CREATING A SUSTAINABLE CULTURE OF INNOVATION

Paul Casey, MD FACEP
Associate Professor
aCMO, Senior Patient Safety Officer | aCMIO
Vice Chairman, ED Operations
Department of Emergency Medicine
Rush University Medical Center

Brief Course Description:

This session will discuss strategies for building a culture of innovation and continuous improvement in your department. We will introduce fundamental quality improvement tools and discuss successful approaches to change management. We will also discuss the application of lean management philosophy to drive a culture of experimentation and daily improvements.

Course Objectives:

1. Discuss a strategy for building a culture of innovation & continuous improvement
2. Introduce essential tools of quality improvement
3. Discuss the science of change management
4. Introduce lean management as a methodology for continuous improvement

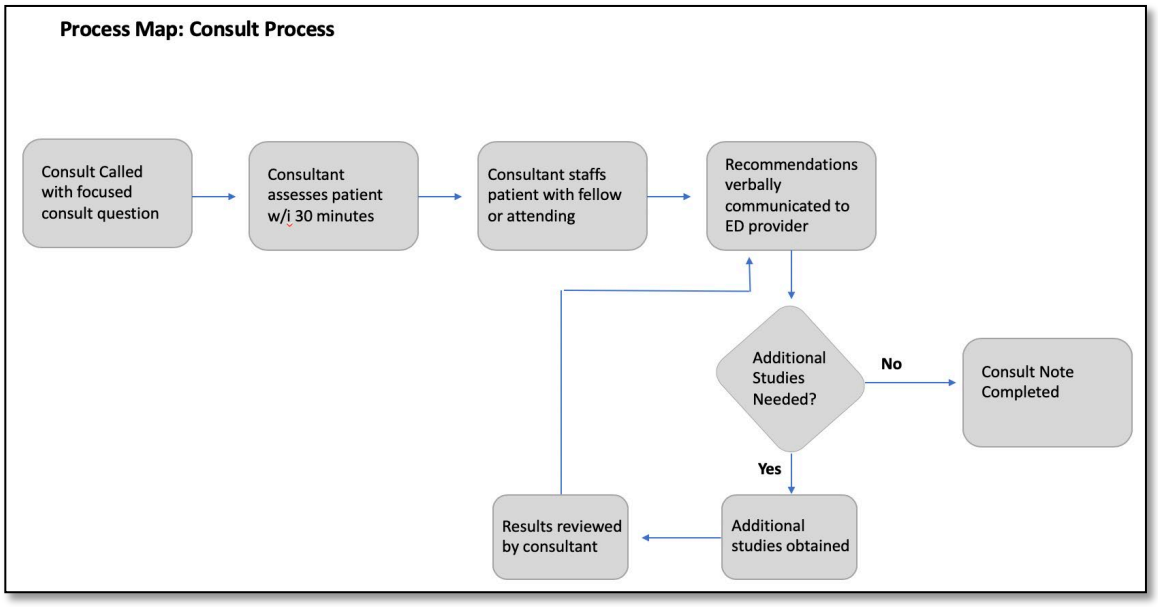
Key Take-Aways:

The Seven Steps to Creating a Culture of Continuous Improvement

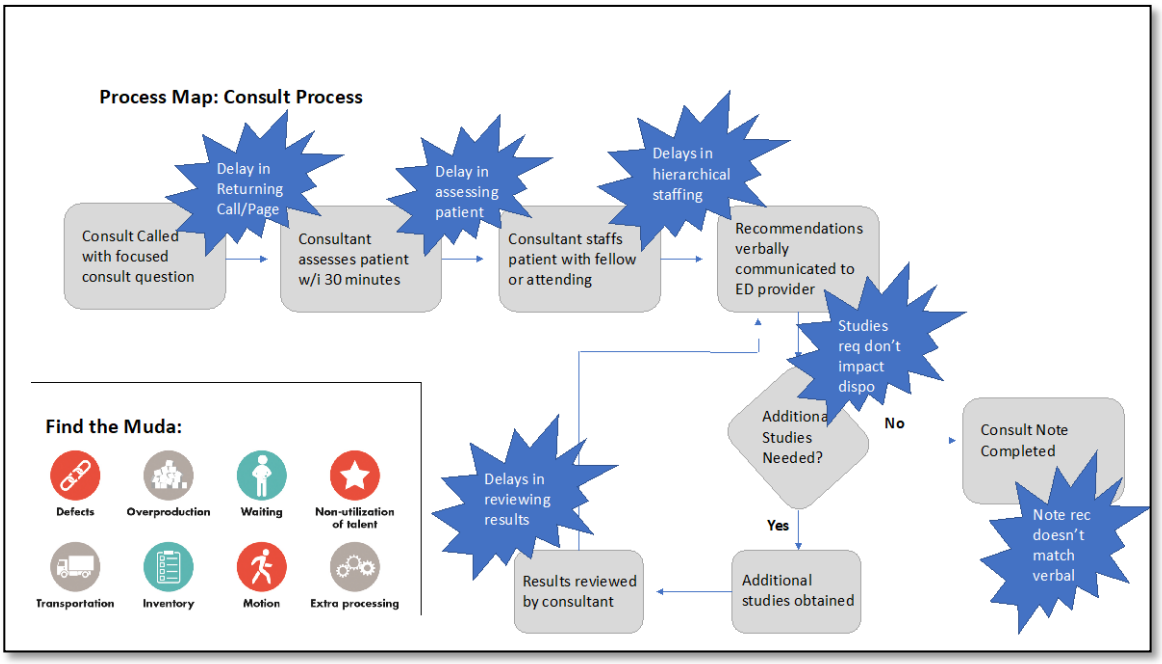
1. Learn your Quality Fundamentals & Your Improvement Ecosystem (see quality 101 tools below)
2. Create a Venue to Dazzle with Your New Skills
3. Assemble Your Team
4. Experiment & Plan to Fail
5. Create Impetus for Change
6. Respect the Gemba
7. Move from Interval Improvements to a Culture of Continuous Improvement

Quality 101 Tools:

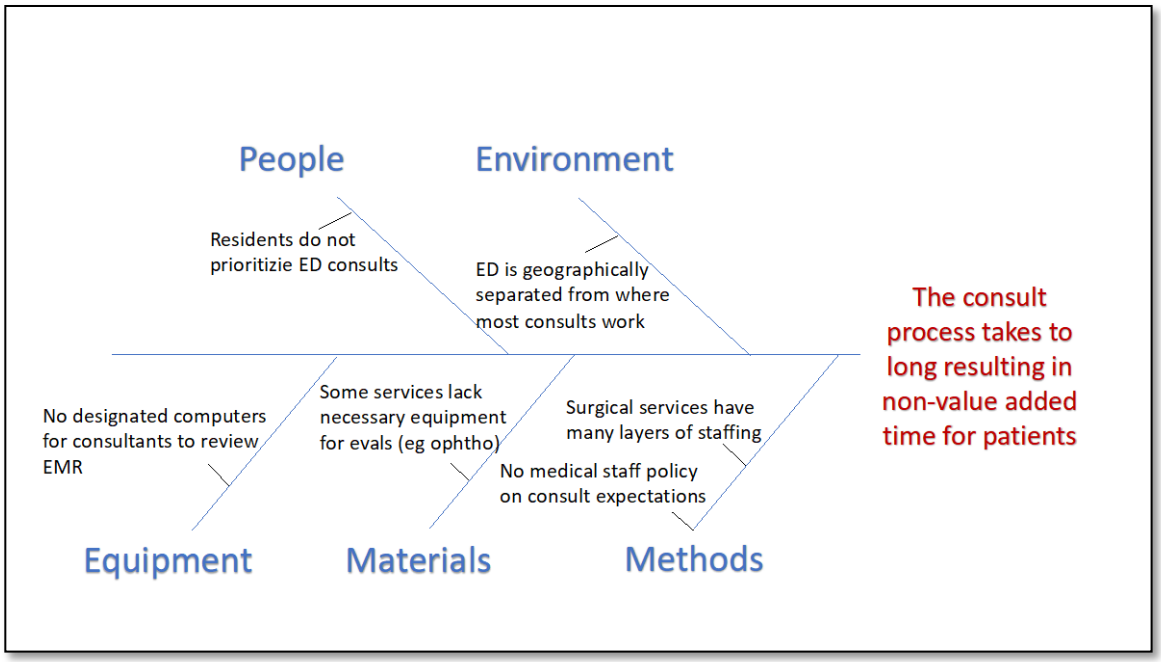
1. **Process Maps –** allow easy visualization of complex processes including decision points. This tool not only helps team level-set on understanding of the process but also becomes the tool to which the team will frequently refer back. This should be created by the team of staff that do the work being studied who have the best understanding of nuances and decision points.



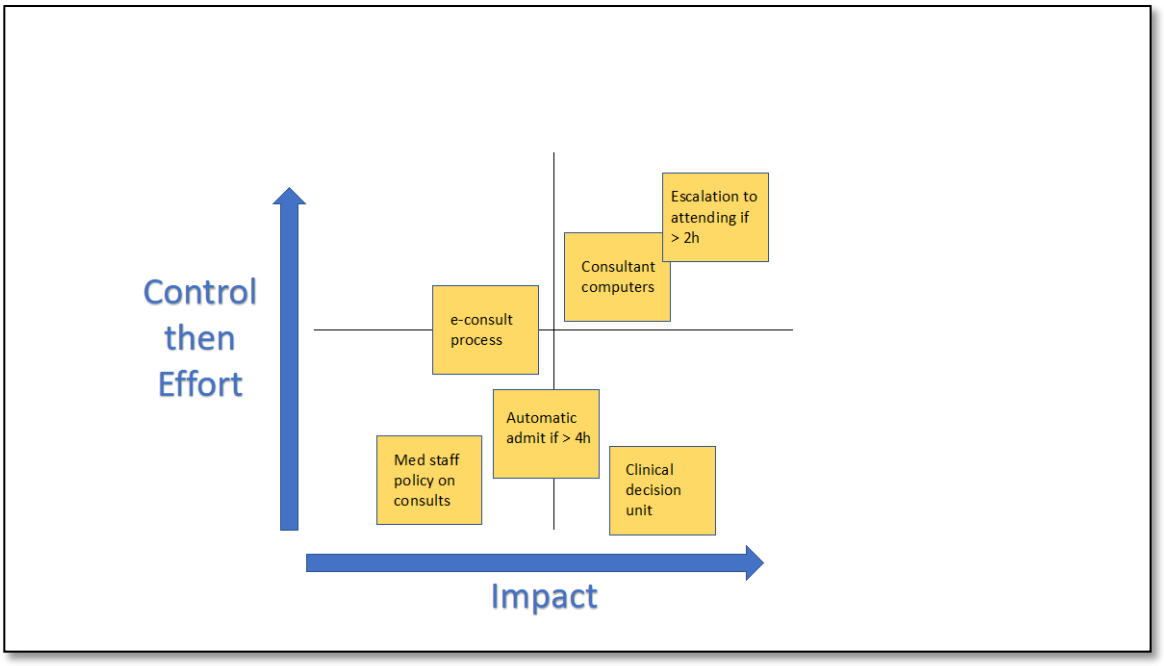
2. **Find the Muda –** using the above process map the team can brainstorm the gaps or opportunities in the current process. The focus should be the elimination of non-value-added activities from the perspective of the patient and the team members. This waste can be generally bucketed into eight categories:
    a. **Defects –** efforts caused by rework and incorrect information
    b. **Overproduction –** production that is more than needed or before it is needed (think just-in-time)
    c. **Waiting** – non-value-added time in the process waiting for next step
    d. **Under-utilization of Talent** – team members not working to the top of their license
    e. **Transportation** – unnecessary movement of products & materials
    f. **Inventory** – redundant, infrequently used or difficult to find supplies resulting in wasted time for staff finding supplies
    g. **Motion** – wasted movement of team members resulting in wasted time (think spaghetti diagram)
    h. **Over-processing** - unnecessary additional steps that do not add value



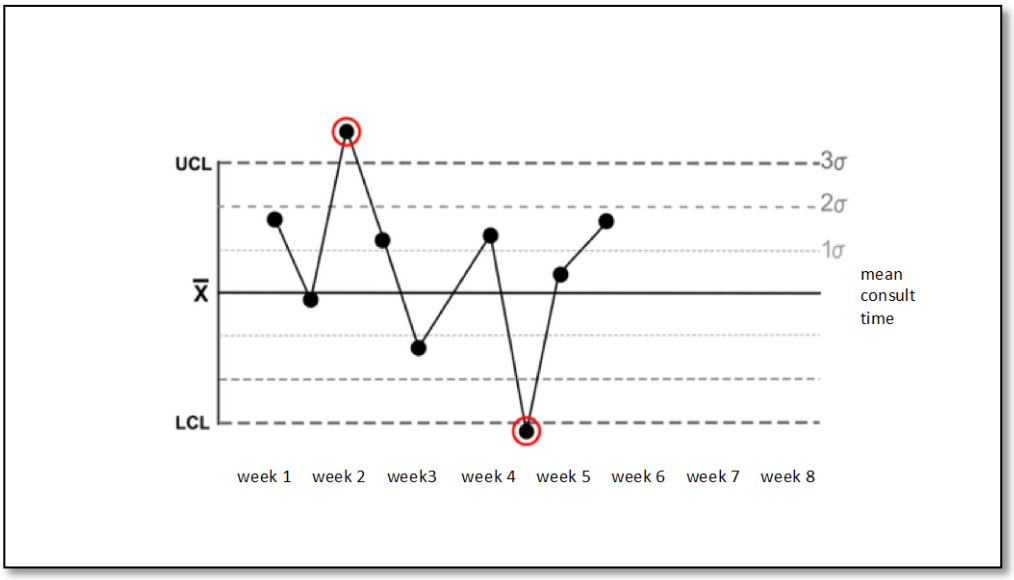
3. **Ishikawa (fishbone, cause-and-effect) Diagram:** used to better understand the most common causes of the problem at hand by categorizing the issues that result in the problem.



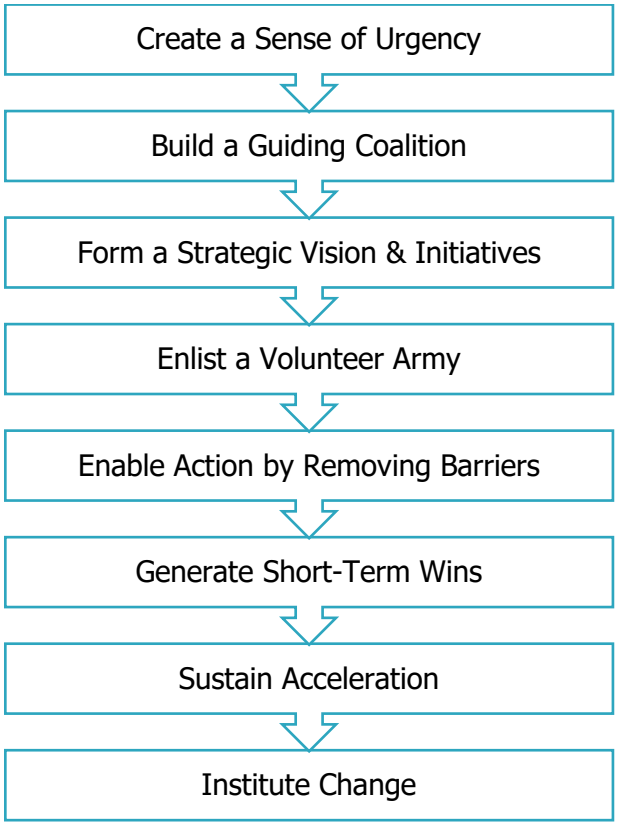
4. **Control-Impact & Effort-Impact Charts:** after team brainstorming for possible solutions to the problem the team needs to assess how impactful and difficult the identified solutions will be to implement. One can start with the control impact to identify the solutions that are most impactful and within the control of the team to be implemented as a start. One may then take those solutions and use the same matrix system to quantify the effort versus the impact of those solutions on which the team voted to work. The team can then use 'dot voting' to decide on the 2-3 interventions to first further explore steps toward implementation.



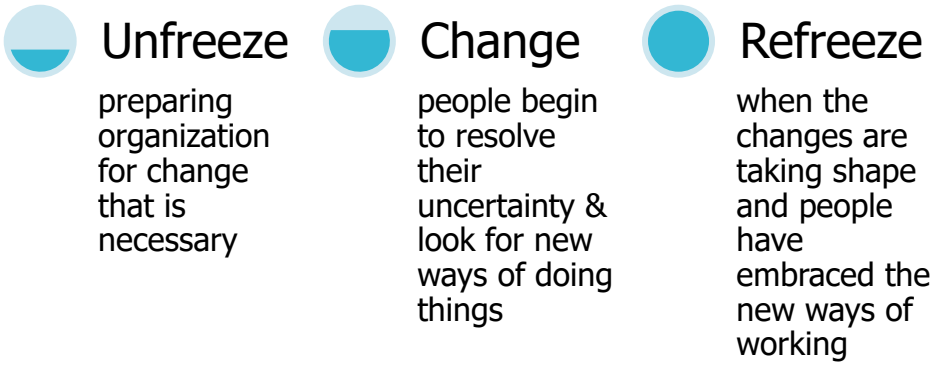
5. **Control Chart:** this tool is used for monitoring ongoing performance. Before implementing a solution, the team would identify current state metrics and a goal which will demonstrate success of the new process. The control chart will serve as the tool to see if performance is improving from baseline and if results are 'in control' (as opposed to outliers). Over time, one wants to see the process becoming more efficient, taking less time and thus the average time will consistently be outside the lower control limit resulting in a new baseline. The chart allows one to identify stability of the new process and identify common causes of variation.



Kotter's 8 Steps to Change Management:



Lewin's Change Management Model:



Suggested Readings & Resources:

1. Scoville R, Little K, Rakover J, Luther K, Mate K. Sustaining improvement. IHI White Paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2016.
2. Mate KS, Rakover J. The Answer to Culture Change: Everyday Management Tactics. NEJM Catalyst. March 6, 2019.
3. Institute for Healthcare Improvement (IHI) Publications. http://www.ihi.org/resources/pages/publications/default.aspx
4. Agency for Healthcare Research & Quality (AHRQ). https://www.ahrq.gov/tools/index.html
5. Institute for Healthcare Improvement (IHI) Open School. http://www.ihi.org/education/ihiopenschool/Pages/default.aspx