Session 5. *Program Spread and Evaluation; Next Steps-What will you do by next Tuesday?*

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Objectives

- Review process of program evaluation
- Formulate measurable fall-related outcomes
- Differentiate types of falls as a basis for analysis of program effectiveness at patient, unit and organizational levels
- Apply a three-level framework for fall and fall injury program evaluation

Spirit of Inquiry – Use of Reasoning

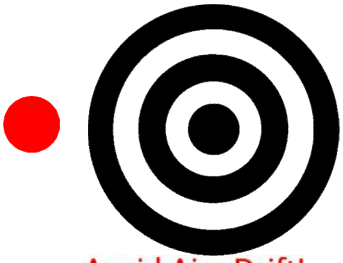
- Clinical Question or Idea
- Patient Idea
- Literature Review
- Innovation
- Product Evaluation
- Networking at Conferences & Meetings
- Informing Clinical Decision-Making

State the Aim Clearly

Achieving agreement on the aim of a project is critical for maintaining progress.

Teams make better progress when they are very specific about their aims.

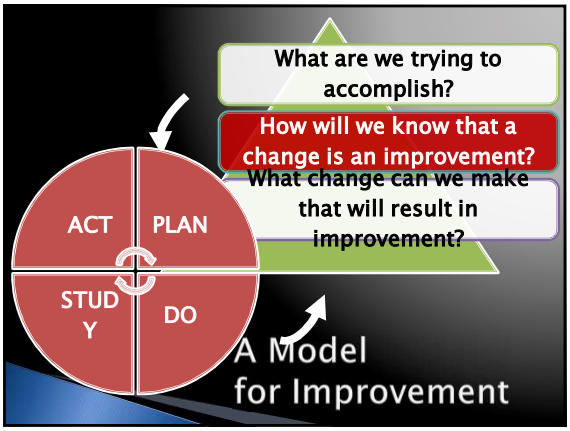
Must Be Measurable!

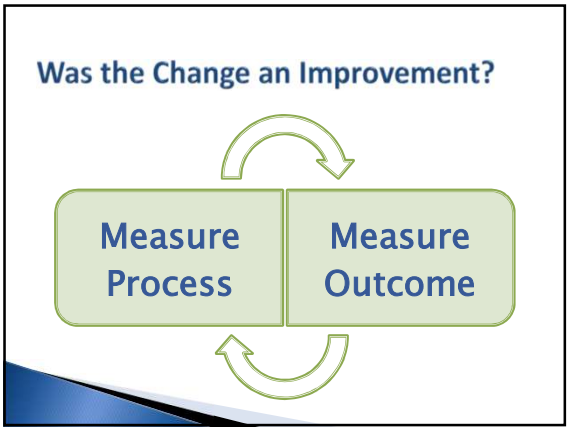


Avoid Aim Drift!

Examples of Aims

Reducing the rate of preventable falls in our facility by 40% in 12 months	Reducing the rate of injuries due to falls in our facility by 50% in 12 months	Increase the percentage of staff on our unit who are educated about our falls prevention protocol to 100% in 2



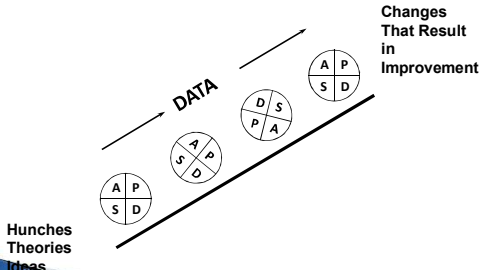


PDSA CYCLE

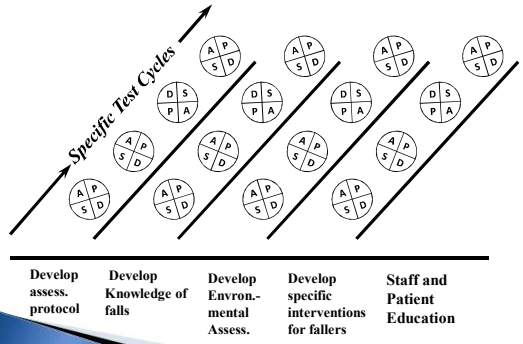
Testing on a Small Scale

- Have others that have some knowledge about the change review and comment on its feasibility.
- Test the change on the members of the team that helped developed it before introducing the change to others.
- Conduct the test in one facility or office in the organization, or with one patient.
- Conduct the test over a short time period.
- Test the change on a small group of volunteers.

Repeated Use of the Cycle



Overall Aim: Decrease Falls Rate by 40% in 7 months



Tips for Measurements

- Seek usefulness, not perfection.
- Use sampling . Ex: 10 charts per week.
- Don't wait for the information system.
- Reports percentages & rates, not absolute numbers.
- Take outcome measures at least 1 X/month.
- Take process measures at least 2 X/month.
- Plot data over time, run charts.

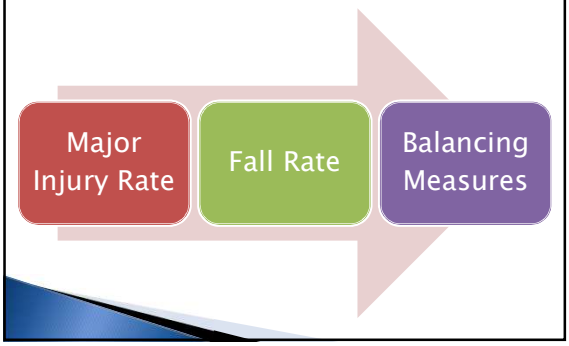
Examples of Process Measures

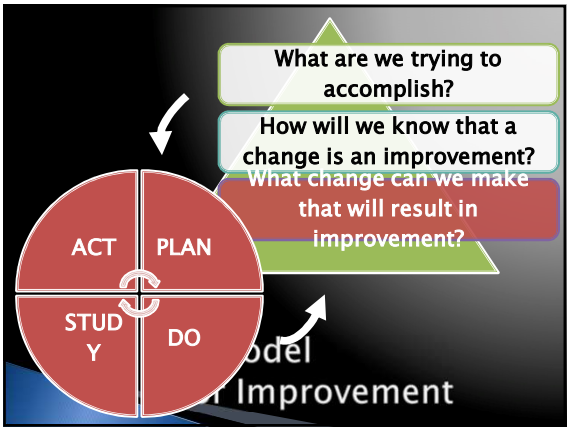
Percentage of

- Patients at risk for falls and fall related injuries with interventions in place
- Patient with completed intentional rounding
- Observation, chart review

Process measures answer the question: *"Are we doing the things we think will lead to improvement in outcome?"*

Outcome Measures





Framing the Question

- Do you want to change a process, improve a practice, or test a product on your unit? (Program Evaluation/QI)
- Do you want to test the strength of an association or the effectiveness of an intervention? (Research)

Program Evaluation Process

- Process by which individuals work together to improve systems and processes with the intention to improve outcomes*

*Committee on Assessing the System for Protecting Human Research Participants. *Responsible Research: A Systems Approach to Protecting Research Participants.* Washington, D.C.: The National Academies Press: 2002.

Intended Purpose

- Improve care for a specific population
- Limited application (a clinical unit or clinic)
- Process of self-monitoring and self-assessment
- Results are applied in an effort to improve a process or a practice
- Trends are monitored using process improvement tools (run charts, standardized reports)

Program Evaluation Process

1. **Problem**: The problem should be of interest to the clinical staff, unit, and or hospital. It should specify the population and the variables that are being studied.
   e.g. Increase in preventable falls (accidental and anticipated physiological)
2. **Purpose**: Determine if standardized purposeful rounding could reduce preventable falls and are accepted by staff and patients.
   A quantitative component identifies the key variables, their possible interrelationships and the nature of the population of interest. In qualitative component, the statement of purpose indicates the nature of the inquire, the key concept, and the group, community, or setting under study
3. **Research Question/hypothesis**: No specific research hypothesis or criteria for including staff or patients.

Program Evaluation Process

4. Intervention: Hand Off Communication
   Outcome: Preventable Falls (quantitative)
   Staff/Patient Acceptance
5. Conceptual/theoretical framework: Planned change theory. Small tests of change.
6. Literature review: What knowledge exists on the study topic? The literature review can help the researcher plan study methods, instruments or tools to measure the study variables.
7. Research design: The overall plan for gathering data in a research study. It is concerned with the type of data that will be collected and the means used to obtain the data. How will the practice change implemented?

Program Evaluation Process

8. **Population- sample- setting**
   Sample: Not specific - rather focus on a process or practice
   Sampling: Convenience methods.
9. **Instruments/ tools-**
   Checklists, surveys and / or instruments that do not have established psychometric properties
   The type used is determined by the data collection method (s) selected.
10. **Data Collection-**
    The gathering of pieces of information or facts. What data will be collected? How will the data be collected, who will collect the data? Where will the data will be collected? When will the data be collected? The data may be collected on subjects by observing, testing, measuring, questioning, or recording or combination of methods.
11. **Data analysis-** Organize, reduce and give meaning to the pieces of information. Involves the translation from common language or general research language to the language of the statisticians. When the analysis is complete, the results of the process or practice change is evaluated.
12. **Results and Findings**: The interpretations of results only apply to that setting and sample.

Data- Not just for research

- Data type is important for performance improvement analysis
- Research and Performance Improvement as a continuum
- Type of data important to determine type of statistical process control (SPC) charts

Program Effectiveness: Fall Prevention

- Organizational Level: Expert interdisciplinary all team, program evaluation, leadership, environmental safety, safe patient equipment, anti-tippers on wheelchairs
- Unit Level: education, communication-handoff, universal and population-based fall-prevention approaches
- Patient Level: exercise, medication modification, orthostasis management, assistive mobility aides

Program Effectiveness: Protection from Serious Injury

- Organizational Level: available helmets, hip protectors, floor mats, height adjustable beds; elimination of sharp edges
- Staff Level: education, adherence, communication-handoff includes risk for injury
- Patient Level: adherence with hip protector use, helmet use, etc.

Evaluations Methods

- Prevalence Studies
- Formative and Summative Evaluation Methods
  - Type of Falls
  - Severity of Injury
    - How are you assessing for injury? Duration? Extent of Injury?
  - Repeat Falls
  - Survival Analysis
  - Annotated Run Charts

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Revisit Falls as Outcome

- If focus on falls, measure preventable falls
- Otherwise, measure effectiveness of interventions to mitigate or eliminate fall risk factors (remember Oliver article, recommendation 2 and 3): Number (and type) of modifiable fall risk factors modified or eliminated upon DC.

Analyzing Fall Injuries by Severity

- Low
- Moderate
- Severe
- Death
- Multiple Injuries – Profile Number and Severity of Injuries

Is That Enough?

- How do you know that your program is working?
- How do you know that your staffing mix is appropriate?
- How do you compare your rates to that of other units?

Let's Go Beyond Fall Rates

- Repeat Fallers
- Delays in Repeat Falls (Time to Occurrence)
- Diagnostic Cohorts
- Known Pts with Fall Related Injuries

Collection of Fall Related Data

- What Data are you collecting?
- Are your variables evidence-based?
- What about Reliability and Validity?
- What is the role of Fall Incident Reports?

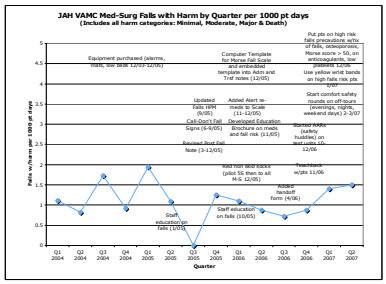
Effectiveness of Fall Improvement Programs

- Interdisciplinary Care Planning
- Post Fall Reviews
- Integration of Technology

Displaying Data/Story Telling

- Run Charts
- Control Charts
- Annotation: Show your Interventions

Annotated Run Chart



Painting the Picture

- Is your program improving?
- Are your patients safer?
- Are your patients confident?

Add other Measures

- Fall Self Efficacy
- Patient Satisfaction
- Family Satisfaction

Keep Thinking *Out of the Box*!

- Leadership: Culture of Safety
- Fall Rounds
- Signage
- Frequency of Fall Risk Screening
- Measurements of Effectiveness

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