# Plan-Do-Study-Act Cycles and How They Can Accelerate Quality Improvement in Your Organization

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Administration on Aging

# Agenda

- Housekeeping/Introductions
- An overview of Plan-Do-Study-Act (PDSA) Cycles
- PDSAs in action: The North Philadelphia Safety Net Partnership
- Resources/Next training
- Questions/Comments

Administration on Aging

# Presenters

- Jane Brock, M.D., MSPH, Chief Medical Officer, Colorado Foundation for Medical Care
- Steven Touzell, Director of Long-Term Care, Philadelphia Corporation for Aging
- Steven R. Carson, RN, BSN, MHA, Vice President, Temple University Hospital

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# Using Shewhart Cycles ("PDSA"): An Introduction/Review

**Jane Brock, MD, MSPH**

**Colorado Foundation for Medical Care**

This material was prepared by CFMC, the Medicare Quality Improvement Organization for Colorado, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. PM-4010-124 CO 2012

Quality Improvement Organizations
Sharing Knowledge. Improving Health Care.
CENTERS FOR MEDICARE & MEDICAID SERVICES

ICPC
Integrating Care for Populations & Communities

# Trying to do something better

| Method | Advantages | Disadvantages |
|---|---|---|
| If it's not broken don't fix it | Effortless | No basis in reality in healthcare |
| Research | •Truly 'true'<br>•Avoids misassumptions<br>•Produces a p-value, so you can publish it | •Limited applicability<br>•Takes a long time<br>•Expensive<br>•Inflexible |
| Trial and Error | •Spontaneous/flexible<br>•Often created by those at the interface (experts)<br>•Quick<br>•Small tests | •Not measured systematically<br>•Can't easily build knowledge<br>•Inefficient/Wastes the opportunity to learn |

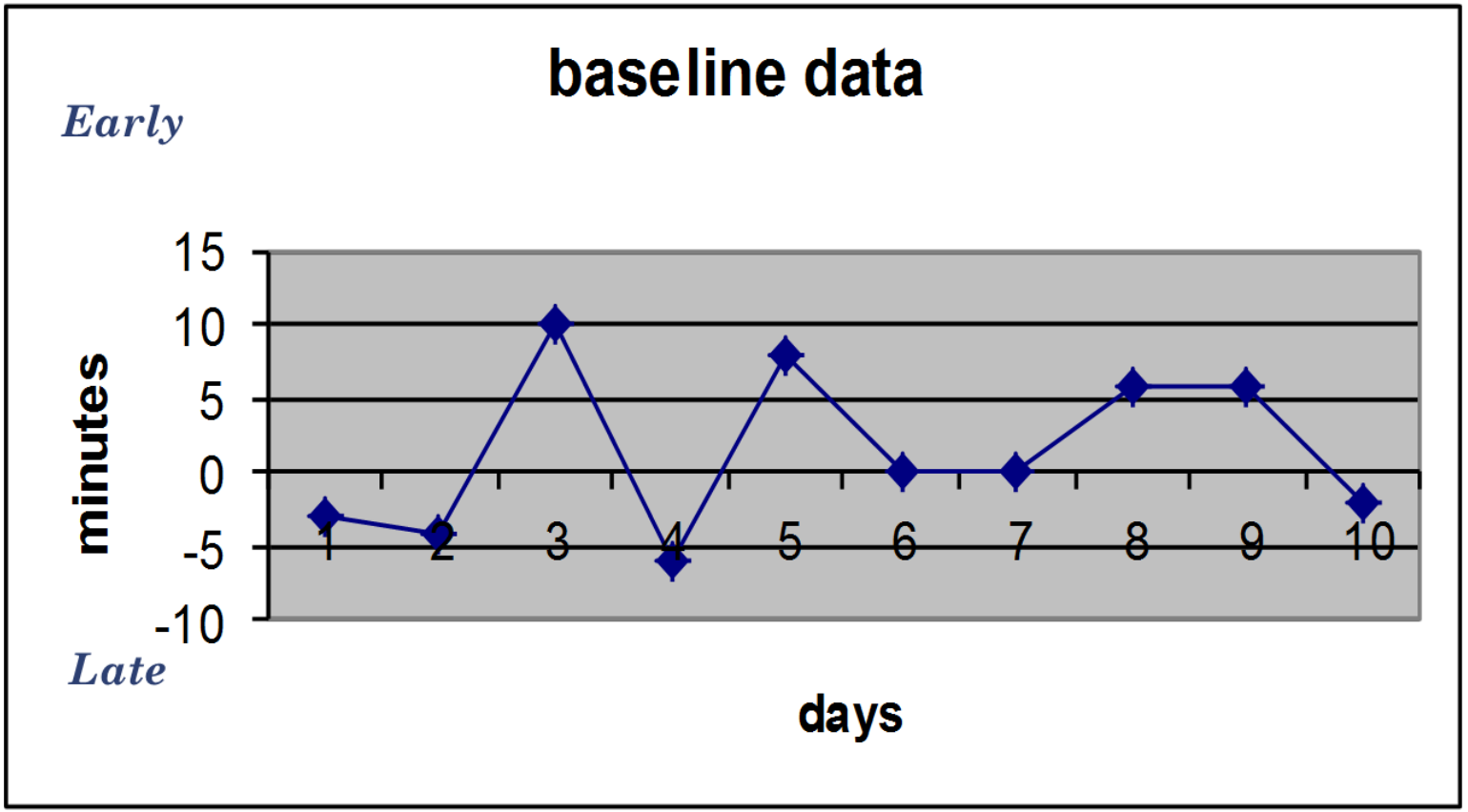
# Using PDSAs

- Captures knowledge from ‘trial and error’
- Can be done today
- ‘Trials’ get better over sequential tests

# Getting the Kids to School on Time

**How I became a believer in the model for improvement**

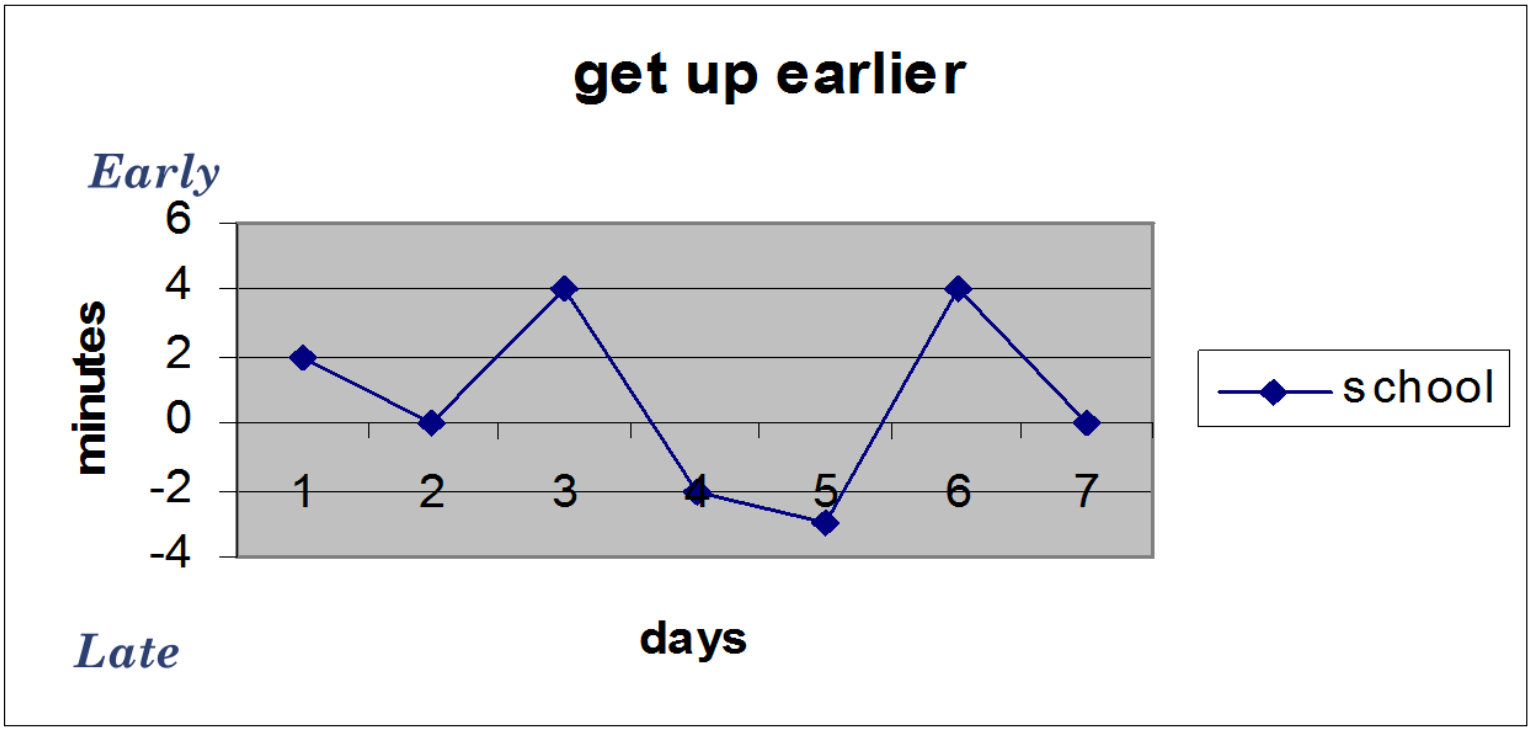
# Baseline Data



# Get Up Earlier..

- Everybody knows you just need to get up earlier
- Nobody needs the model for improvement to know THAT..

# Get Up Earlier



# Aim Statement

- Increase the proportion of time arriving at school on time by improving morning process and workflow for all members of the family while reducing negative parental interventions.

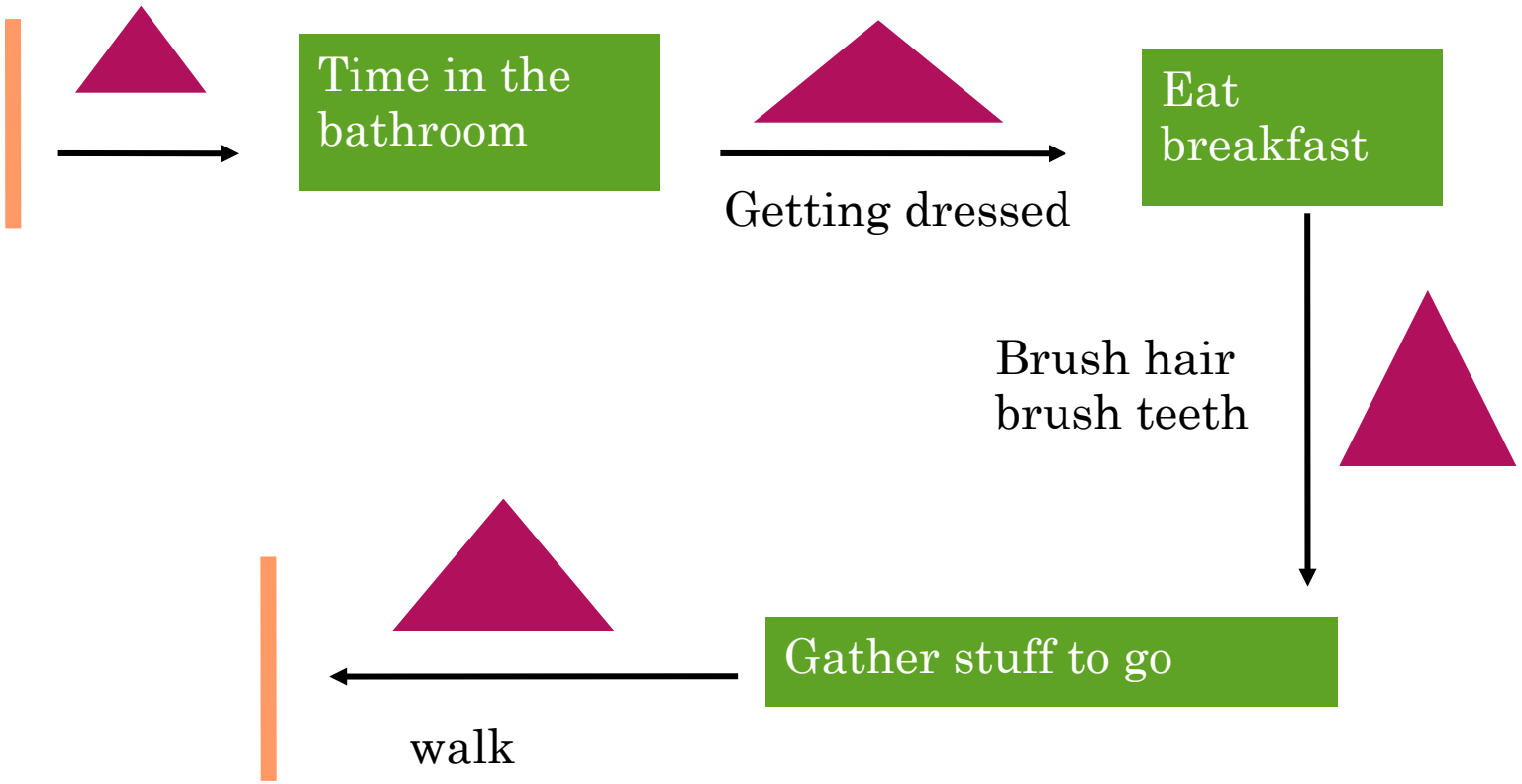
# How will we know a change is an improvement?

- Number of times on time
- Number of negative parental interventions

# Theories

- Basic disorganization – no routine / no expectations
- Bottlenecks - ?bathroom
- Waste – finding things

# Current State



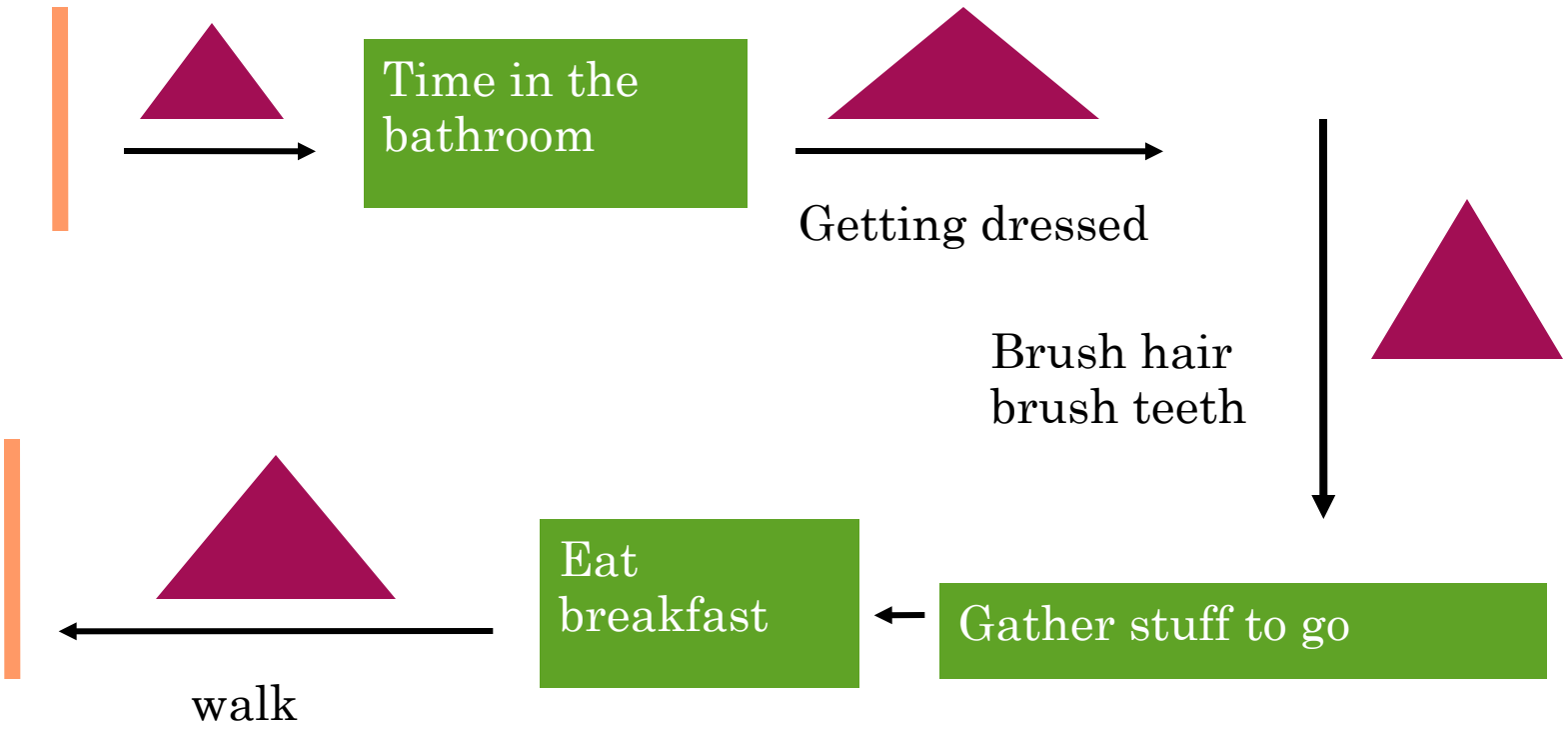
# What changes can we make (1)?

- Smooth work flow - Change order of activities*
- Eliminate waste – movement*
- Emphasize natural and logical consequences*

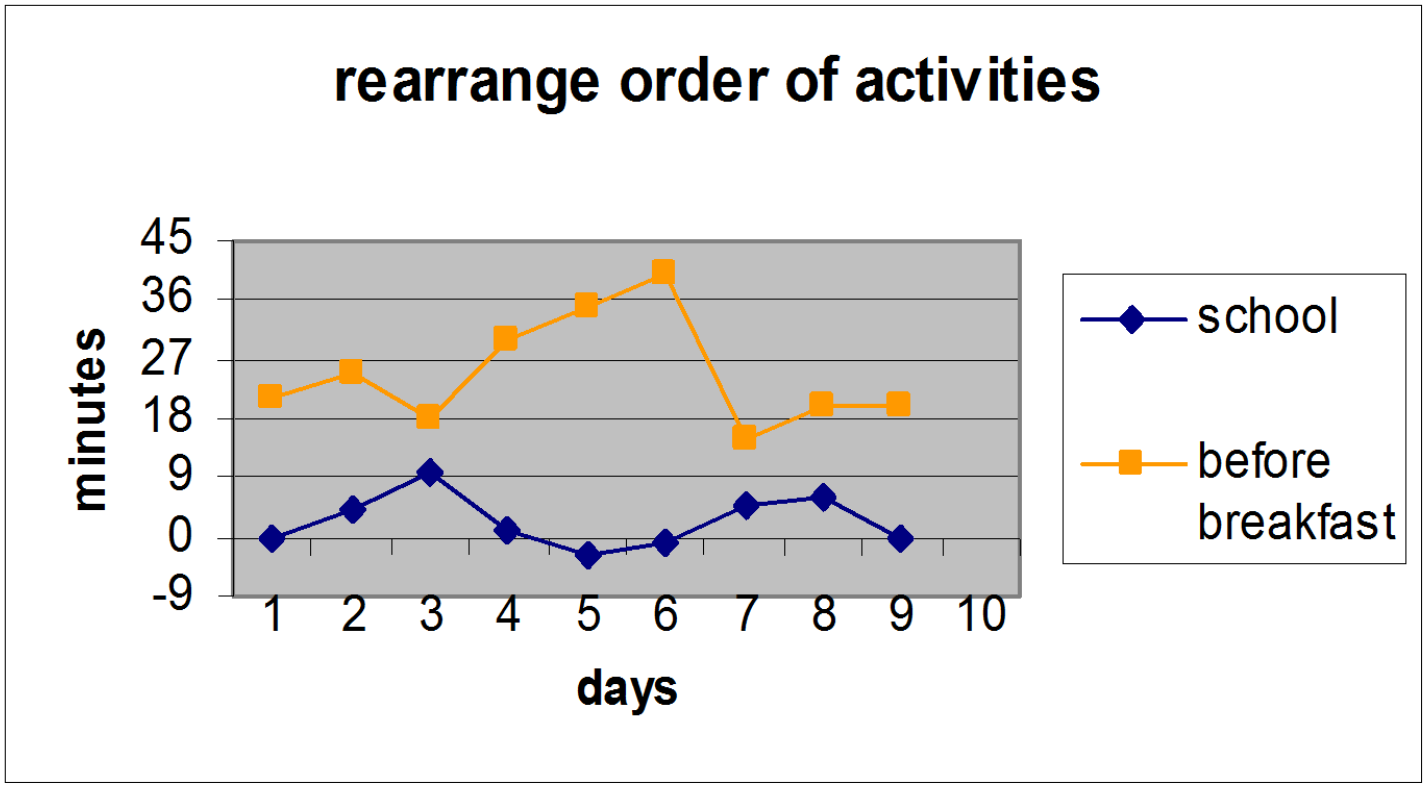
**Eat breakfast last, as the back door through which we exit to get to school is in the kitchen.**

**Will measure the before-breakfast interval as mins between getting up and arriving at breakfast.***

# Proposed Future State



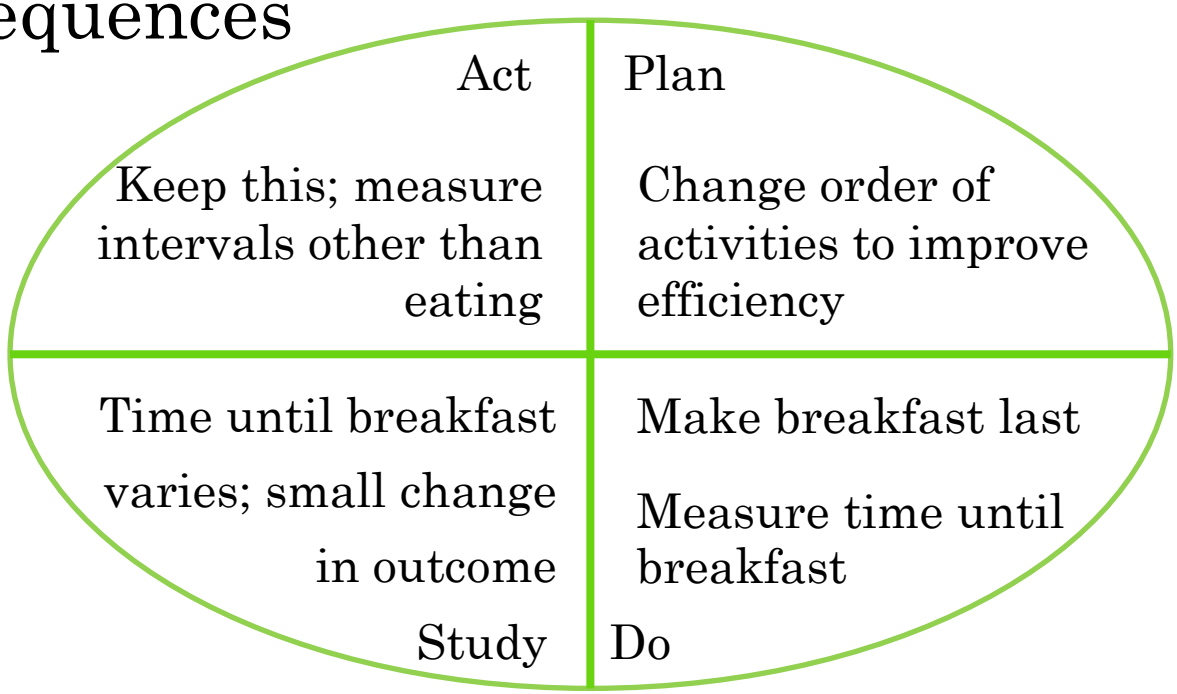
# Rearrange order of activities




| Measure | Result | Assessment |
|---|---|---|
| Late or almost | 4 (40%) | Improvement |
| Negative Parental Intervention | 16 (1.6/day) | Minimal Improvement |

# Summary of Test 1:

- Smooth work flow - Change order of activities
- Eliminate waste – movement
- Emphasize natural and logical consequences



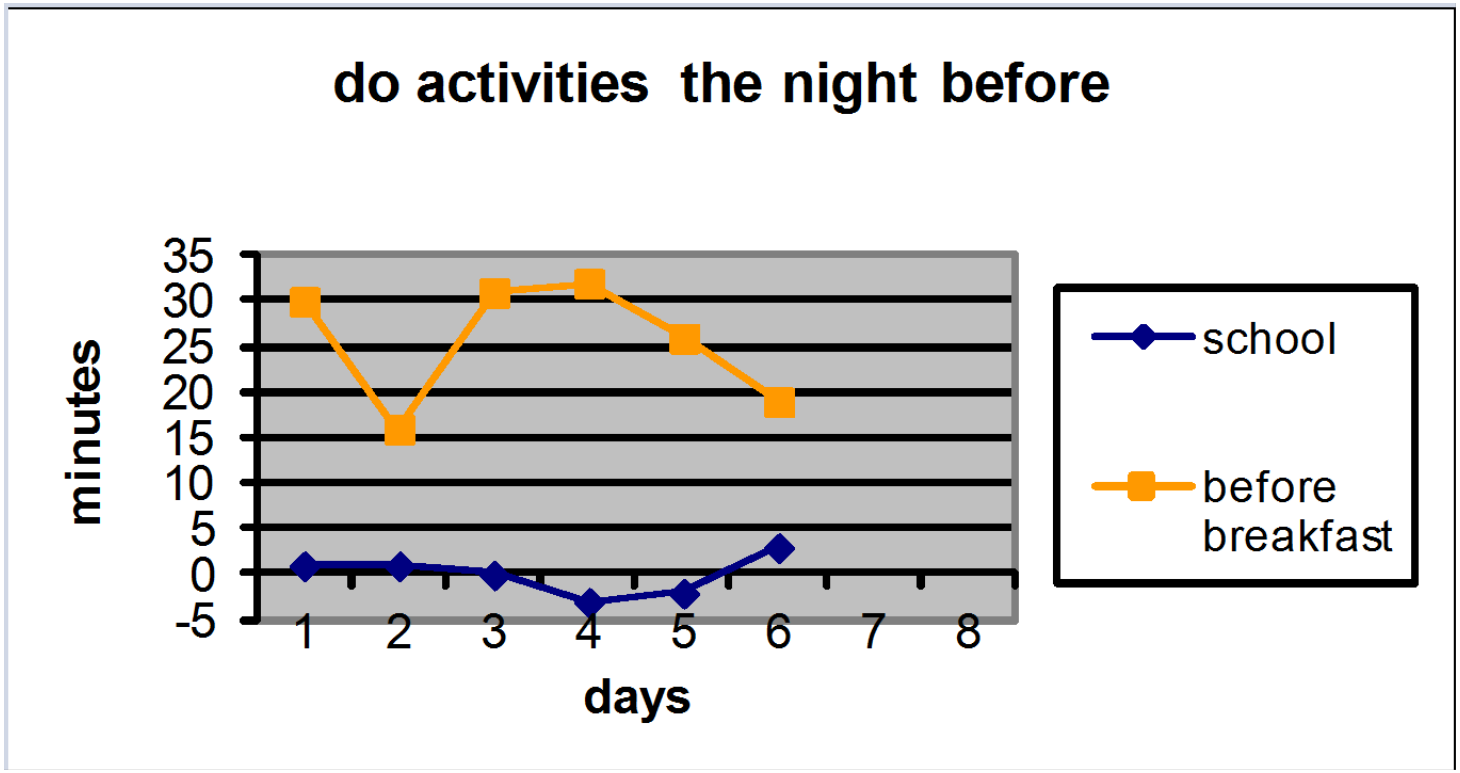
# What changes can we make (2)?

- Reduce set up/start up time by doing external work ahead of time*

**Lay out clothes the night before to reduce the workload of the morning.**

**Keep the before breakfast interval measurement**

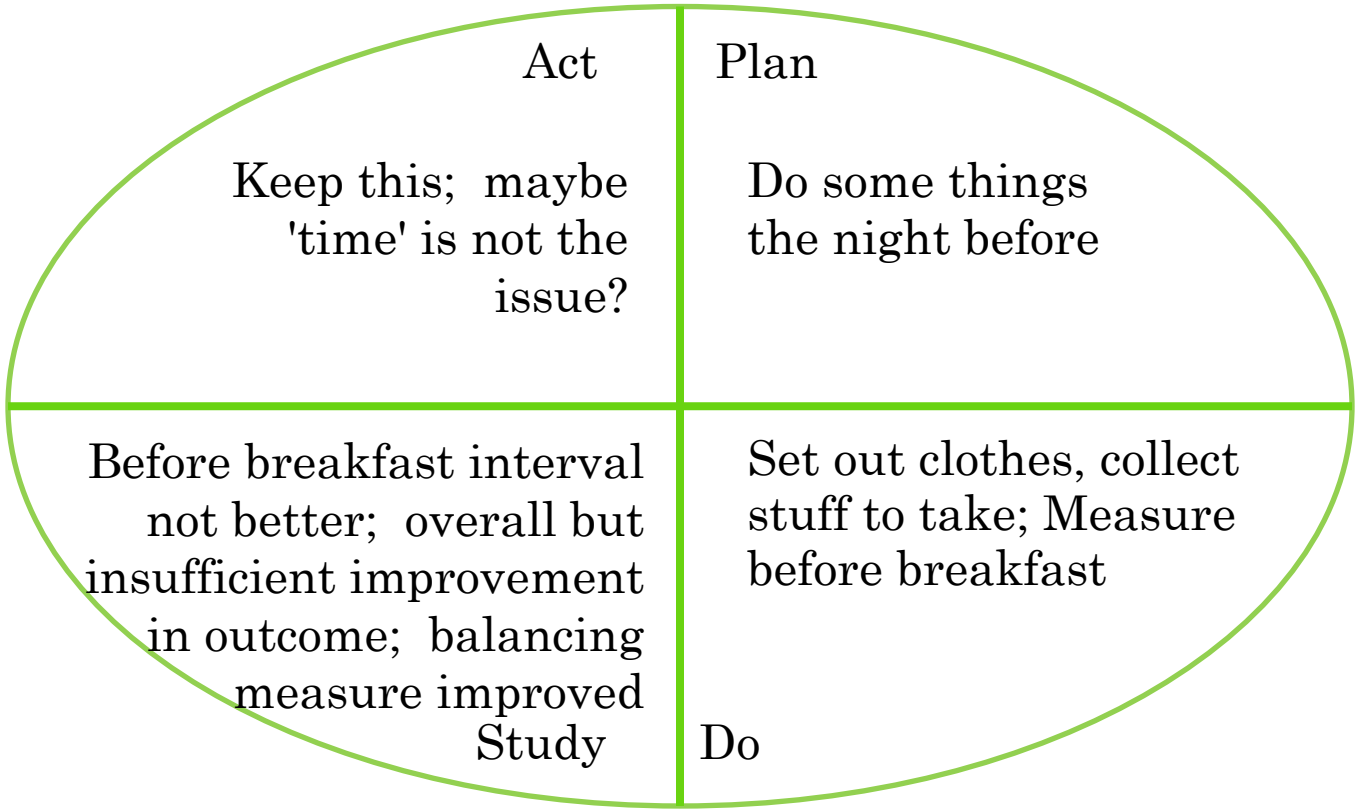
# Do Activities The Night Before




| Measure | Result | Assessment |
|---|---|---|
| Late or almost | 3 (50%) | No Improvement |
| Negative Parental Intervention | 9 (1.5/day) | Slight Improvement |

# Summary of Test 2:

- Reduce set up/start up time by doing external work ahead of time

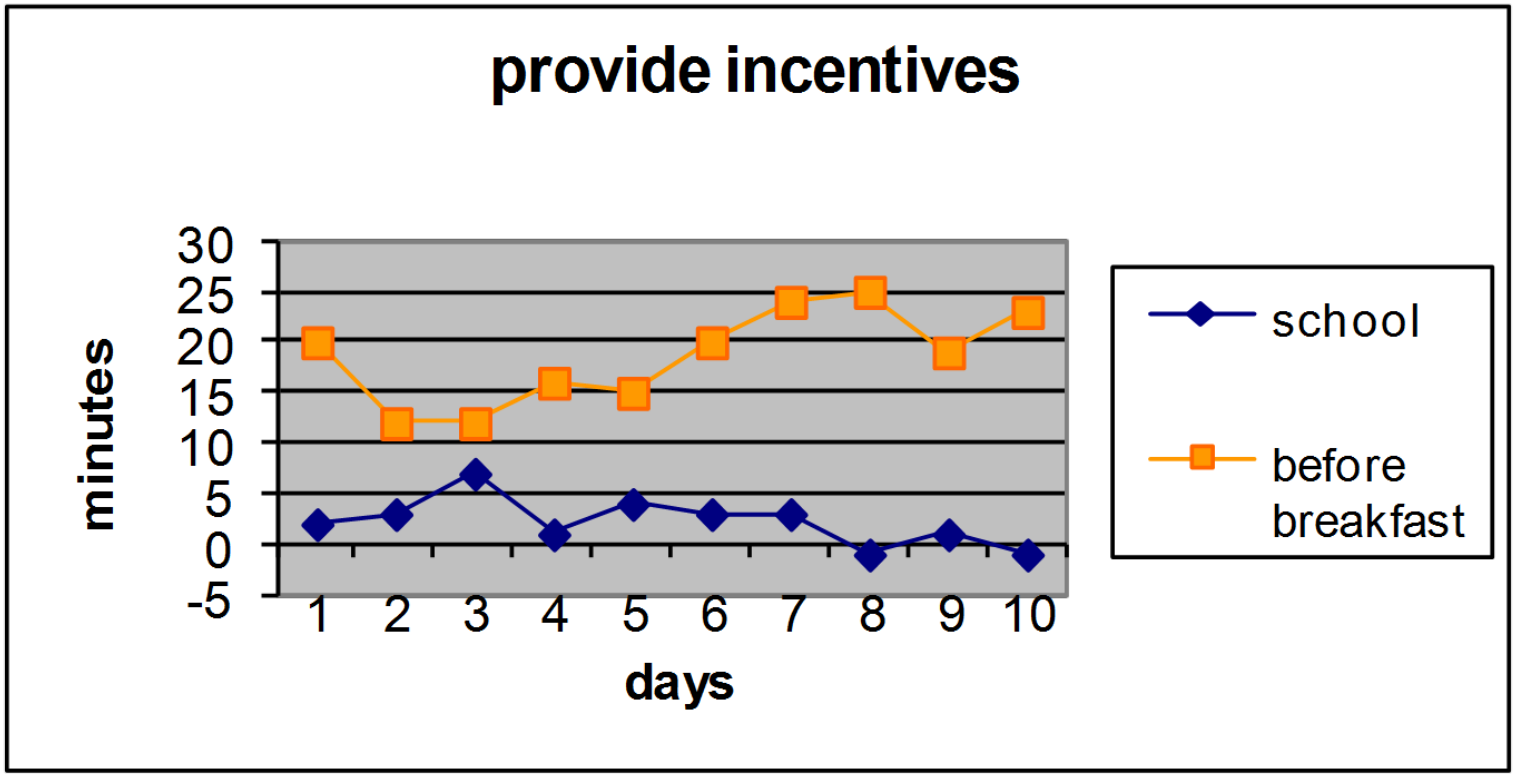


# What changes can we make (3)?

- Reduce demotivating aspects of the pay system – provide incentives*

**Earn points for being on time to breakfast. Earned points accumulate toward opportunity for ice cream.**

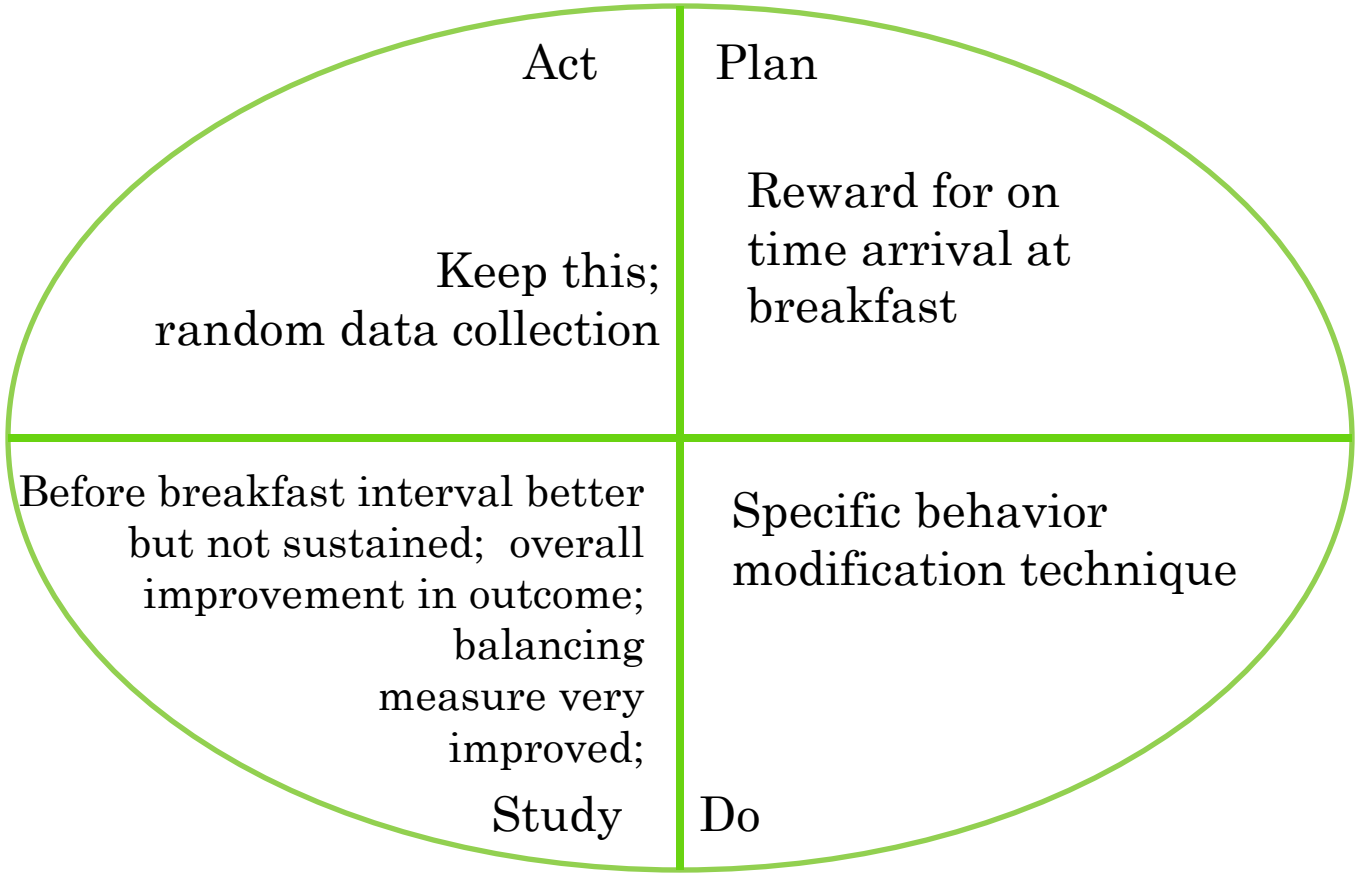
# Provide Incentives




| Measure | Result | Assessment |
|---|---|---|
| Late or almost | 2 (20%) | Improvement! |
| Negative Parental Intervention | 6 (0.6/day) | Improvement! |

# Summary of Test 3:

- Reduce demotivating aspects of the pay system – provide incentives

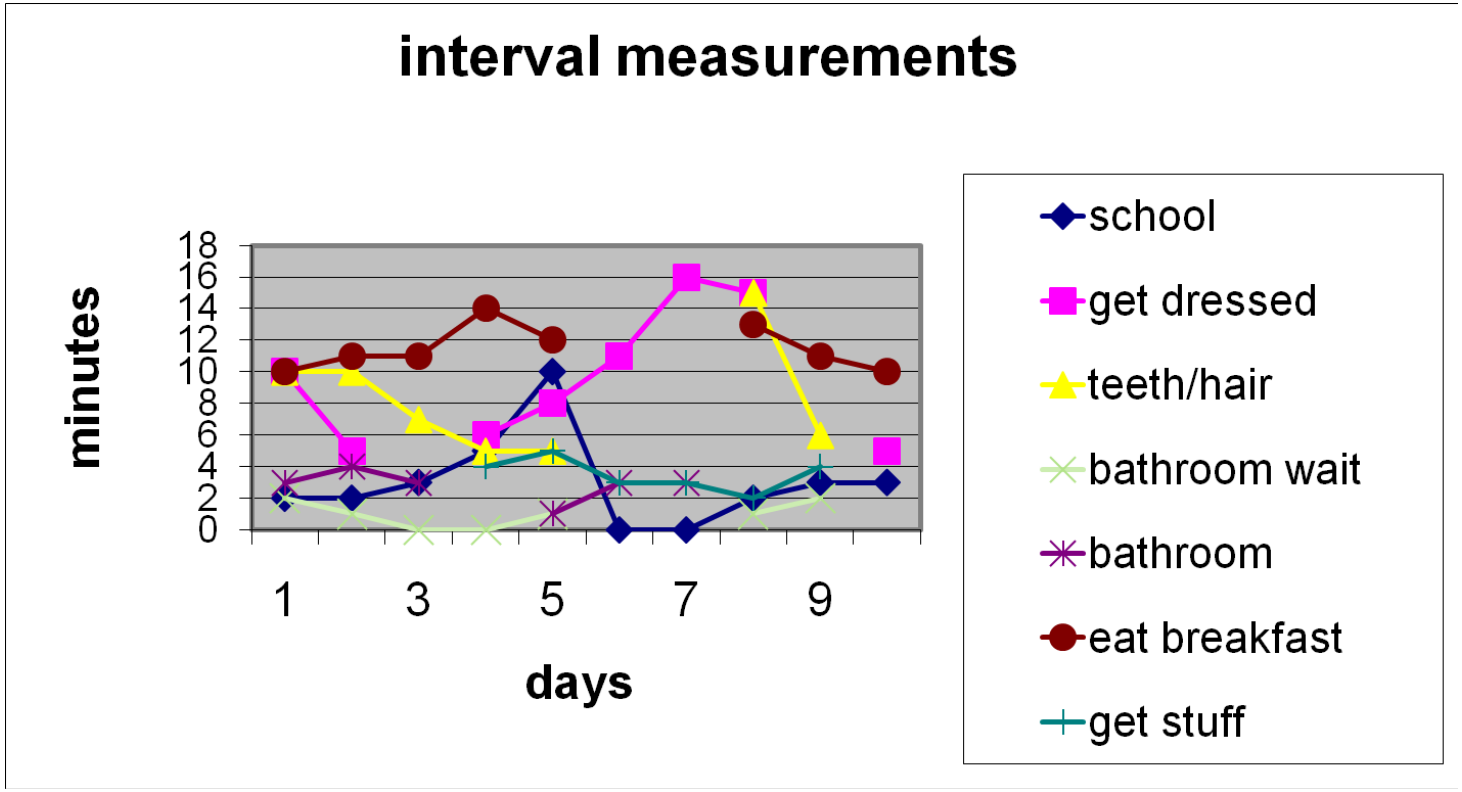


# What changes can we make (4)?

- Find bottlenecks*

**Where exactly is the black hole of time? Will capture measurements of specific intervals as able and correlate with arrival time.**

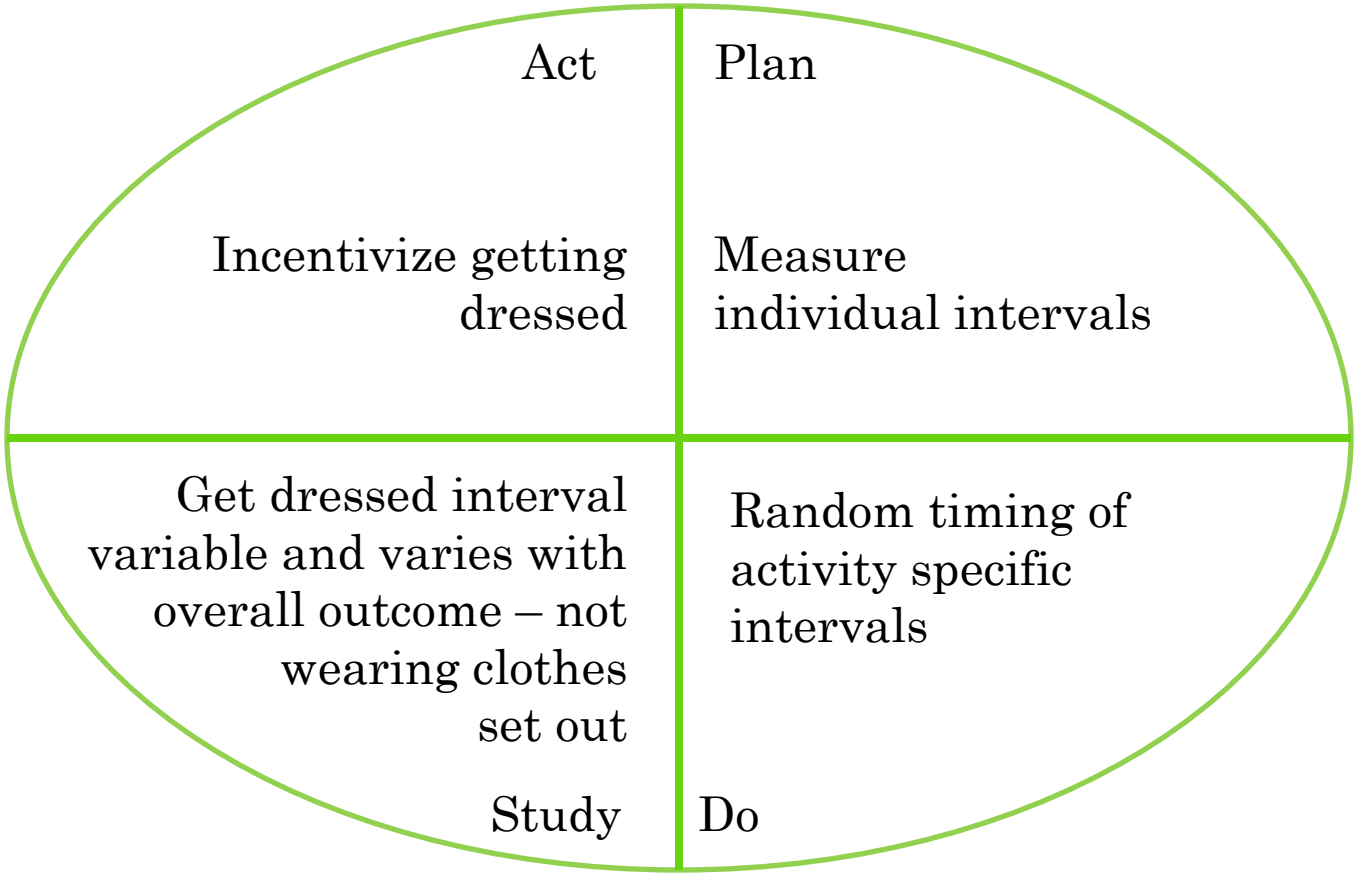
# Interval Measurement of Different Activities




| Measure | Result | Assessment |
|---|---|---|
| Late or almost | 2 (20%) | Improvement |
| Negative Parental Intervention | 2 (0.2/day) | Improvement |

# Summary of Test 4:

- Find bottlenecks



# Next Steps

- Incentivize wearing pre-arranged clothing specifically
- Reminder systems for brushing hair/teeth
- Conduct training?
- ??

# Overall Summary

- Get up earlier (more of same) – no change
- Re-arrange order of activities – improvement
- Remove activities – no change
- Wasted test – could have predicted this based on no improvement with getting up earlier
- Provide incentives – improvement
- Provide incentives specifically - improvement

# The North Philadelphia Safety Net Partnership: Use of the PDSA Model of Improvement


- Steven Touzell
- Director Long Term Care
- Philadelphia Corporation of Aging

- Steven R. Carson, RN, BSN, MHA
- Vice President
- Temple University Hospital
- Temple University Hospital

# Objectives

- High Level Overview of The North Philadelphia Partnership
- Review of a program implementation strategy using the PDSA model for improvement.

# North Philadelphia Safety Net Partnership – Community Based Care Transitions Program

**PCA, Philadelphia County's Area Agency on Aging has partnered with two of the city's largest safety net hospitals, Einstein and Temple, to meet the specific care transition challenges of some of our nations' most economically challenged urban areas.**

Einstein MEDICAL CENTER PHILADELPHIA

Temple University Hospital

PCA PHILADELPHIA CORPORATION FOR AGING

**BOOST and RED**
implemented within 24 hours of hospital admission

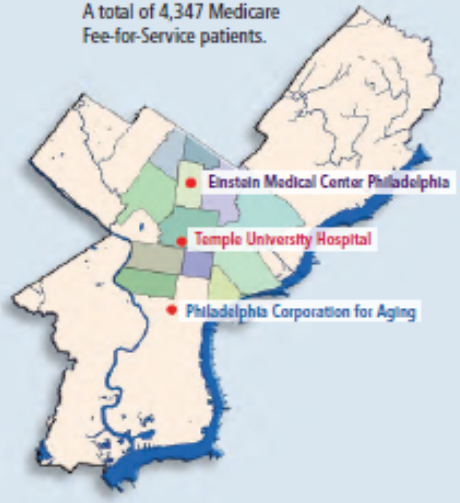
**Bridge Model**
implemented no later than 24 hours prior to discharge home

## Aims

- Decrease the number of readmissions within 30 days of hospitalization
- Greater coordination of care services across the continuum
- 20% reduction in all Medicare Fee-for-Service (FFS) readmissions

## Target Population

A total of 4,347 Medicare Fee-for-Service patients.




## Evidenced-Based Care Transition Models

### Einstein Medical Center Philadelphia BOOST Program

- Patient Navigator, RN
- Pharmacist
- Discharge Plan
  - Educational materials
- Staff training
- Clinical care team
- Electronic discharge-planning system

### Temple University Hospital RED Program

- Patient Navigator, RN
- Discharge Plan
  - Educational materials
- Staff training
- Clinical care team
- Electronic discharge-planning system

### PCA BRIDGE Program

- 13 FTE Bridge Care Coordinators (BCC)
- Staff training
- MSW supervisors
- Educational materials
- Electronic discharge-planning system
- Support package for eligible beneficiaries
  - Cab vouchers
  - Home delivered meals

## Performance Targets

**Objective 1**
Reduce 30 day risk-adjusted readmissions rate
*Evaluation Method:*
Administrative Data (CMS)

**Objective 2**
Increase primary care provider follow-up within 7 days of index discharge
*Evaluation Method:*
Medical Record Review

**Objective 3**
Increase percentage of patients over 65 who rate hospital performance as meeting HCAHPS performance standards for information
*Evaluation Method:*
HCAHP Survey

**Objective 4**
Improve Patient Activation and Care Transition Measures
*Evaluation Method:*
Patient Activation Measure (PAM) Surveys

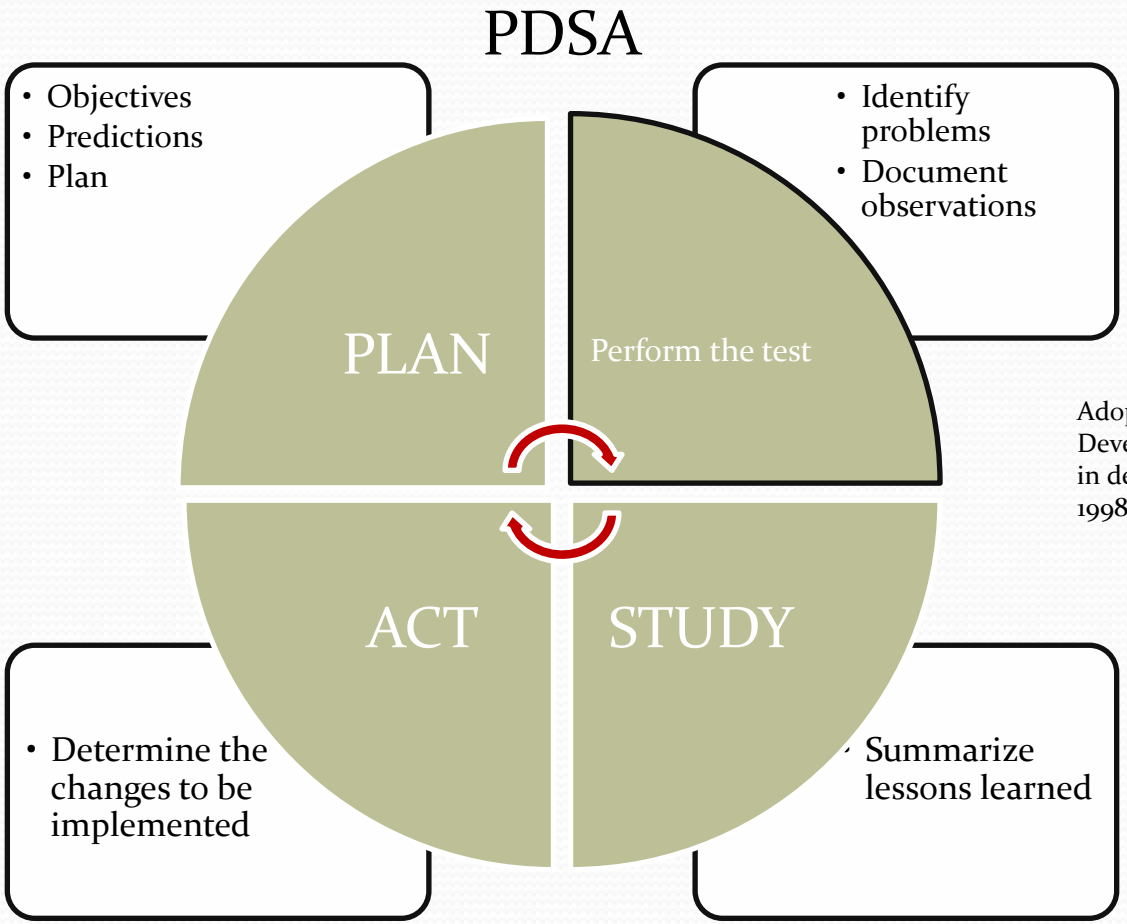
## Transition Program

- Patient Navigator coordinates discharge plan with clinical care team
- Navigator meets with patient to review discharge plan utilizing teach back to confirm understanding
- Pharmacist, Navigator or member of clinical care team meets with patient for medication reconciliation
- Navigator introduces patient to BCC for transition to home care
- BCC, when possible in hospital, conducts needs assessment and PAM pre-survey
- Navigator makes follow up appointment for patient
- Patient discharged
- BCC makes home visit to patient to:
  - Identify 30 day health goals and review discharge plan
  - Review medication plan / Identify barriers to plan / Confirm follow up appt
- BCC makes follow up calls or home visits to ensure progress, that goals of patient are being met and to reinforce care plan
- BCC administers post PAM at 30 day mark and submits summary report

## Bridge Participants


Bridge Participants data provided by Rush University Medical Center and Age Options (both are members of the Illinois Transitional Care Consortium)

# * Rapid Cycle, Pilots and Testing




Adopted from Berwick, DM. Developing and testing changes in delivery of care. Ann Int Med 1998;128(8);651-656.

# Data Collection, Communication and Reporting

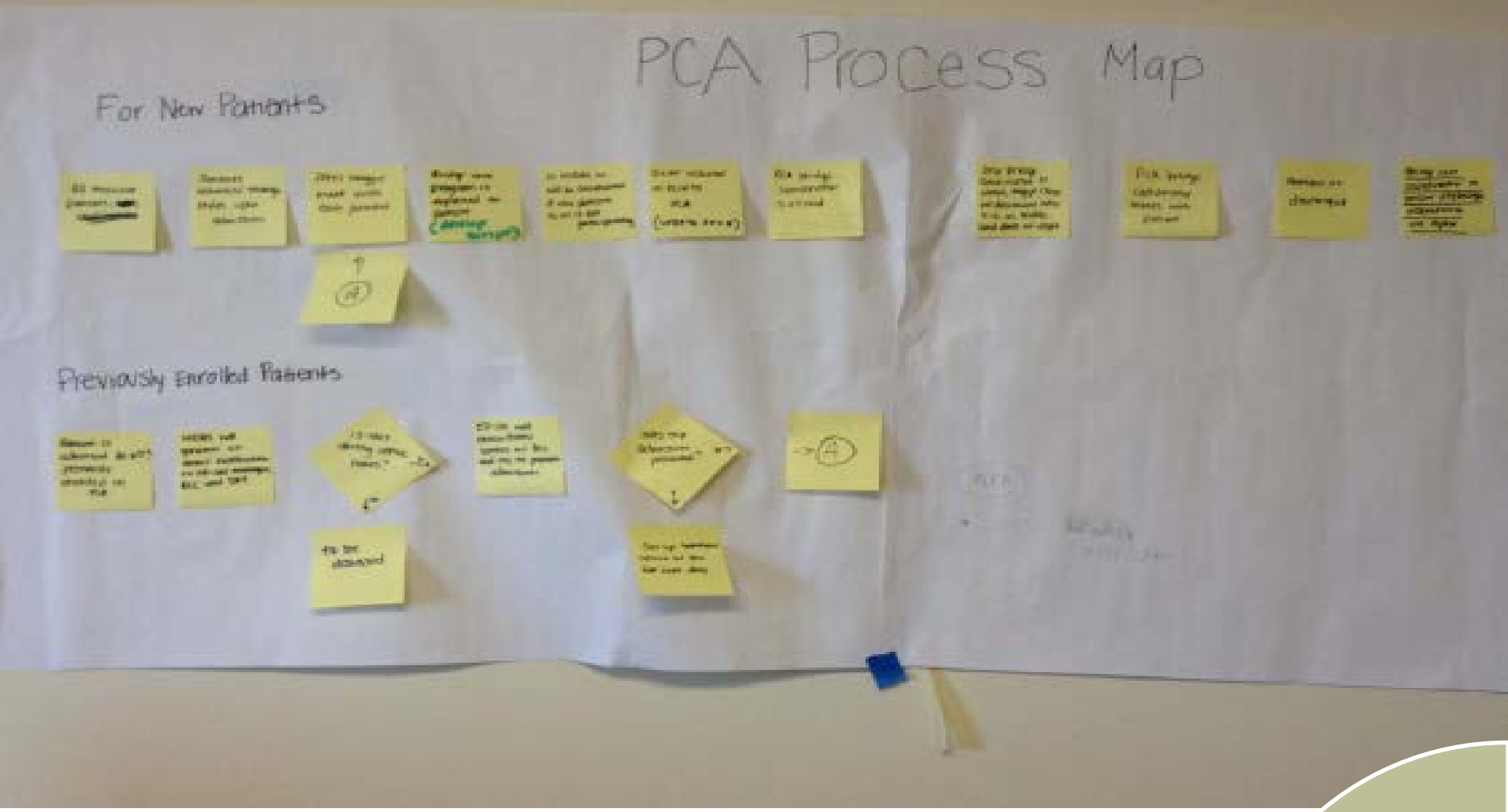
**Plan:**

- Structure
  - What is the defined goal
    - *Establish a data / metric reporting plan for the CCTP outcomes management*
    - *The process needs to largely use electronic or limited use of manually collected data to achieve the result*
- *Part of a larger work plan for implementing the Bridge program*

# Data Collection, Communication and Reporting (Part 2)

- Process
  - Map the existing process ( current state)
    - What information systems report information ( each organization)
    - Are there any common systems (referral system)
    - Who can have access
    - What data elements are available and entered into systems
      - Demographic
      - Admission
      - Diagnosis
      - Transition date (Discharge)
  - Identify performance expectations and what needs to be changed.
    - What information needs to be communicated
    - Who needs it, when do they need it and in what format
    - How can it be collected, in an automated fashion

PLAN




**Future State to be tested in the pilot**
**Process flow identify data and communication points**

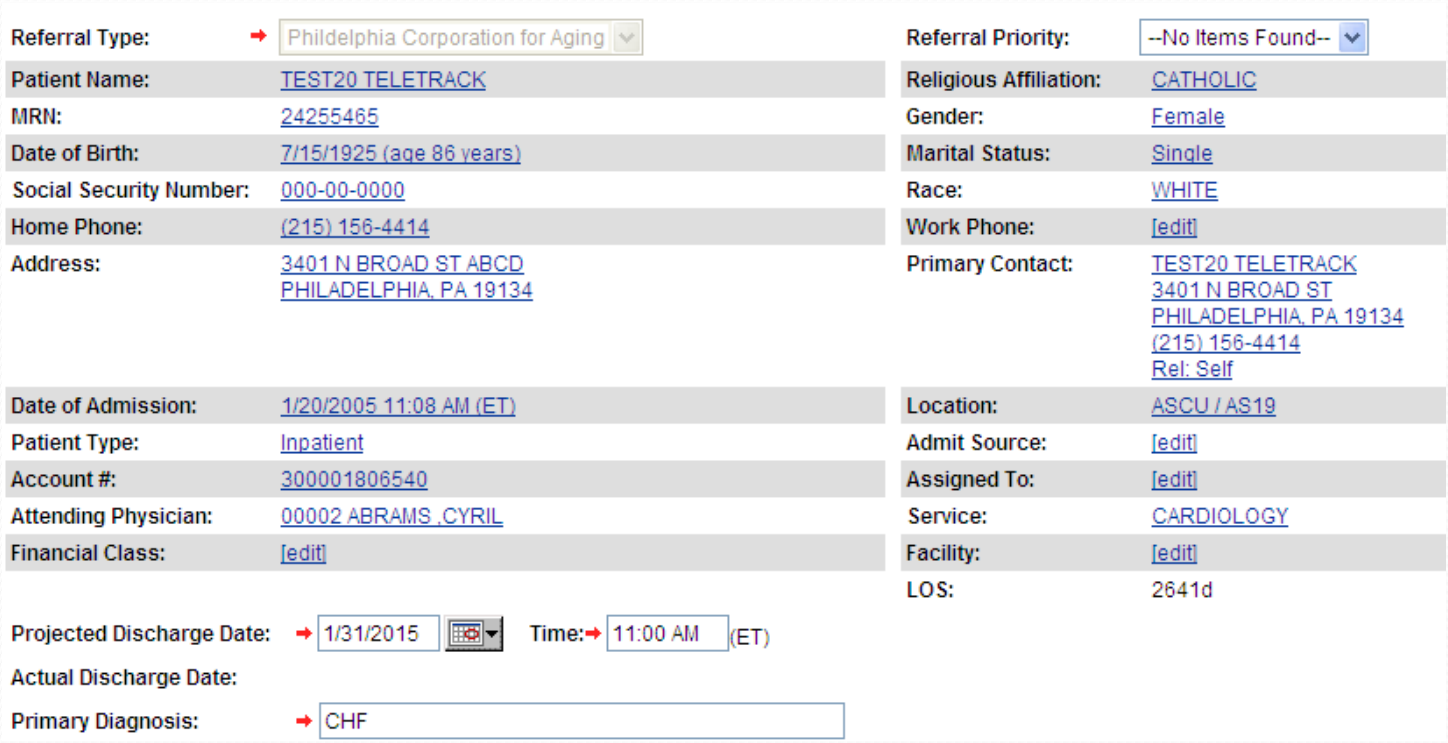
PLAN

## Data Collection, Communication and Reporting (Part 3)

- Create future state for information system communication.
  - Referral Process ( Electronic System)
    - Data from the referring institution
  - Bridge Coordinator documentation process
    - Metrics that are measured based on proposal
    - Activation scores
    - Satisfaction
    - Return to PCP / Specialty Care
    - Transition services
- Confirm fields and point of data entry
- Create test report formats

PLAN

# Creating the Referral



| | | | |
|---|---|---|---|
| Referral Type: | Phildelphia Corporation for Aging | Referral Priority: | --No Items Found-- |
| Patient Name: | TEST20 TELETRACK | Religious Affiliation: | CATHOLIC |
| MRN: | 24255465 | Gender: | Female |
| Date of Birth: | 7/15/1925 (age 86 years) | Marital Status: | Single |
| Social Security Number: | 000-00-0000 | Race: | WHITE |
| Home Phone: | (215) 156-4414 | Work Phone: | [edit] |
| Address: | 3401 N BROAD ST ABCD<br>PHILADELPHIA, PA 19134 | Primary Contact: | TEST20 TELETRACK<br>3401 N BROAD ST<br>PHILADELPHIA, PA 19134<br>(215) 156-4414<br>Rel: Self |
| Date of Admission: | 1/20/2005 11:08 AM (ET) | Location: | ASCU / AS19 |
| Patient Type: | Inpatient | Admit Source: | [edit] |
| Account #: | 300001806540 | Assigned To: | [edit] |
| Attending Physician: | 00002 ABRAMS ,CYRIL | Service: | CARDIOLOGY |
| Financial Class: | [edit] | Facility: | [edit] |
| | | LOS: | 2641d |

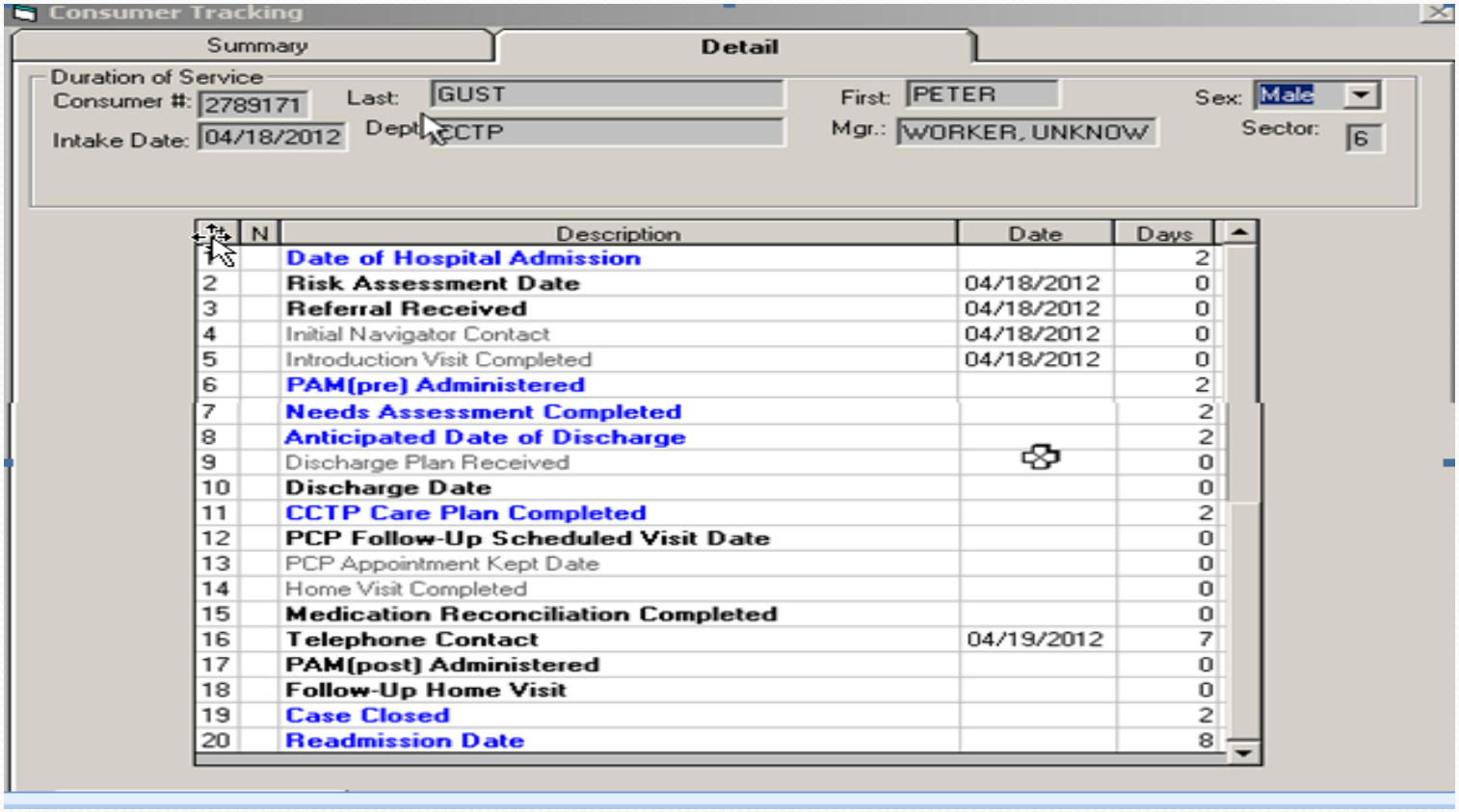
Projected Discharge Date: 1/31/2015 Time: 11:00 AM (ET)

Actual Discharge Date:

Primary Diagnosis: CHF

PLAN

# PCA – Information System – Beta Design




| | N | Description | Date | Days |
|---|---|---|---|---|
| 1 | | **Date of Hospital Admission** | | 2 |
| 2 | | **Risk Assessment Date** | 04/18/2012 | 0 |
| 3 | | **Referral Received** | 04/18/2012 | 0 |
| 4 | | Initial Navigator Contact | 04/18/2012 | 0 |
| 5 | | Introduction Visit Completed | 04/18/2012 | 0 |
| 6 | | **PAM(pre) Administered** | | 2 |
| 7 | | **Needs Assessment Completed** | | 2 |
| 8 | | **Anticipated Date of Discharge** | | 2 |
| 9 | | Discharge Plan Received | | 0 |
| 10 | | **Discharge Date** | | 0 |
| 11 | | **CCTP Care Plan Completed** | | 2 |
| 12 | | **PCP Follow-Up Scheduled Visit Date** | | 0 |
| 13 | | PCP Appointment Kept Date | | 0 |
| 14 | | Home Visit Completed | | 0 |
| 15 | | **Medication Reconciliation Completed** | | 0 |
| 16 | | **Telephone Contact** | 04/19/2012 | 7 |
| 17 | | **PAM(post) Administered** | | 0 |
| 18 | | **Follow-Up Home Visit** | | 0 |
| 19 | | **Case Closed** | | 2 |
| 20 | | **Readmission Date** | | 8 |

PLAN

# PCA – Information System – Beta Design (Part 2)

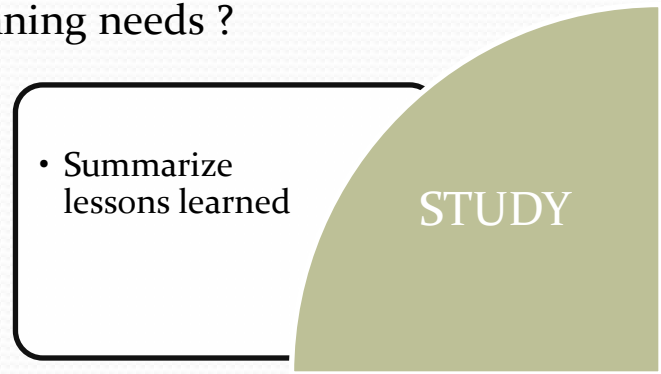
- Execute a pilot test group of patients to test the design
- Document process design on pilot patient group:
  - Electronic Referral system
  - Documentation tools
  - Access to electronic discharge instruction
- Run  defined reports

- Perform the test
  - Identify problems
  - Document observations

DO

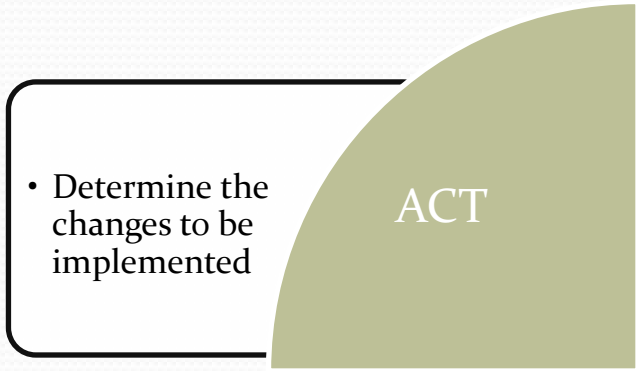
# PCA – Information System – Beta Design (Part 3)

- Evaluate process design on pilot patient group:
  - Electronic Referral system
    - Did the system work as intended ?
    - If not what needs to be changed or removed / added to the process ?
  - Communication
    - Did the electronic notifications work as intended ?
    - Did the messaging process provide a value added component ?
  - Documentation tools
    - Did the tools support the data elements needed by the Bridge Care Coordinator ?
  - Access to electronic discharge instruction
    - Can the coordinators access ?
    - Do the instructions meet the community based planning needs ?
  - What additional education is needed ?



# PCA – Information System – Beta Design (Part 4)

- **Hardwire process**
  - Make modifications based on the results
    - Communication
    - Referral System
    - Data Reporting
- **Redesign and Re-test**



# Resources: *PDSA*

- http://www.ihi.org/knowledge/Pages/HowtoImprove/default.aspx (Institute for Healthcare Improvement "How to Improve" site)

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# Resources: *Care Transitions*

- http://www.innovations.cms.gov/initiatives/Partnership-for-Patients/CCTP/index.html (Community-based Care Transitions Program)
- http://www.aoa.gov/Aging_Statistics/Health_care_reform.aspx (AoA's Health Reform page – where archived webinars are stored)
- http://www.aoa.gov/AoARoot/AoA_Programs/HCLTC/ADRC_CareTransitions/Toolkit/index.aspx (AoA's The Aging Network and Care Transitions: Preparing your Organization Toolkit)
- http://www.aoa.gov/AoARoot/AoA_Programs/HCLTC/ADRC_CareTransitions/index.aspx (AoA's Aging and Disability Resource Centers Care Transitions page)
- http://www.adrc-tae.org/tiki-index.php?page=CareTransitions (AoA's Aging and Disability Resource Centers Technical Assistance Exchange care transitions page)
- http://www.cfmc.org/integratingcare/ (Integrating Care for Populations and Communities Aim National Coordinating Center website)

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# Resources: *Affordable Care Act*

- http://www.aoa.gov/Aging_Statistics/Health_care_reform.aspx (AoA's Health Reform web page – where webinar recordings, transcripts and slides are stored)
- http://www.healthcare.gov (Department of Health and Human Services' health care reform web site)
- http://www.thomas.gov/ (Affordable Care Act text and related information)

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# Next training

- May date and topic TBD
  - Watch your email in early May for registration information

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# Questions/Comments/Stories/ Suggestions for Future Webinar Topics?

Send them to:

AffordableCareAct@aoa.hhs.gov

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