

Use and Usability Issues Log*

*This worksheet was adapted from a 2011 book published by the Healthcare Information and Management Systems Society (HIMSS) entitled "Improving Outcomes with Clinical Decision Support: An Implementer's Guide, Second Edition."

In the first column, list all the interventions that are in active clinical use. In the second column, synthesize data from all the various feedback channels. Include both quantitative information about how often users interact with the intervention and their qualitative comments about its use and impact. Including the source for the feedback can be useful if additional details about the issue are needed from the person(s) who raised it. Documenting the feedback channel can be helpful in checking on the use and usefulness of the various channels in place. For example, remediation plans can be directed as needed by the implementation team toward overuse or under use of specific channels.

The third column logs the date that the issue first surfaced or the usage data was gathered. These dates can be helpful in assessing the rate at which the implementation team is addressing the various issues, and in documenting usage trends over time (e.g., through multiple rows for the intervention, each with usage statistics and corresponding observation date). In some cases, it can be helpful to plot this data on a graph to show changes in intervention usage over time, perhaps overlaying communications and training events to demonstrate their effect.

A remediation plan for each major issue should be developed and documented. In the last column you can assign relative priorities for addressing the issue, using a scale that seems appropriate. This prioritization can help guide resource allocation and remediation schedule and is driven by a variety of factors. These include the risk to patient care of not correcting the problem, the number of users affected, the resources and time required for the fix, and the like. These relative priorities can change over time as resources such as personnel change and other interventions develop new usage issues.

This is a working document. Successfully resolved issues can be removed (ideally archived elsewhere with the date they were resolved) and new issues can be added as they occur.

Use and Usability Issues Log

Intervention Name	Usage and usability issues (source/channel)	Date Noted	Remediation Plan (responsible party, Date resolved)	Priority
Heparin post-op alert	Avg. 20 firings/day across all deployed units; 30% rejection rate. High user dissatisfaction (Anne M).	1 Mar 2012	Analysis in progress to add in better data on contraindications for heparin therapy. Alert removed from production awaiting resolution (5 Mar 2005)	Medium
PTT order set	Avg. 16 uses/day; No issues noted; good user satisfaction.	1 Apr 2012	NA	NA

Intervention Name	Usage and usability issues (source/channel)	Date Noted	Remediation Plan (responsible party, Date resolved)	Priority
PTT alert	Avg. 50 firings/day; 80% rejection rate. Nurses do not feel that it is accurate and don't have time to contact physicians after it fires.	1 Apr 2012	Consider removing the intervention.	High
Heparin post-op order set	Avg. 13 uses/day; no issues noted.	1 Apr 2012	NA	NA

Step 2: Evaluate intervention impact on target objectives.

To the greatest extent possible, the assessments should be quantitative and compared to baseline measurements. Ideally, you have a benefits realization team in place charged with gathering and analyzing the needed data, and reporting the results. Getting the needed quantitative information can be difficult for some improvements and may require a combination of strategies. These can include extracting data through various reporting mechanisms from the organization's clinical, administrative, and financial databases. These systems often produce standard reports or have query tools, though some data might still need to be processed manually. Keep in mind that key definitions might vary across these systems, making it difficult to create a unified picture of intervention effects. For example, if medical conditions are defined differently in financial and clinical systems, it might be problematic to assess the financial implications of specific clinical changes. Healthcare data analysis vendors and consultants have experience with such complexities and can also help generate the needed measurement information.

Because there can be several interventions focused on a single clinical objective, it is important to keep straight whether the targets and performance measures pertain to the objective or to a component intervention. For example, a clinical objective might be to improve monitoring of patients receiving IV heparin, so that 95% of patients on this therapy receive the indicated monitoring.¹ A physician order set that makes it easier to include this testing with other orders might be one useful CDS intervention to accomplish this. However, the compliance target for this intervention might be less than 100% (e.g., if only a fraction of physicians are using CPOE). Thus, targets and baselines for objectives and the corresponding interventions need to be considered and evaluated separately. Improved compliance with the intervention is expected to improve performance toward the clinical objective. However, this should not be taken for granted because a variety of factors can decouple these changes.

Enhancements assessed qualitatively are also important and should be documented as well. For example, user-perceived improvements in workflow, confidence in decision-making and appreciation for the "clinical safety net" are all desirable intervention effects worth noting. Be aware that careful benefits measurement is often time consuming and costly, and relatively few organizations currently do it very well. Considering these measurement issues early in

working with your CIS infrastructure and developing the CDS interventions hopefully helped optimize your access to needed measurement data. As CIS and CDS systems evolve further, especially in light of pay-for-performance trends, this data should become easier to obtain. Do not necessarily expect to fully achieve your goals on the first measurement round. Progress will depend on a variety of factors, including time between measurements. Establish reasonable measurement intervals and expectations for improvement speed based on input from key stakeholders. If formal accountability for realizing CDS benefits has been assigned (e.g., with implications for job performance assessment or departmental budgeting), then care and collaboration in setting and measuring these benefits becomes particularly critical.