

# Massachusetts Hospital Lean Network

September 21<sup>st</sup>, 2010



## Brigham & Women's/Faulkner Hospital: Center for Clinical Excellence (CCE)

Michael L. Gustafson, MD, MBA (*Senior Vice President, CCE*)

Dorothy T. Goulart, MS, RN (*Director of Perf Improvement, CCE*)

Jonathan Baum, MBA (*Senior Consultant, CCE*)

## North Shore Medical Center

Barbara Corning-Davis (*Director of Operational Improvement*)

# Patient Care at BWH

## BWH Statistics (FY09)

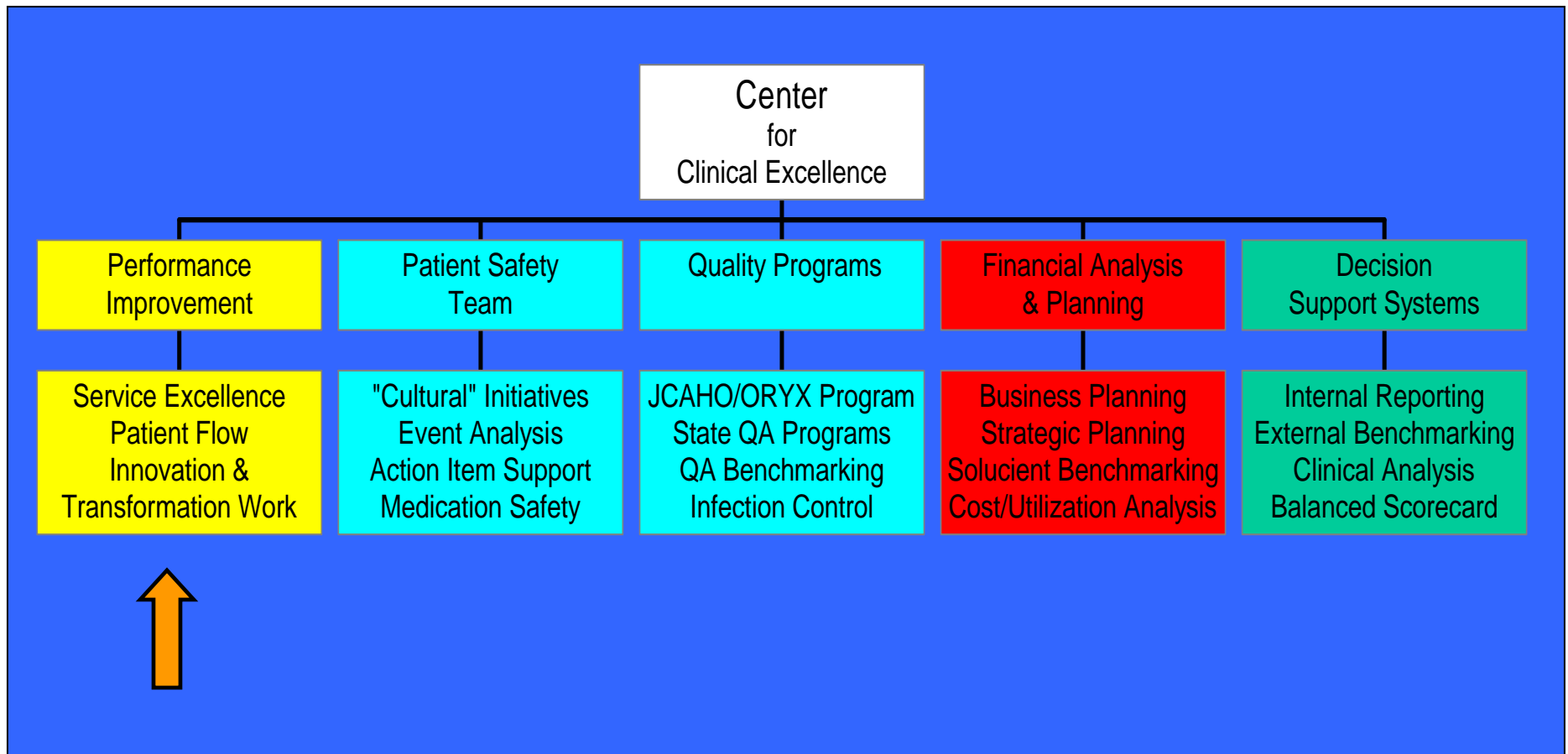
Licensed Beds	777
Discharges	56,048
Births	7,683
ED Visits	59,322
Surgical Procedures	30,457
Outpatient Visits	761,687
NPSR	\$1.52 Billion
BWPO (founded 2001)	900+ MDs 17 Business Units



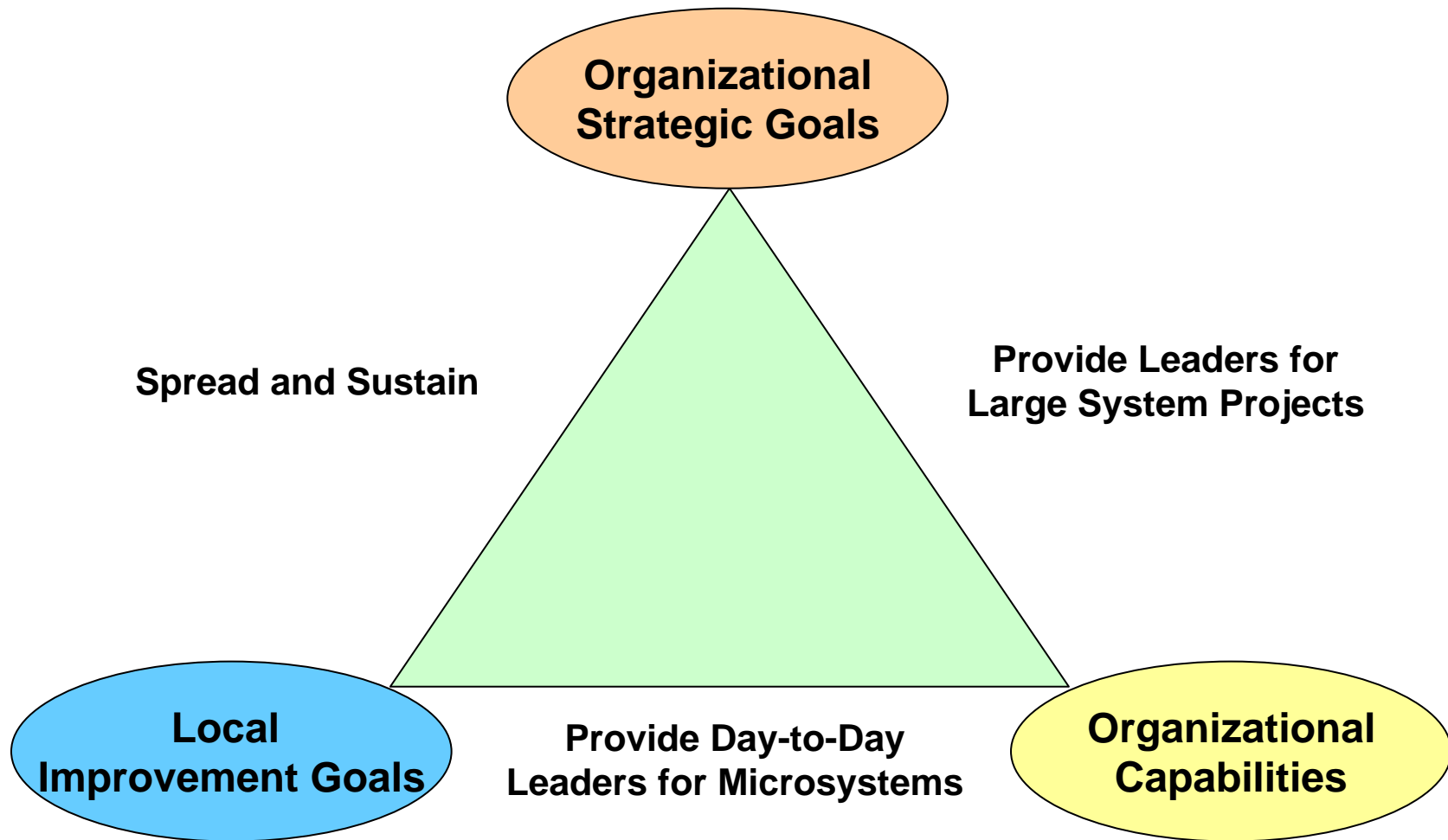
**Joint Venture with Dana Farber  
Cancer institute**  
- inpatient beds for our joint adult  
DF/BW Cancer Center

**Merger with a 130-bed Boston  
community hospital in 1998  
(Faulkner Hospital)**

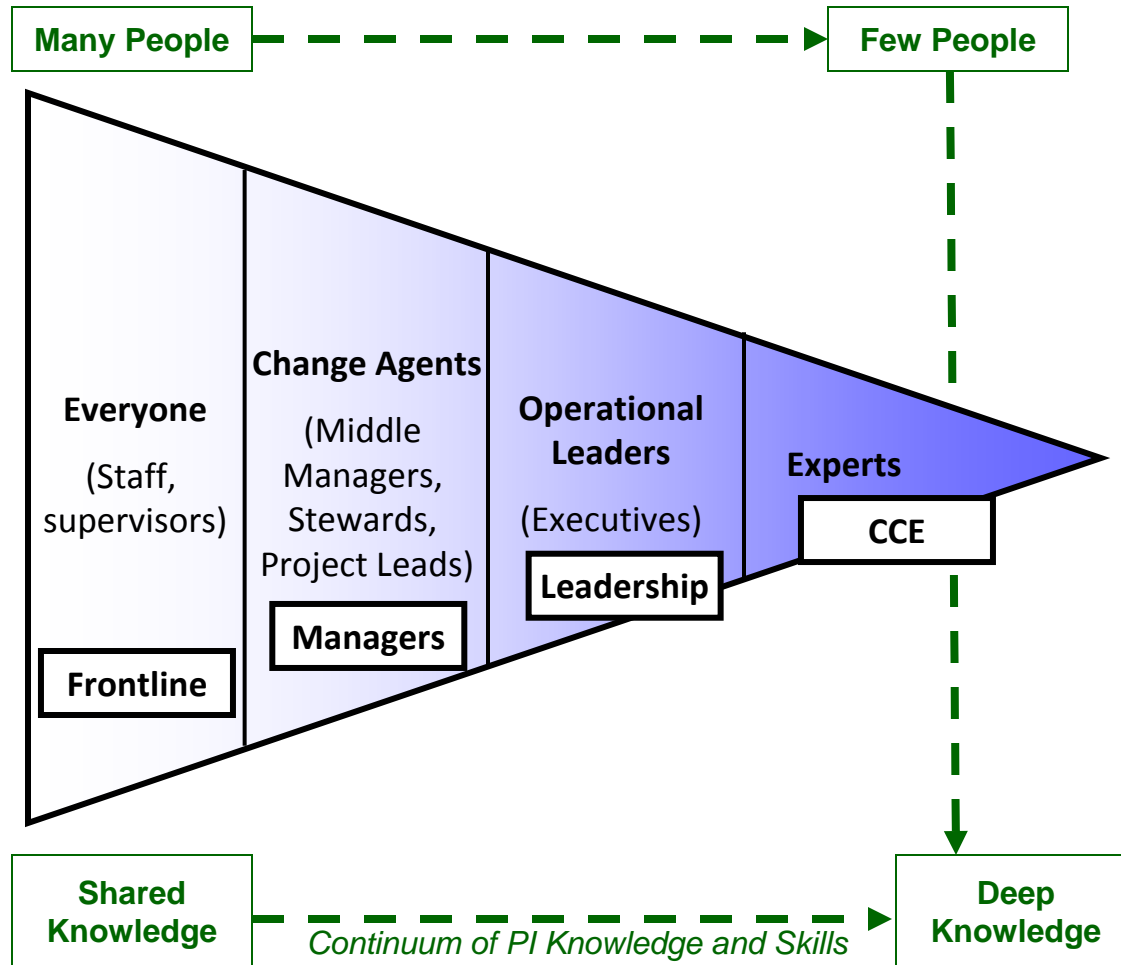
# *BWF Center for Clinical Excellence*



# *A Framework for Execution*

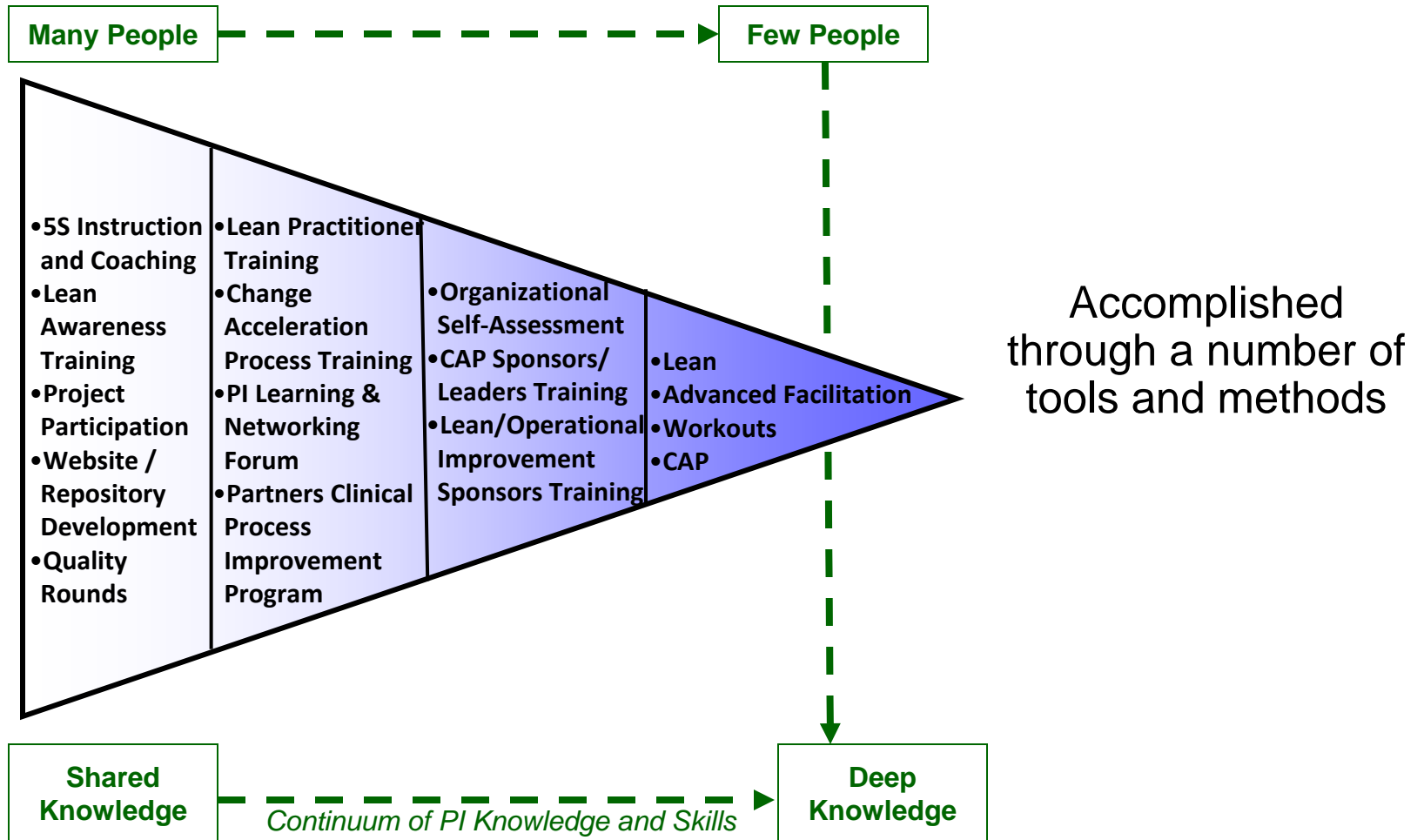


# Partnering to Build Capability

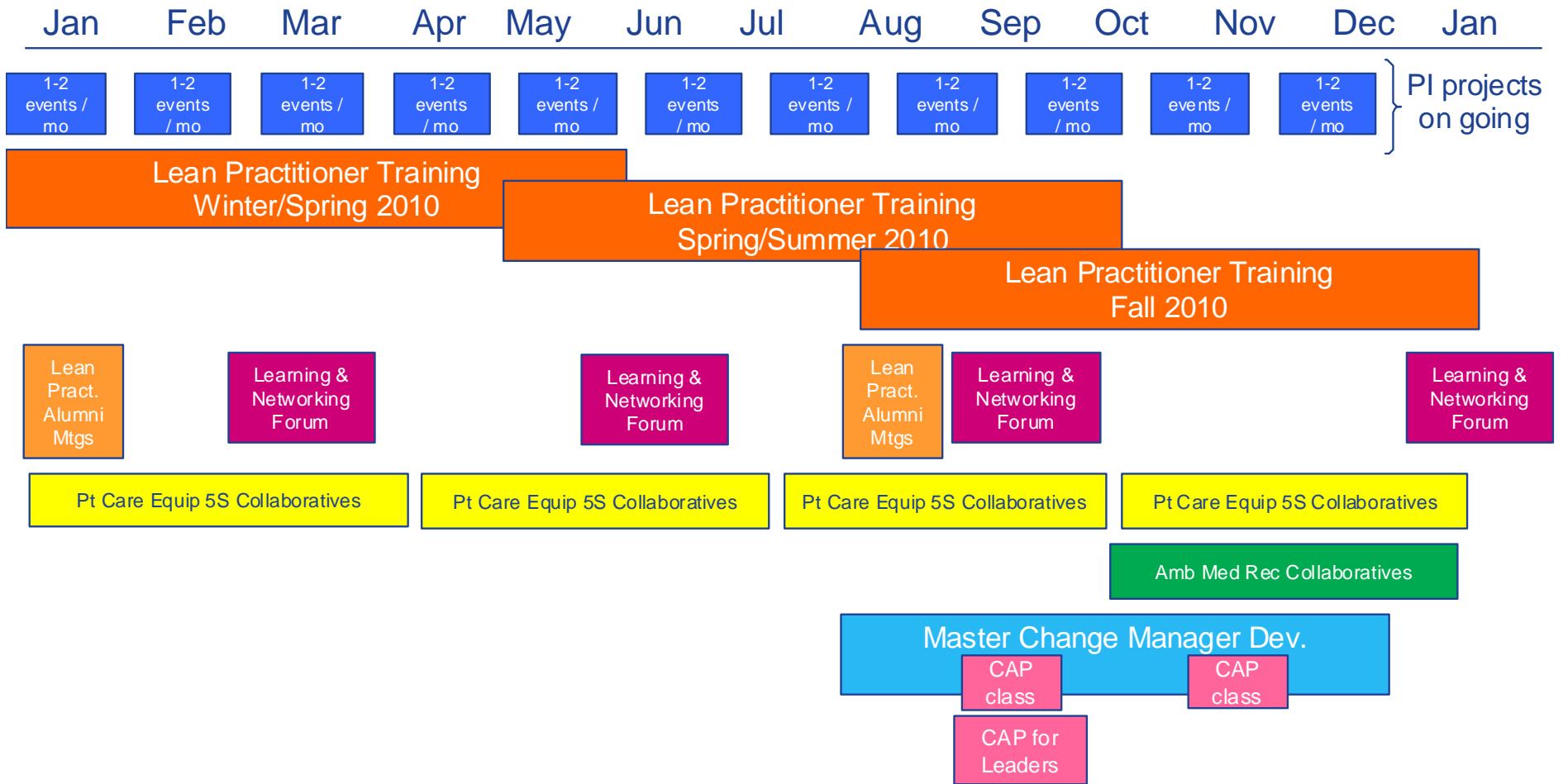


One of the main missions of the CCE is to build organizational capability

# Partnering to Build Capability



# BW/F PI Roadmap for 2010



# FY10 Projects

- Inpatient phlebotomy workflow and processes
- Emergency Department process redesign
- OR efficiency: room turnover and first case on time starts
- Inpatient MRI performance improvement
- Revenue capture improvement for procedural areas
- Discharge transport process
- Patient care equipment and Medication Reconciliation 5S collaborative



# 17 Kaizen, 20 Work-Outs™, 5+ Facilitated Sessions

Dec07 – Apr10

## • Obstetrics

- 4 Kaizen
- 4 Work-Outs

## • Clinical Lab and Phlebotomy

- 8 Kaizen
- 3 Work-Outs

## • Information Systems

- 1 Work-Out

## • Inpatient Oncology

- 1 5S Kaizen, then spread

## • Emergency Department

- 2 Work-Outs

## • MRI

- 1 Work-Out

## • Surgical Services

- Faulkner Hospital
  - 1 Kaizen
  - 4 Work-Outs
- BWH
  - 4 Work-Outs (PACU, OR Pharmacy, CPE)
  - 3 Kaizen (CPE, OR)

## • Faulkner Hospital

- 1 Work-Out

## • 5+ Facilitated Action Plan / Testing Sessions

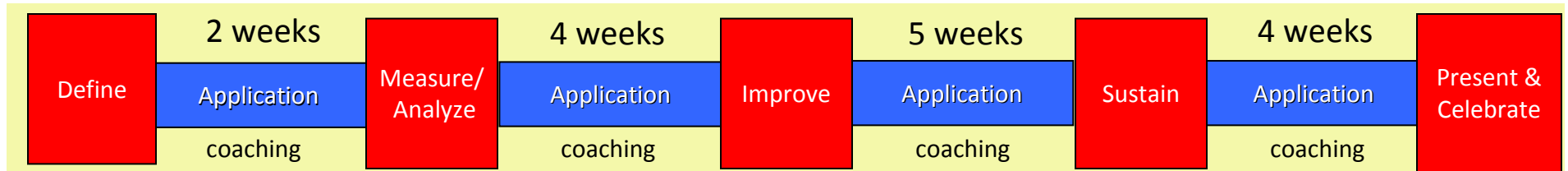
- Revenue Capture, Linen, Pt Equip, Discharge Transport

# 351 Participants & 43 Leaders/Sponsors involved in PI across BWF

<b>Roles</b>	<b>Number</b>
Nurses	110
Physicians/Mid-levels	27
Other Clinicians	38
Technical Staff	65
Support Svcs	14
Information Svcs	13
Admin Svcs	51
Clerical Support	32
Patient/Family Advisor	1
Sponsors/Owners	43
<b>Total</b>	<b>394*</b>

\* does not include additional front line staff involved in testing

# Lean Practitioner Training Cycle



## Learning objectives

- See waste in processes
- Use a common language for performance improvement
- Scope a small project
- Engage staff in diagnosis, testing of changes and implementation
- Develop dashboards / metrics / targets
- Facilitate acceptance
- Sustain changes
- Improve processes as part of daily work

# Lean Practitioner: Accomplishments

- Now in our 6<sup>th</sup> round of the program
- 118 graduates
  - Continuing demand for coaching
- 54 projects completed, with local efforts to sustain improvements
- Venues for continued learning and sharing
  - Learning and Networking Forum
  - Reunion

# Project results achieved

## Operational Efficiency

- Dermatology office cycle time: % of pts seen within 10 minutes of scheduled appt time from 70% to 90%
- Gastrointestinal Practice prescription refill cycle time: decreased from 4-6 days to 0.5 days
- Breast Center pt wait time in exam room: decreased 49% (from mean of 37 min to 19 min)

## Patient Satisfaction

- Gynecology Center phone call response: decreased dropped call rate from 15-20% to 5-7%

## Increased Revenue

- Psychiatry office no show rate: decreased from 20% to 15%
- General Surgical Specialties Clinic co-pay collection: increased co-pays collected from 76% to 92%
- OP center charge capture accuracy: decreased weekly unresolved forms 43% across center and 91% for targeted clinic

## Growth

- OP center market alignment: accuracy of referral source increased from 40% to 90%

# Identified significant changes in pre and post-course self assessments

- Scores increased in each area
- Greatest increase:
  - Techniques to understand the process
  - Change management skills

Pre and Post-Course Skills Self-Assessment	Round 1 % change	Round 2 % change	Round 3 % change
I have a basic understanding of formal process improvement approaches.	36%	17%	21%
Overall, when I see a need to improve processes within my area, I feel comfortable knowing how to structure my efforts.	47%	24%	41%
I am comfortable with techniques used to understand the way the process currently works (such as process mapping, interviews and observations).	44%	39%	52%
I have the skills needed to analyze basic data and to use that data to find causes and illustrate improvement opportunities.	40%	31%	38%
When I make or support change in my area, I use formal techniques to make the change easier for staff.	49%	40%	52%
I am comfortable trying small change ideas and measuring the success of those ideas.	29%	16%	24%
I understand techniques used to respond to resistance to change.	60%	41%	52%
To know that the change is an improvement, I am comfortable measuring the process changes on an ongoing basis.	45%	21%	40%
I am comfortable sharing measures with staff in my area to encourage continuous improvement.	29%	15%	25%

# CAP Course Agenda

- Designed for team leaders and facilitators
- 2.5 days of training
- Review of each component and tools (~ 35 tools)
- Interactive exercises to practice use of tools
- Facilitation tips
- Development of CAP strategy plan for a current or future project
- Dates: 9/22-24 and 11/17-19

# CAP for Leaders Course Agenda

- Designed for sponsors of projects
- 1 day of training
- Review of each component and a subset of the tools (~10 tools)
- Interactive exercises to practice use of tools
- Leading change self-assessment
- Date: 10/7/10



# Equipment 5S Collaborative: Inpatient Units

Purpose: Development of knowledge and skills in 5S methodology with coached application on each unit

# involved: All Brigham & Women's Hospital inpatient units  
26 teams (*five training waves*)  
November 2009 – September 2010



Key components:

- 2.5-hour classroom training and action planning session followed by coached application
- Two 1-hour progress report sessions
- Initial focus is application to patient care equipment, methods can also be used for reorganizing work areas

# Example 5S Collaborative: Sort *Center for Nursing Excellence*

Before



After



# Example 5S Collaborative: Standardize *Center for Nursing Excellence*

## F-Closet: Space Request Ticket for Shelf Use

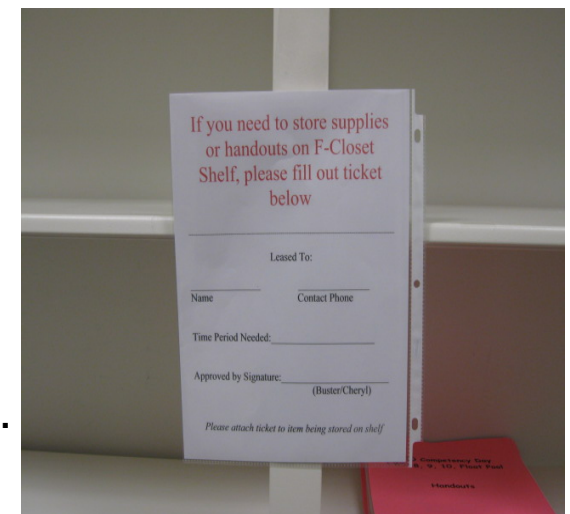
In order to store supplies or handouts not on the list, instructors will be required to fill out a ticket (available in F closet) to request use of shelf space.

I. The following information should be included:

- Name
- Contact Phone
- Need to Store (please check):
  - Permanently (print label)
  - Temporarily
- Description of Need

II. After filling out this information instructor will bring to Buster/Covering Administrator for signature approval.

III. Instructor will then place the ticket on top of the items being stored and place on appropriate shelf in closet.



# Process Improvement Learning & Networking Forums

Purpose:  Share change ideas, improvement tools and approaches  
 Network with others doing improvement work

Target Audience: Any Brigham & Women's/Faulkner Hospital employee who has experience or been exposed to process improvement

Approach:  2 hours (*over lunch*): didactic, interactive and BWH employee presentations



**5S: Maximizing the Use of Shared Work Areas** (*April 2010*)

**Strategies to Sustain Improvements** (*June 2010*)

**Making Improvement Part of Daily Work** (*September 2010*)

*Approximately 50 attendees at each of the first three forums*

# PI Learning & Networking Forums

## FEEDBACK



- “The session is helpful as a continued reminder of improvement approaches”
- “Meeting new people...and ideas, ways to improve our departments problem solving”
- Evaluation Scores: 4.2 & 4.7 out of 5



- Challenge of 2 hours commitment

# North Shore Medical Center Process Improvement beyond the Central Group

For MHA Lean Networking Event  
September 21, 2010

Barbara Corning-Davis

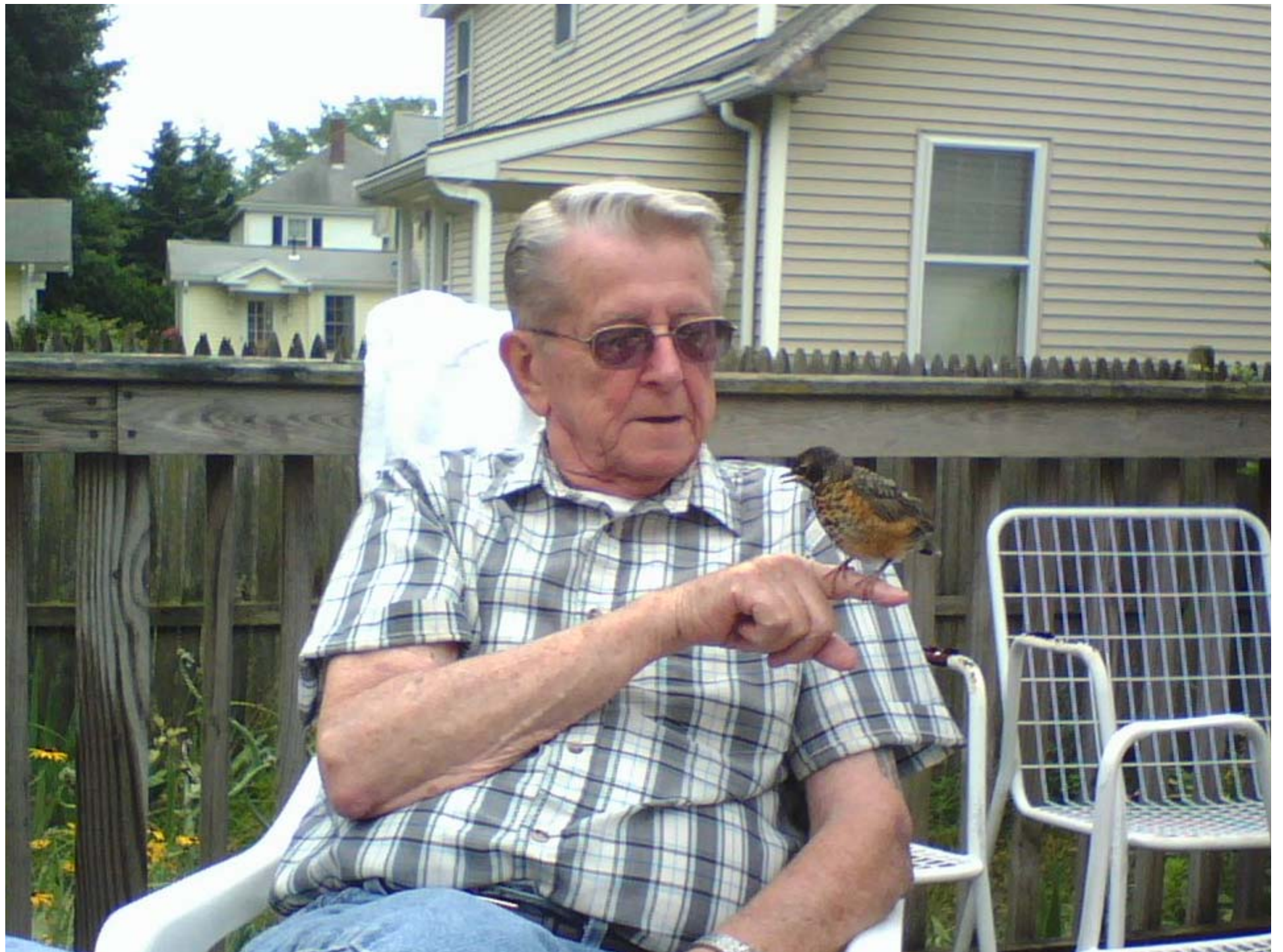


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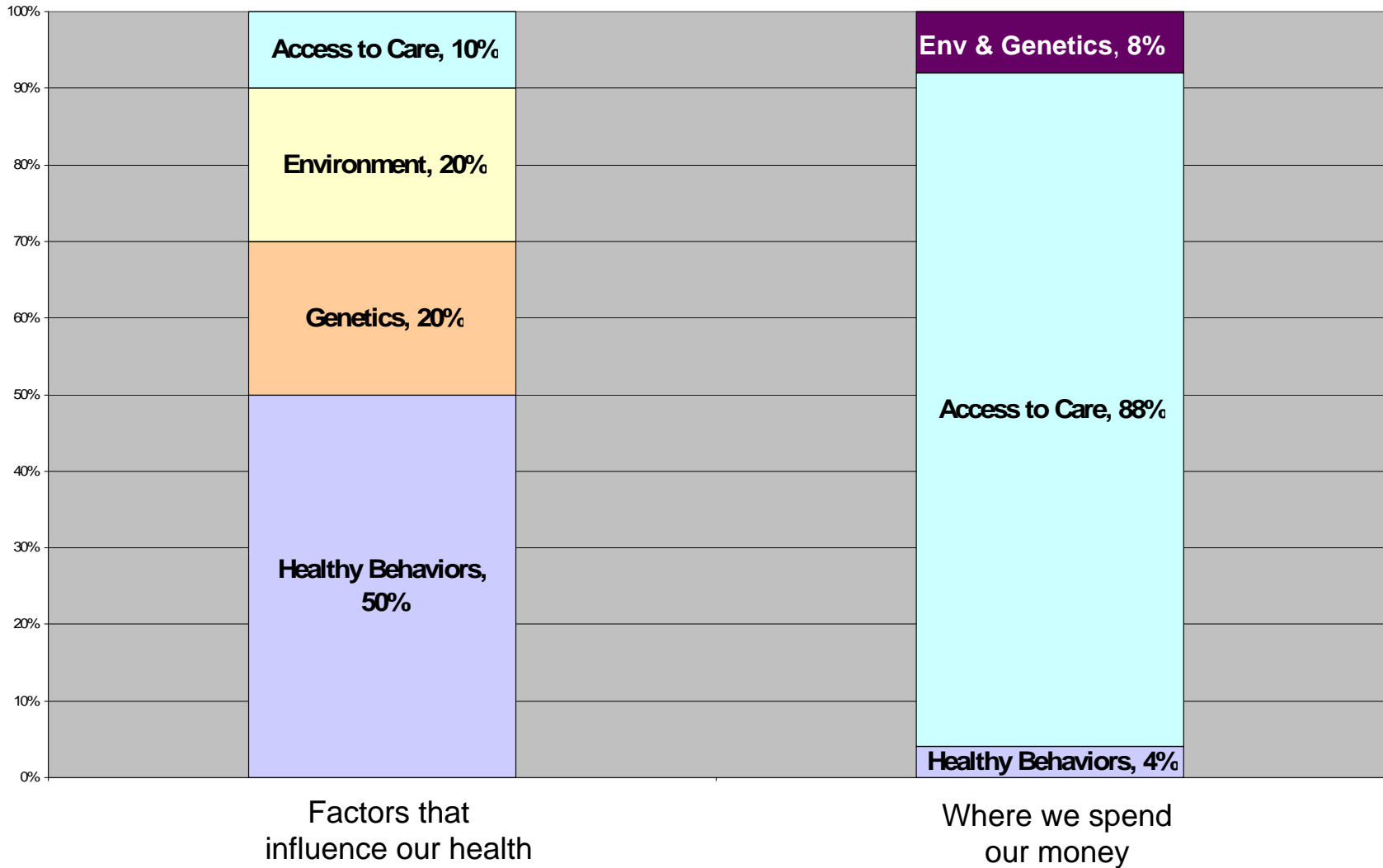


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# The Case for Change

(from UNH, Sources: CDC, UCSF, IFTF)





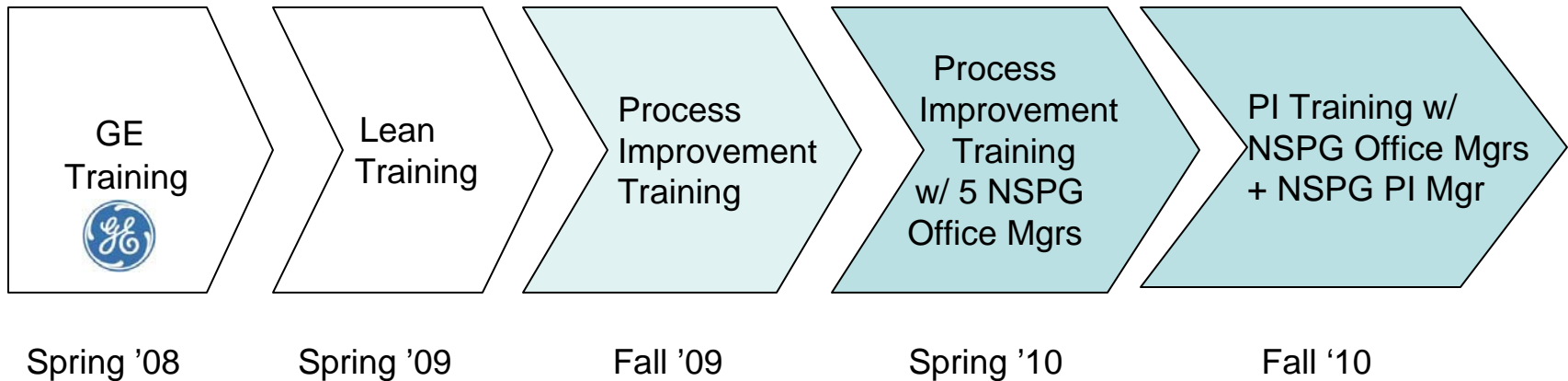
# Who is North Shore Medical Center?

- Two acute care facilities, total of 414 beds
- Community hospital and physician network
  - 3,000 employees
  - 585 physicians (NSPG MD's ~ 200 in 16 offices)
- Member, Partners Healthcare

# Timeline

## Key events in NSMC Process Improvement

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# Projects FY10 (10/1/09 – 9/30/10)

- Food Service improve inpatient delivery (time, temperature, accuracy)
- Human Resources – reduce recruiting cycle time
- Pharmacy – inpatient med delivery – reduce wait times
- Pharmacy – reduce PRN requests
- Labs – improve outpatient specimen processing
- Case Management – reduce time for insurance authorization
- Interventional Radiology – reduce # cancellations
- Surgical Services – improve equipment repairs tracking
- **NSPG – reduce check-in time in physician office**
- **NSPG – increase insurance pre-authorization prior to office visit**
- In process:
  - Nursing Process Improvement (unit-based teams)
  - 14 other new projects – (Medical Records, Case Mgmt, Surgical Services)
  - Supply expenses (inpatient and vascular center), 4 new NSPG teams



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# Next Steps – Goals FY '11

- Develop NSPG PI Manager
- Develop PI Quality Specialists to teach material
- Participate in Partners-wide training
- MD's participation in training



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# ***North Shore Physicians' Group***

Front Desk Work Flow Process

Improvement Project

400 Highland Avenue

Presenters: *Kay Fouhey and  
Deb Phelps*

Date: *August 13, 2010*



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# Project Team

- **Project Sponsors:** Sharon Lucie and Maury McGough, MD
- **Project Leaders:** Kay Fouhey and Deb Phelps
- **Team Members:**
  - Susan Homan, LPN
  - Kathy Michaud, PSR
  - Luisa Moreta, Lab Tech
  - Eileen Pagliarulo, PSR
  - Heidi Pappas, PSR
  - Maria Rodriguez, PSR
  - Tracy Tizol, PSR
  - Kris Way, Medical Records



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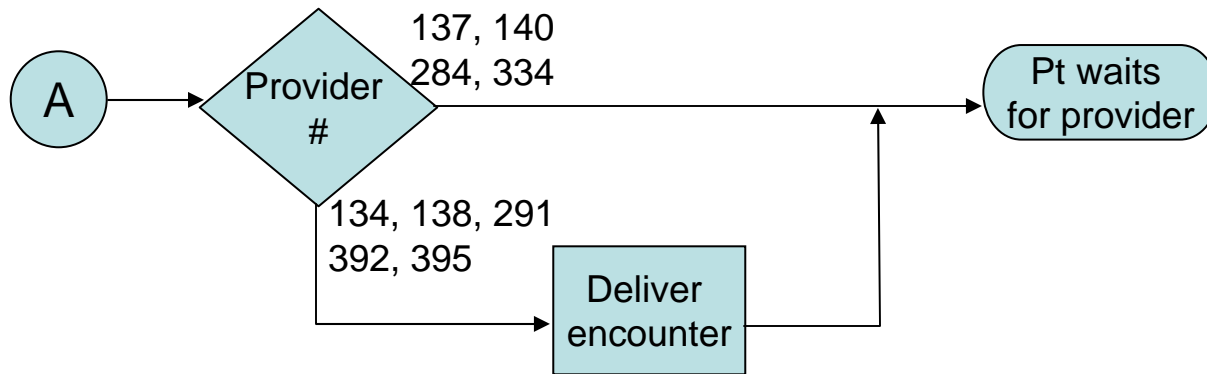
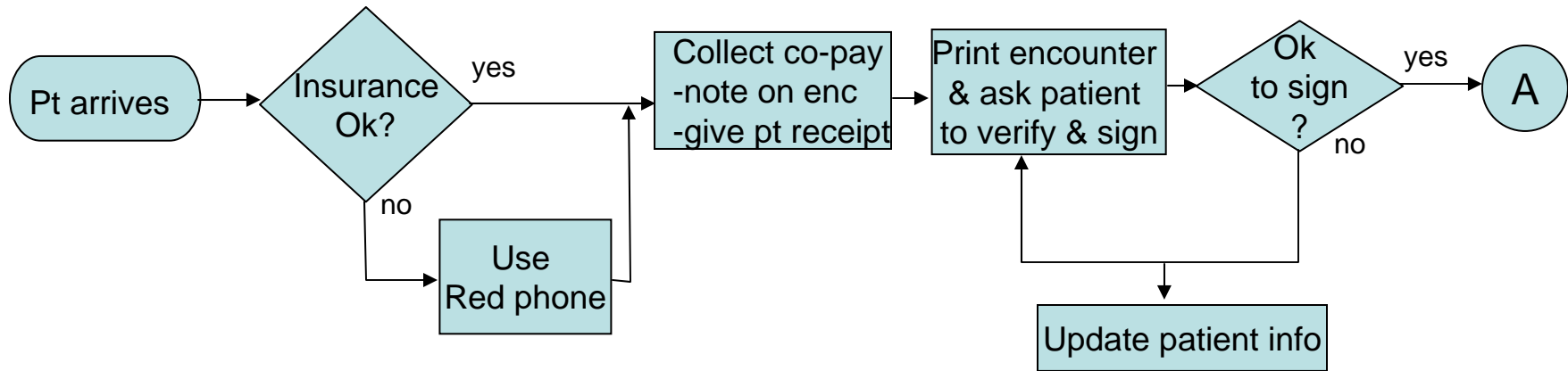
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# Define the Problem

- **Goal Statement:** Provide every patient a seamless check in process. Execute a workflow process allowing the patient service representatives the ability to give their full attention to patients and complete the transaction / service without interruption. Eliminate need to place patients on hold. Increase patient satisfaction by 15 % in the October Survey cycle. Re-design front end systems to accommodate the patient.
- **Project Scope:** Compile data on all activities and produce an analysis for time spent checking in patients. Identify all interruptions and non-value added work impacting the patient experience.
- **Project Limitations / Restrictions (if applicable)**
- No Restrictions, but should be noted that patient volume was lower than usual due to provider vacations

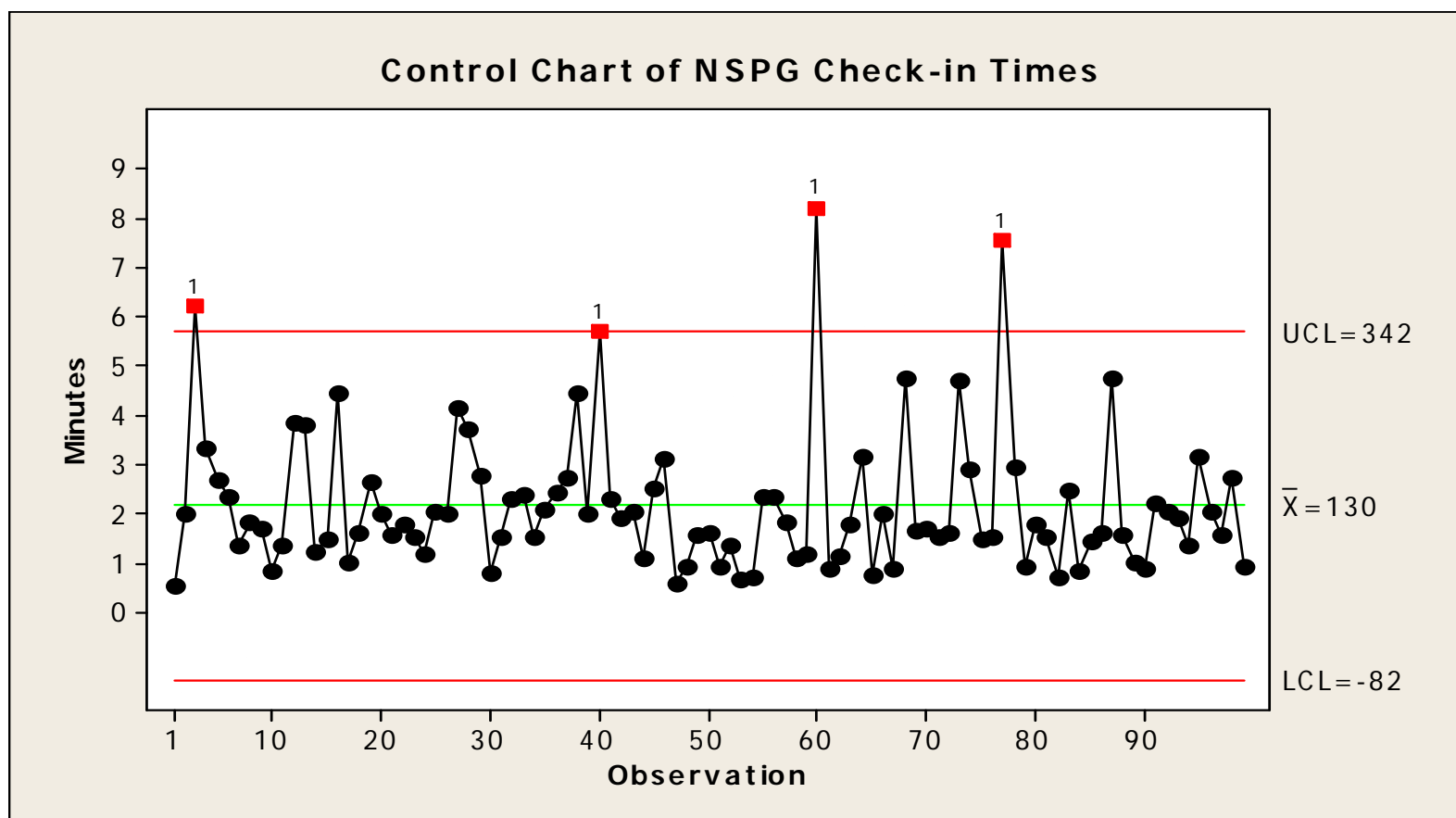


# Process Flow – Patient Check-in process





# Process Baseline



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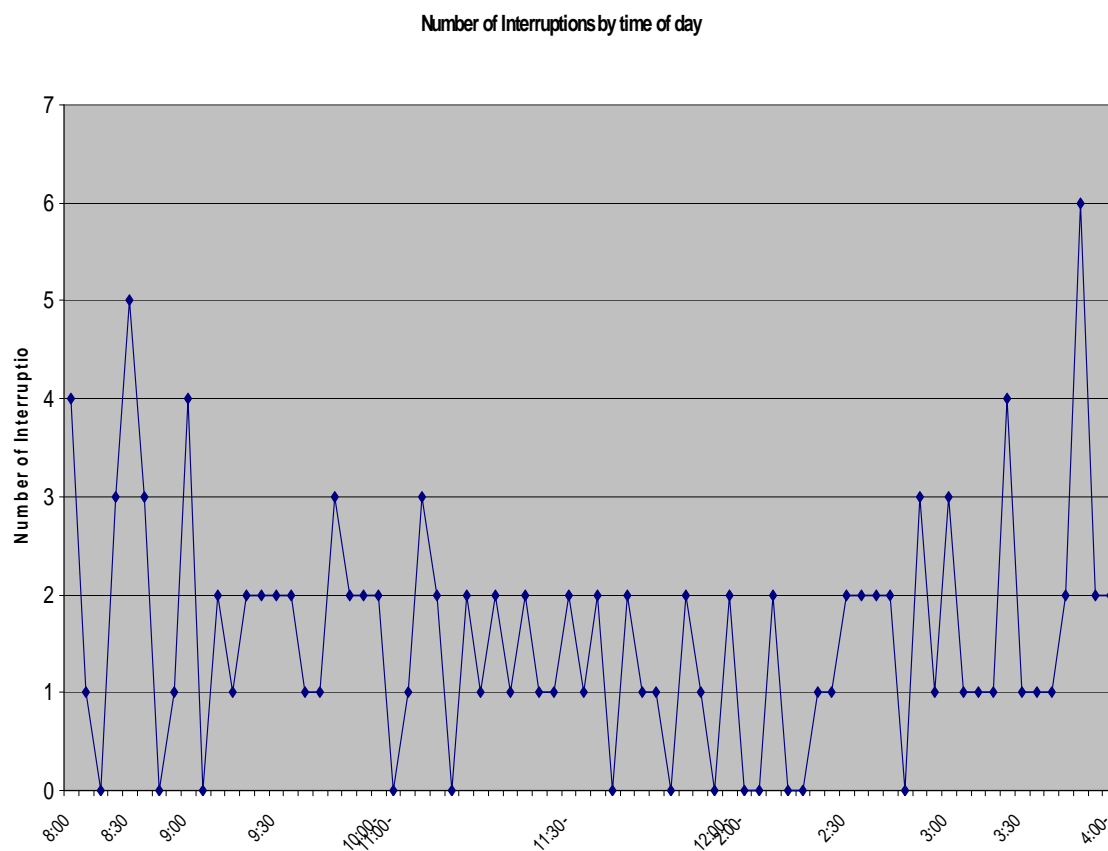
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# Data Analysis

- *Few perfect check-ins (no-interruptions)*
- *Many Walk-ins for lab draws (15%)*
- *More interruptions during early (8-10 AM) and late (2-4 PM)*



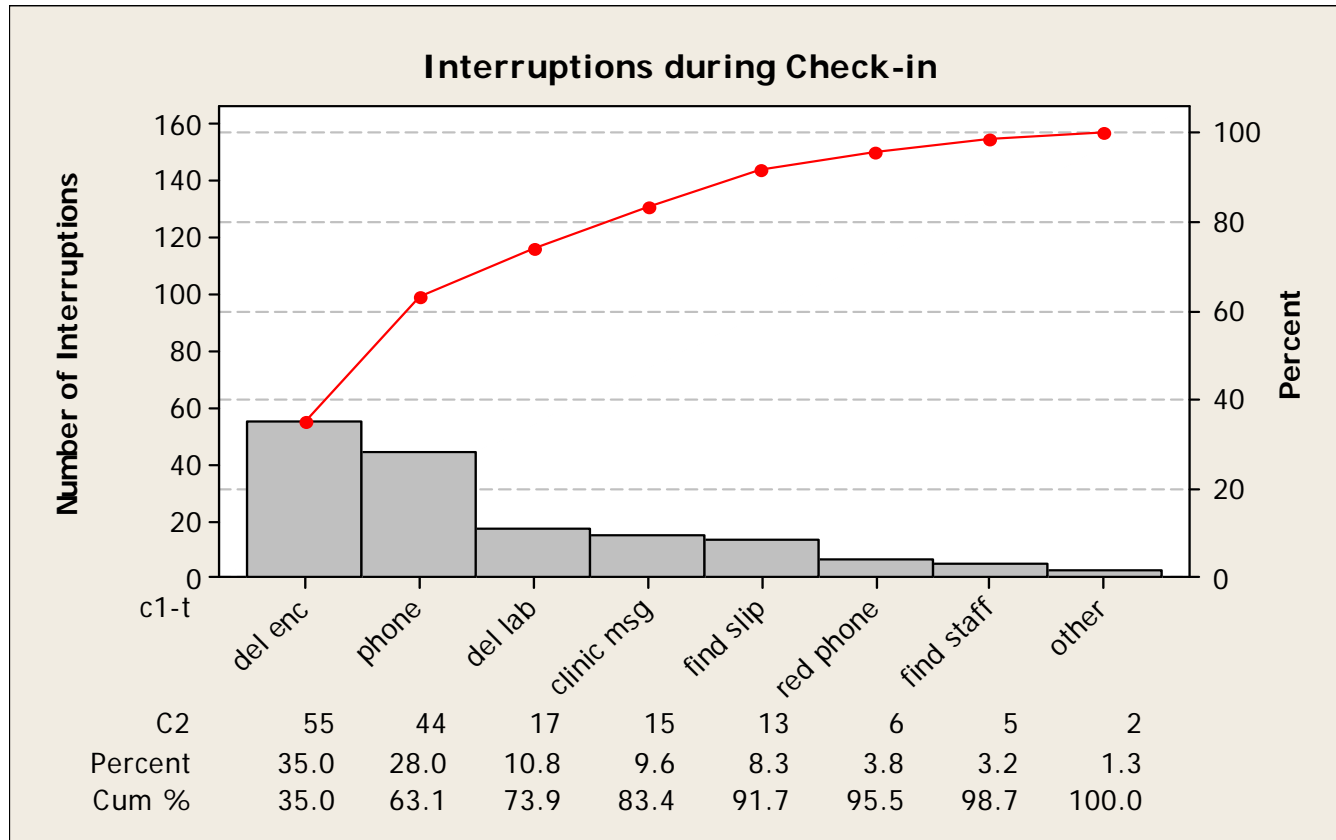
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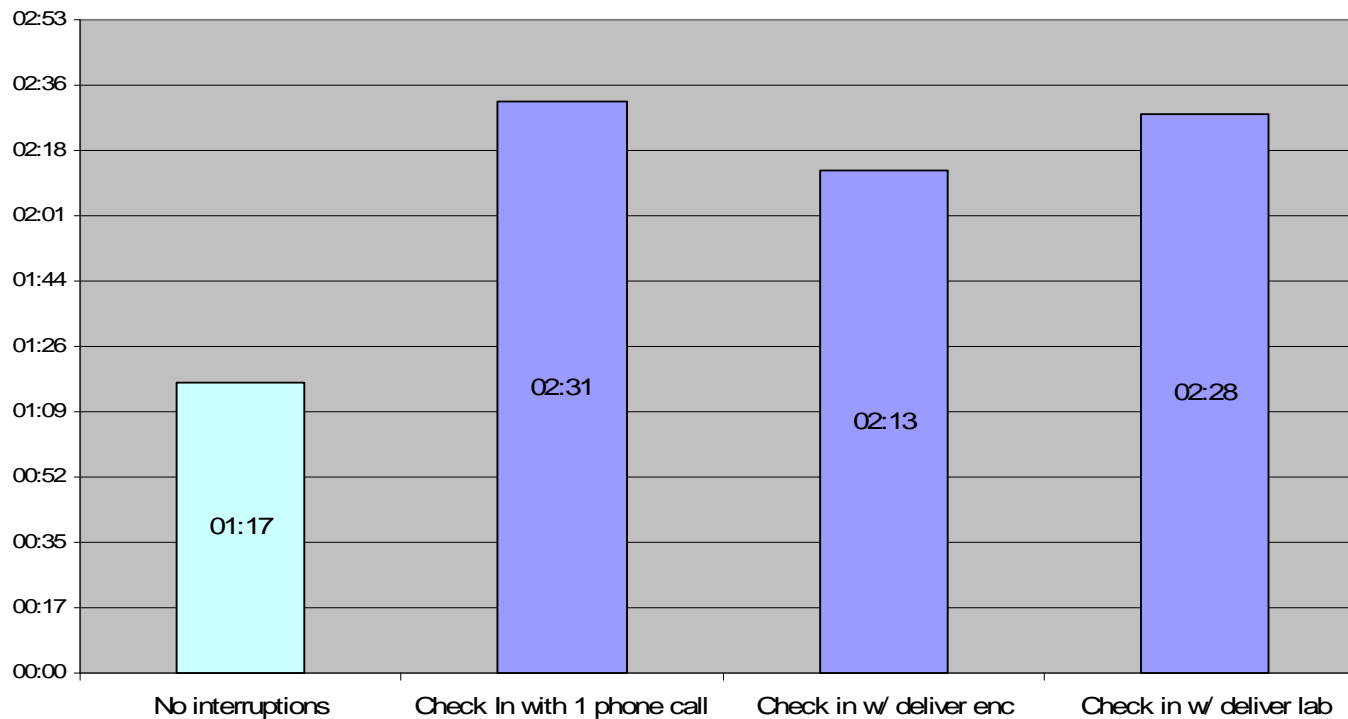
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# Pareto Chart of Most Common Interruptions



# Effect of Three Most Common Interruptions

NSPG 400 Highland Avenue Average Check-in Time  
Observed July 2010



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# Action Plan

- **Reduce interruptions from phone calls**
- 8-10AM – Primary coverage by check-out person
- 2-4 PM – Primary coverage by check-in person
  
- **Eliminate need to deliver lab slips**
- Set up meeting with Gail Civitarese, Lab supervisor, and lab tech
- Develop sign-in system where lab tech is pulling patients for lab draws
- Lab tech responsible for requisition box
- Incorporate pre-visit system into MA work flow (for long term solution, i.e. MA to send completed lab req. for patients' physicals 2 weeks prior to visit)
  
- **Eliminate need to deliver encounters**
- Patient delivers slip to medical assistant or provider
- Will meet with providers prior to change.
  
- **Reduce and eliminate walk in appointments for injections**
- Completed: For every walk-in, a new process to schedule patient's next appointment.



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# Control Plan

- *Continue with periodic assessments and data collection*
- *Report results to staff*
- *Add Process Improvement to agenda for every staff meeting*
  - *Review results, discover issues and new ideas*
- *Empower staff members to take an active role in continuous change towards improvements*



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# Next Steps

- Analysis of Check-out process
- Reduce time to book tests
- Identify opportunities in all other tasks
  - Faxing (reduce paperwork)
  - Calls to other physician offices
  - Looking for clinical staff to clarify incomplete orders
  - Answering phones
  - Scheduling patients
  - Clinical messages



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# Next Steps, continued

- Reduce placing patients on hold
  - Implement improvement plan to reduce interruptions
  - Compile data on number of patients put on hold
  - Dedicate staff resources to answering phones.



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