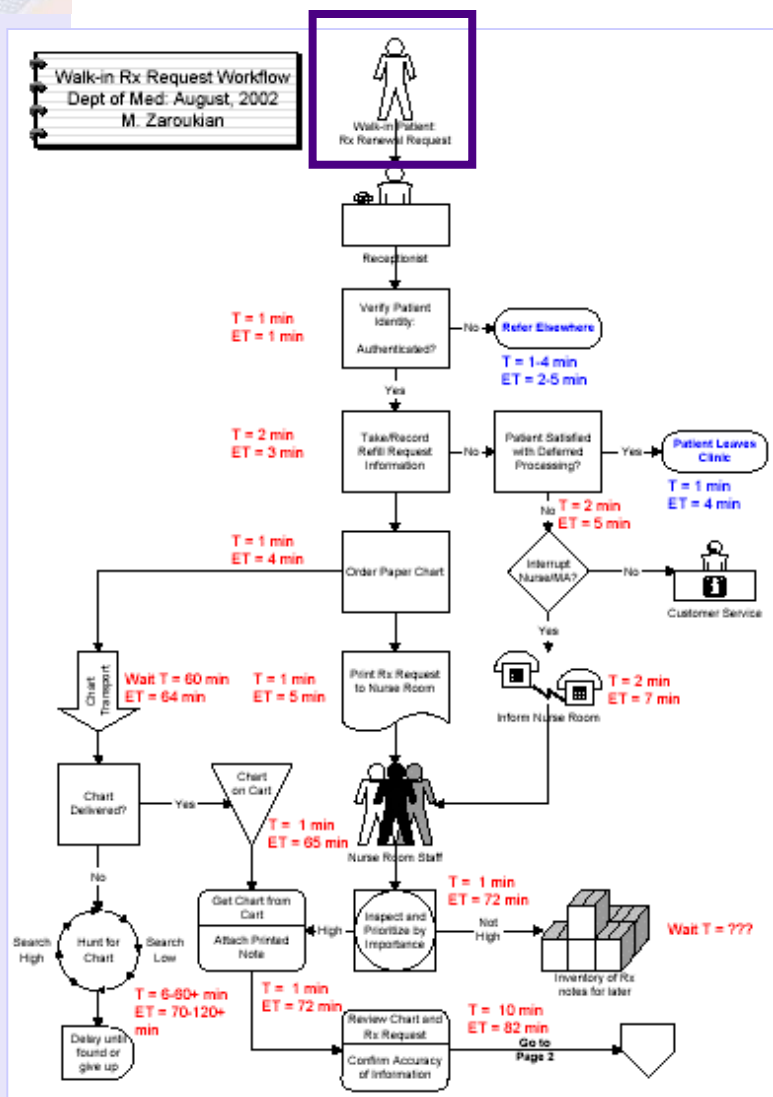- Customer-focused, data-driven philosophy

http://www.isixsigma.com

http://www.ge.com/sixsigma/

Six Sigma Key Concepts

σ level	defects/ 10^6
6	3.4
5	230
4	6210
3	66800
2	308000
1	690000

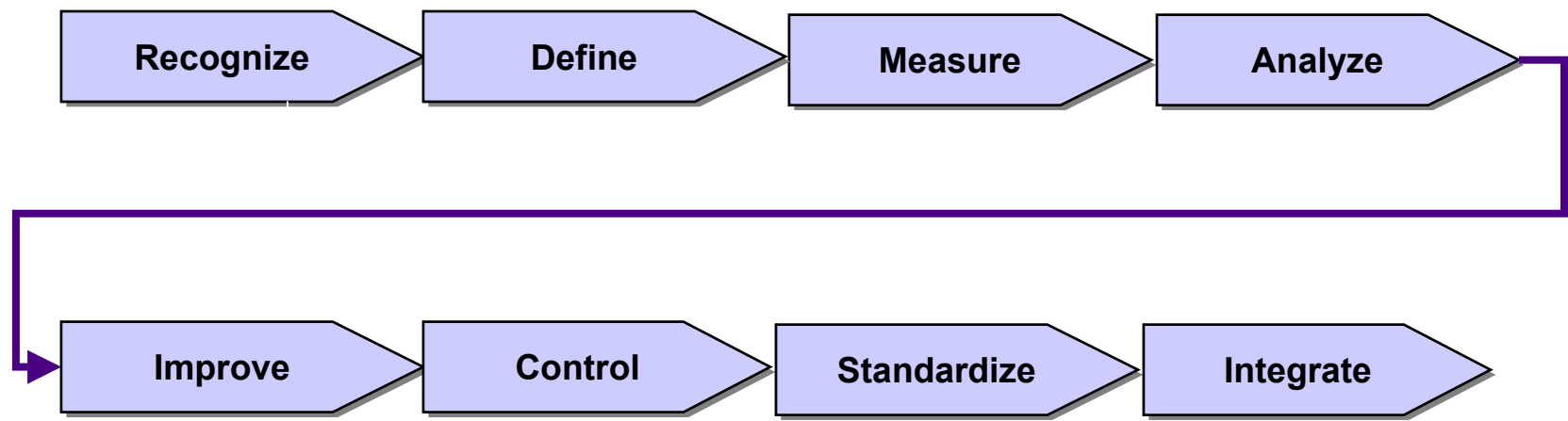|	
Critical to Quality:	Attributes most important to the customer
Defect:	Failing to deliver what the customer wants
Process Capability:	What your process can deliver
Variation:	What the customer sees and feels
Stable Operations:	Ensuring consistent, predictable processes to improve what the customer sees and feels
Design for Six Sigma:	Designing to meet customer needs and process capability

http://www.ge.com/sixsigma/

A Six Sigma Baseline Flow Diagram

Steps to Process Improvement

■ Six Sigma

Recognize	→	Define	→	Measure	→	Analyze	→

Improve	→	Control	→	Standardize	→	Integrate	→

■ PDSA
- Plan
- Do
- Study
- Act

Act → Plan → Do → Study (cycle)

Deming WE: The Deming Management Method, 1986.   *Washington, DC – October 20-23, 2004*   *Harry M, Schroeder R: Six Sigma 2000*
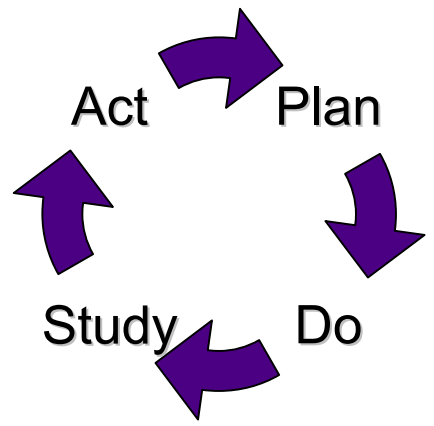
Clinical Process/Work-flow Redesign: 11 Principles

1. Don't move the patient
2. Increase clinician support
3. Create broad work roles
4. Organize care teams
5. Communicate directly; with urgency

HRSA Bureau of Primary Health Care

Clinical Process/Work-flow Redesign: 11 Principles

6. Start all visits on time
7. Exploit technology
8. Match capacity and demand
9. Prepare for the expected
10. Get all the tools you need
11. Do today's work today

HRSA Bureau of Primary Health Care

Implications for Process and Work-flow Redesign

- Physical space redesign
- Care team redesign
- Training for cross-functionality
- Instant communication tools
- PM and EHR system implementation
- Performance benchmarks, metrics
- Patient-centered process improvement
- Feedback and accountability

EHR Systems and Process Improvement

- Core HIT for process/workflow redesign
- Catalyst for cultural transformation
- Asset for data collection and reporting
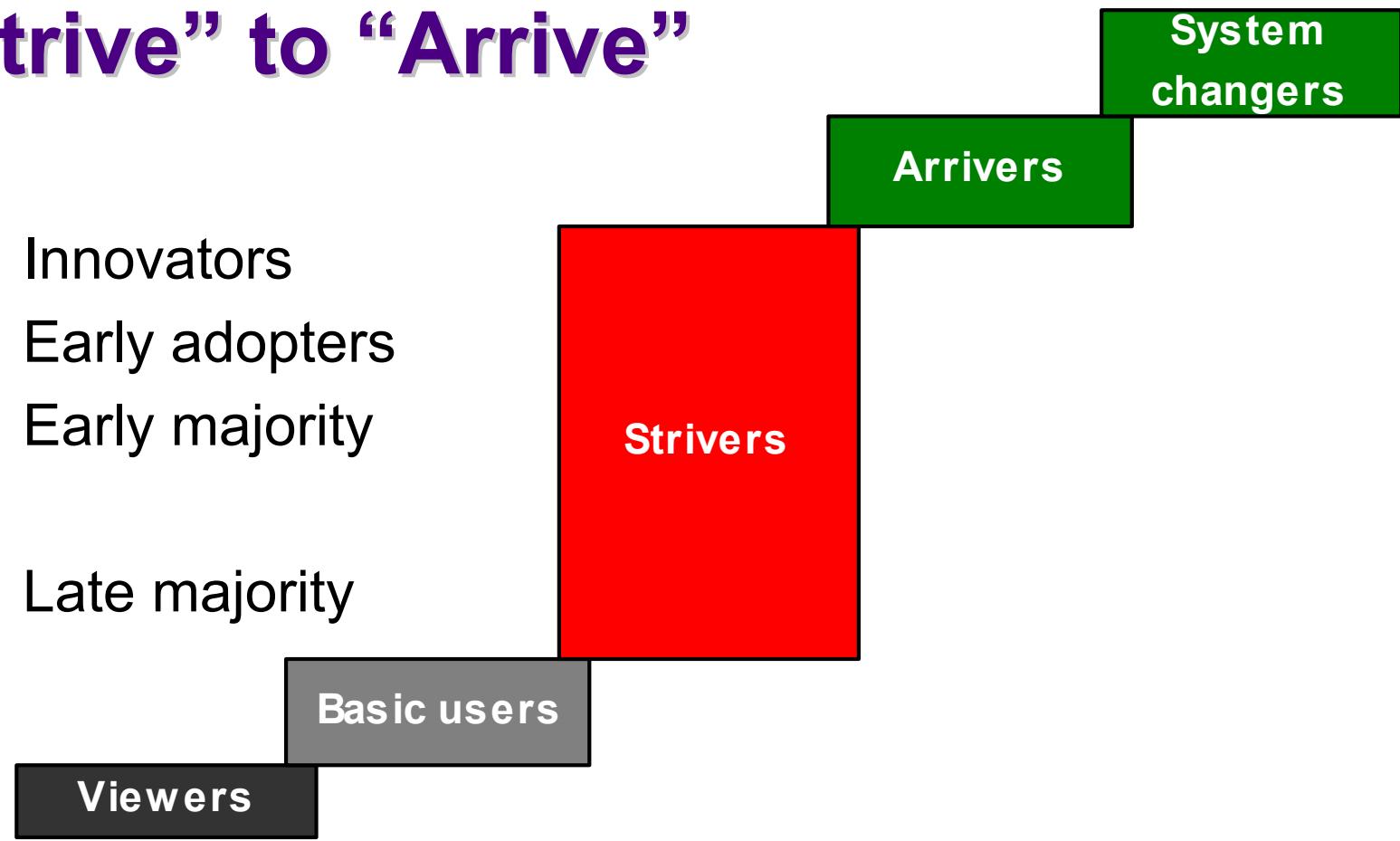
Inquiry

		Count Result:	Patients found: 1275
Find	Patients		Search Result:
Where	Medication Code, Active (Classification lookup)		
	is		
	ROFECOXIB		

Making HIT Work: You Have to "Strive" to "Arrive"

System changers

Arrivers

Strivers

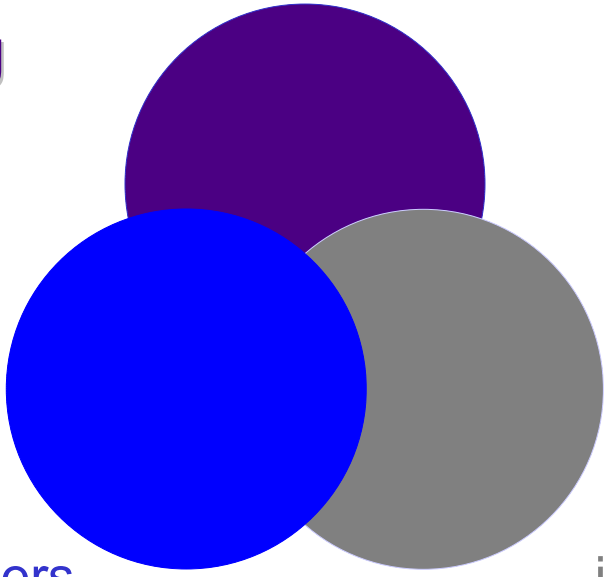- Innovators
- Early adopters
- Early majority

- Late majority

Basic users

Viewers

- Laggards

Miller RH, Sim I, Newman J: CHCF, 2003; www.chcf.org

Tools for Planning & Improvement

Working with Ideas

- Activity Network Diagrams
- Affinity Diagrams
- Brainstorming
- C&E/Fishbone Diagrams
- Flowcharts
- Gantt Charts
- Matrix Diagrams
- Nominal Group Techniques
- Prioritization Matrices
- Radar Charts
- Tree Diagrams

Working With Numbers

- Process Control Charts
- Histograms
- Pareto Charts
- Process Capability
- Run Charts
- Scatter Plots

Working in Teams

- Storyboard Case Studies
- Starting teams
- Maintaining Teams
- Ending teams/projects
- Effective meetings

http://www.goalqpc.com/

Adapted from: Brassard M, Ritter D: The Memory Jogger™ II; GOAL/QPC, 1994.

Some Resources and Information

- http://www.hcqualitycommission.gov/final/chap12.html
- www.clinicalmicrosystem.org
- http://www.clinicalmicrosystem.org/images/PDF%20Files/ Assessing%20Your%20Practice%203-22-04.pdf
- http://www.isixsigma.com
- http://www.chcf.org/topics/index.cfm?topic=CL108
- http://www.goalqpc.com/
- http://www.ihi.org/IHI/Topics/Improvement/ImprovementMethods/

A Final Thought: You'll Know Whether it's Working if…

- www.emr.msu.edu
- michael.zaroukian@ht.msu.edu