

Tackling Quality Improvement Using Plan- Do-Study-Act Cycles and Human Factors Design

Presented by the Wolff Center at UPMC

Goals

- Identify and assess the feasibility of real-world problems that can be tackled using quality improvement (QI) methodology.
- Learn strategies to generate potential solutions to QI problems.
- Apply rapid-cycle tests of change and human factors design principles to real-world projects.

What problem am I trying to solve?



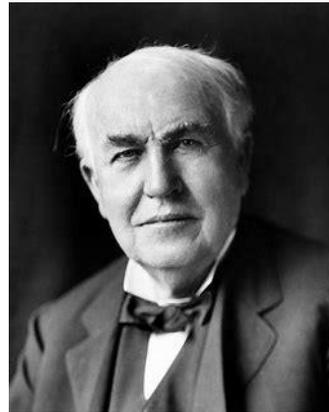
Is solving this problem feasible?

Statement of your problem:						
<h2>Project Evaluation Worksheet</h2>						
Criteria	Rating					
1. The process or project is related to a key clinical or business issue.	Not at all 1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	Very 5 <input type="radio"/>	Don't know <input type="radio"/>
2. Leadership does or would give this project high priority.	Not at all 1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	Very 5 <input type="radio"/>	Don't know <input type="radio"/>
3. Data is available or can be easily collected for this project.	yes <input type="radio"/>		no <input type="radio"/>		Don't know <input type="radio"/>	
4. I know what processes I want to improve to make a change.	yes <input type="radio"/>		no <input type="radio"/>		Don't know <input type="radio"/>	
5. The processes that I want to improve repeat regularly (every day, several times a week).	yes <input type="radio"/>		no <input type="radio"/>		Don't know <input type="radio"/>	
6. The problem that I need to improve is stated as a problem, not a pre-determined solution (e.g. "I want to improve the efficiency of the triage process" not "I will improve efficiency by instituting a new form".)	yes <input type="radio"/>		no <input type="radio"/>		Don't know <input type="radio"/>	
7. The processes that I want to improve are within my scope of knowledge/authority or within the scope of my small team.	yes <input type="radio"/>		no <input type="radio"/>		Don't know <input type="radio"/>	
8. I know who has authority over the different parts of the process that I want to improve.	yes <input type="radio"/>		no <input type="radio"/>		Don't know <input type="radio"/>	
9. The process will not be changed by another initiative in the near future.	yes <input type="radio"/>		no <input type="radio"/>		Don't know <input type="radio"/>	

How can I make successful change?

“I have not failed. I’ve just found 10,000 ways that won’t work.”

Thomas Edison



Generate and share possible interventions

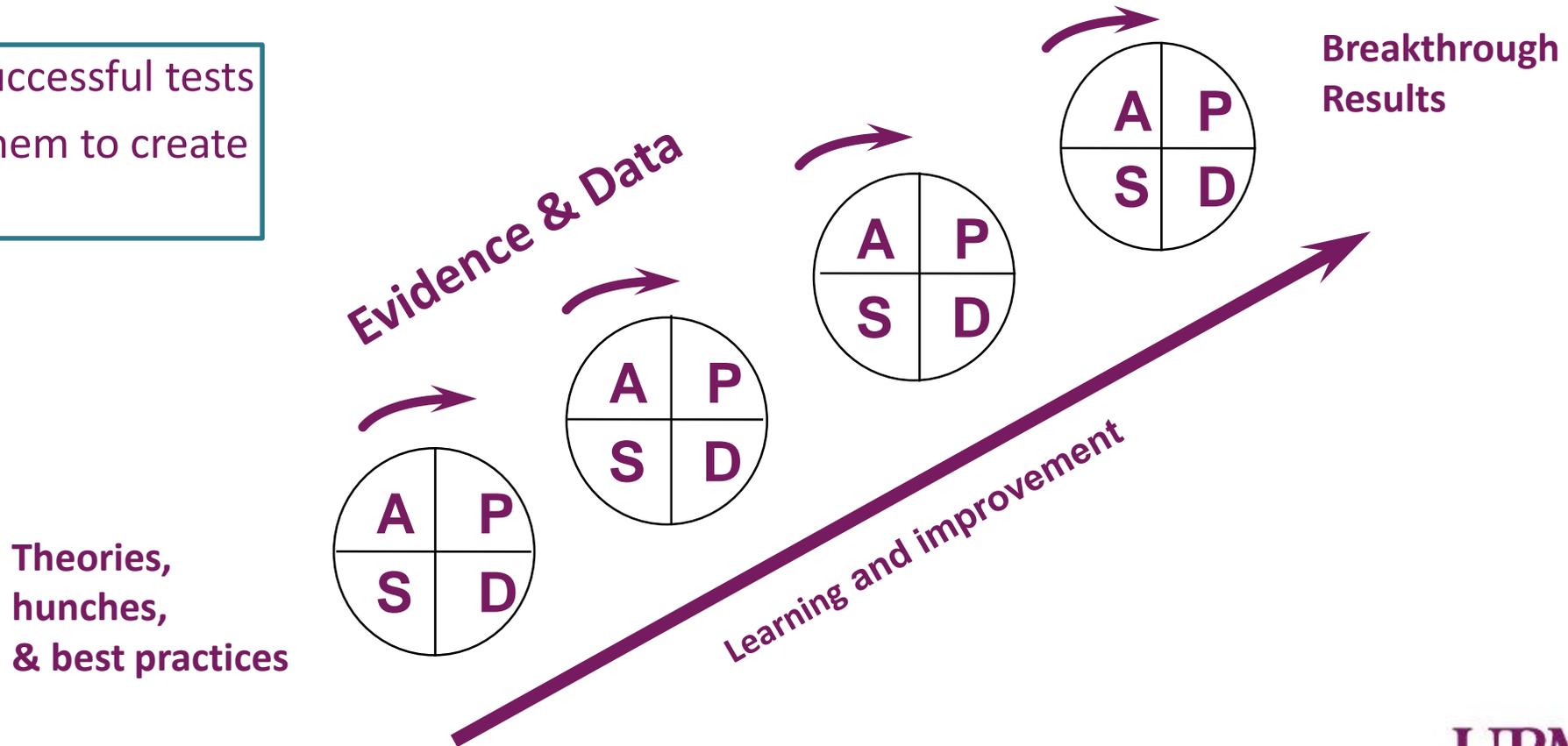
- Identify **at least 4 different interventions** that you could use to get closer to your goal.
- Consider:
 - Where do you start first?
 - Who is nice and is willing to make change?
 - What patient population, doctor, nurse, tech, floor is most likely to show success?
- Share your ideas with your partner – can you think of additional interventions each of you can try?
- Plan one of your tests of change that you could make within a week **in detail** using the PDSA worksheet.

Generate and share steps of your ramp

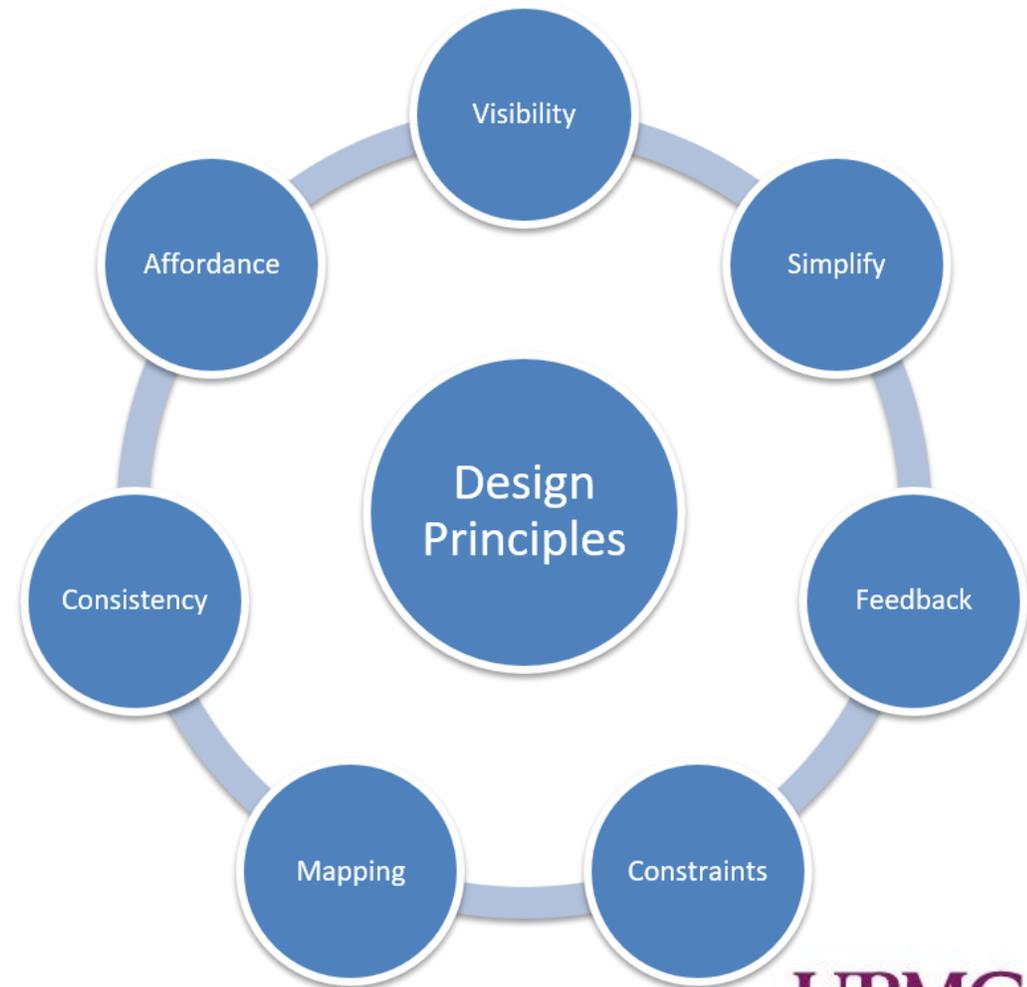
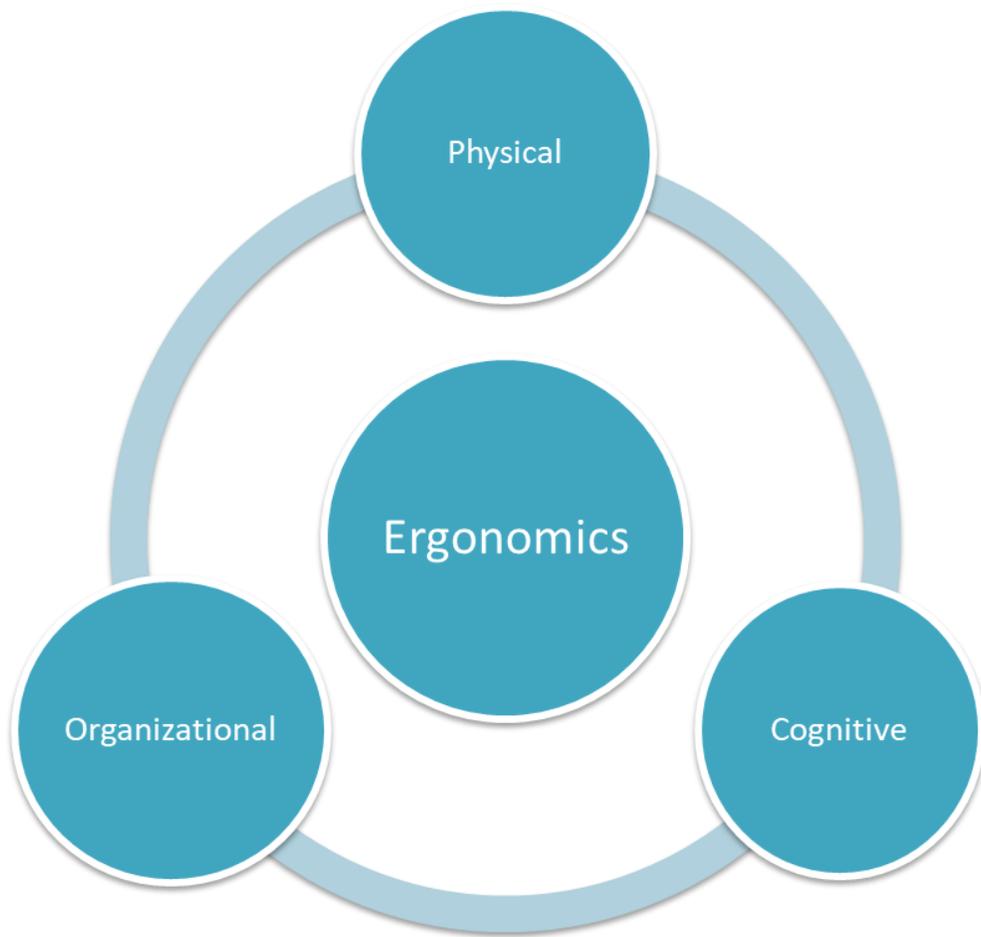
- List at least **4 possible versions of a single change** you could make in your project. Remember – one nurse, one tech, one patient, one day.
- Consider:
 - What other times, patient populations, conditions, staff would you want to test with?
 - Could the intervention be in a different format?
- Share your ideas with your partner – can you think of additional interventions each of you can try?
- **Create a draft ramp plan** that you could use to test changes over the course of the next two weeks.

Building on Knowledge: Creating a Ramp

Build on successful tests or adapt them to create a ramp.



How can I make my change stick?



Case Study

“Most serious medical errors are committed by competent, caring people doing what other competent, caring people would do.”

Don Berwick, MD

IHI Founder, Former CMS Administrator



Case Study

- The setting:
 - You are invited by a large health system to conduct a medical investigation of an adverse event as part of an external medical accident investigation team.
- Your job:
 - Discuss your assigned proximal cause with your group and answer the following questions:
 - Who would you talk to in order to understand the larger context of this error?
 - What do you think are possible physical, cognitive, and organizational human factors design issues that might have contributed to this accident? Think about why things may have happened as they did.
 - What could have been done to avoid or mitigate these human factors design issues?

Apply and share human factors design concepts

- Working in groups, identify **at least 3 different ways** to apply HFD concepts to each of your projects.
- Identify what human factors design interventions would be most likely to be successful in **your project**.



Thank you!

Contact us: Wolff Center at UPMC

Cindy Liberi, Director, Quality Education/Program
Development – liberica@upmc.edu