

## Suggested Actions and Tools

Below are listed some potential actions that may be taken which have been shown to improve adoptability. Sample tools and questionnaires are also provided to help assess the domains on page 2. This list is not meant to be exhaustive and other tools are likely available and useable.

### Implementation strategy

Actively involving end-user staff/ physicians in the change initiative is an imperative step. Having front line end-users involved in as many stages of the change initiative has been shown to increase the perceived value of the initiative itself and is more likely to produce a workable, feasible and less complex intervention. Most tools within improvement science endorse using small iterative tests of change with end-users for the above reasons. The hallmark approach is the Plan-Do-Study-Act or Plan-Do-Check-Act cycle. PDSA/PDCA is common to the Model for Improvement, LEAN and Six Sigma. These approaches are described in more detail from the following sources:

- Model for Improvement [www.ihl.org/resources/Pages/HowtoImprove/default.aspx](http://www.ihl.org/resources/Pages/HowtoImprove/default.aspx)
- LEAN [www.leanproduction.com/top-25-lean-tools.html](http://www.leanproduction.com/top-25-lean-tools.html)
- Six Sigma [www.isixsigma.com/tools-templates/](http://www.isixsigma.com/tools-templates/)

Although some change initiatives require implementation at a higher system level, more broadly or are more complex; when they result in individuals needing to change workflow and work processes, involving those individuals at as many steps on the change process as possible will increase the likelihood of sustainable adoption. Furthermore working with the end-users will allow for a more accurate assessment of the resources required including training, equipment, technical support and personnel.

### Intervention design

Determining the complexity of and workload associated with a change intervention may not be intuitive or easy. However attempts to further understand the impacts of the change on the end-users will provide valuable information on the feasibility of sustained adoption, potential areas that can be removed, reduced or simplified, and the need for additional resources. The measurement of workload and complexity can easily be incorporated into PDSA/PDCA cycles during intervention design and testing.

Timing the steps and processes involved in the intervention can give you an estimate of the additional workload. You can then reflect on the complexity of the intervention and ask:

- 1) Does it need all the proposed steps/processes?
- 2) Could steps/ processes be simplified?
- 3) Could necessary equipment and technology be provided to reduce the workload associated with the steps? Could the tasks be automated without needing people?
- 4) Could other staff, providers or patient/families be involved to distribute the workload? Using LEAN tools can help identify other workflow

steps that may have associated waste (or non-value added time), or could be modified to better incorporate the new work.

Tools exist to attempt to get the end-users perception of the workload associated with tasks. The one developed by NASA has end-users self-assess the demands of an intervention or task. This can be used, along with timing, to produce a better understanding of the cognitive, physical and time demands of the intervention. <https://humansystems.arc.nasa.gov/groups/tlx/index.php>

Increasing the belief that the intervention will result in the desired outcomes (ie. efficacy) is also important to increase perceived value and decrease change fatigue and cynicism as the outcomes are realized. When planning the change initiative it is advantageous to look for known effective strategies that have existing evidence of achieving the desired outcomes and implemented in a similar setting and context. Below is a sample list of sources and sites that can be used to search for such existing strategies.

- AHRQ Patient Safety Network [psnet.ahrq.gov](http://psnet.ahrq.gov)
- AHRQ Health Care Innovations Exchange [www.innovations.ahrq.gov](http://www.innovations.ahrq.gov)
- BMJ Quality Improvement Reports [qir.bmj.com](http://qir.bmj.com)
- IHI Improvement Stories [www.ihl.org/resources/Pages/ImprovementStories/](http://www.ihl.org/resources/Pages/ImprovementStories/)

If little evidence exists, or has not been implemented in a similar setting then the theory as to why the chosen intervention (innovation) will lead to the desired outcomes needs to be well thought out and discussed with end-users to gain further validity. In this latter case, designing and testing of the intervention (innovation) with end-users, on a small-scale is even more important.