Key Features of Effective Recommended Actions
3.6.6 Developing and Managing Recommended Actions

Developing and managing recommended actions involves a series of activities at several levels of the organization aimed to determine, “What can be done to reduce the risk of recurrence and make care safer?” The success of the recommended actions is dependent on the quality of findings identified in the previous analysis step (how and why it happened). It is important to consider that a few well thought out high-leverage recommendations will ultimately be more effective than a lengthy list of low impact actions. Note that in rare instances, analyses may not generate any new recommended actions (in particular, concise analyses).

Develop Recommended Actions

The analysis team has a foundational role in the development of recommended actions. Findings identified in the previous analysis step (how and why it happened) are reviewed by the team and actions proposed to address the contributing factors that allowed the incident to occur. Use of analysis diagrams (like the constellation diagram) supports teams in evaluating the best leverage points for recommended actions. The analysis team is generally responsible for proposing recommended actions, suggesting an order of priority, and consulting with others before the analysis report is handed off to those responsible for validating and implementing the actions.

Key features of effective recommended actions

Healthcare leaders and those involved in analysis in Canadian healthcare organizations expressed the need for a tool to help build more robust and precise recommended actions. The list of key features presented below, is a guide that can be adapted by teams and used locally. Effective recommended actions:

- Address the risk associated with the findings identified during the analysis.
- Utilize the most effective solution that is reasonable or possible given the circumstances (Figure 3.9).
- Offer a long-term solution to the problem.
- Are written using the “SMART” format:
  - Specific – tackle a clearly defined issue and have a clear scope;
  - Measurable – can demonstrate impact on process and outcomes;
  - Attainable – can be achieved with available resources;
  - Realistic – do a reality check to predict if it will be accepted, implemented; and
  - Timely – have a timeframe for implementation.
- Target the actions at the right level of the system and ensure the action is appropriate for that level (see Section 2.2 for a description of system levels). If, for example, in a medication error incident one of the recommendations is to change the label design, the responsibility for implementation lies outside the organization where the incident occurred, making this a national or international effort.
- Assign responsibility at the appropriate level in the organization.
- Have a greater positive than negative impact on other processes, resources and schedules (balancing measures should be in place to ensure that unintended consequences are known and understood).
• Are based on evidence that shows the impact of this or similar action. Consider research literature, similar recommendations implemented in the organization (e.g. from accreditation, patient complaints) or externally (e.g. from the Global Patient Safety Alerts).\textsuperscript{13} Aim to use the highest level of evidence available (randomized controlled trials are the highest, followed by controlled observational studies, uncontrolled studies, opinion of experts and opinion of peers).\textsuperscript{67,68}

• Provide enough context (explanation, facts) to ensure that if the action is implemented, those responsible will understand the rationale behind it.

One of the benefits of using human factors principles to assist in identifying contributing factors is that the same approach can be used to identify and evaluate the effectiveness of recommended actions. In other words, identifying systems-based contributing factors correctly should lead to systems-based solutions.

Figure 3.9: **HIERARCHY OF EFFECTIVENESS**

When recommending actions, many possible categories of options with varying degrees of effectiveness are available. The team should be apprised of this range (see below, listed in order from most effective to least effective) and encouraged to recommend the most effective solution that is reasonable and/or possible given the circumstances. Note that items such as training and policy development are necessary components, but when used alone, do not change the underlying conditions that lead to the incident.

From a human factors standpoint, the strongest interventions are “physical rather than procedural and permanent rather than temporary.”\textsuperscript{65} Organizations may find the assistance of human factors engineers or ergonomists helpful in determining if the proposed actions will be effective from a human factors perspective.

**OPTIONS FOR CHANGE:**\textsuperscript{37,65,69}

1. Forcing Functions and Constraints
2. Automation/Computerization

3. Simplification/Standardization
4. Reminders, Checklists, Double Checks

5. Rules and Policies
6. Education and Information

**HIGH LEVERAGE - MOST EFFECTIVE**
(e.g. installing grab bars; ensuring that devices intended for use by different routes of administration lack connectivity)

**MEDIUM LEVERAGE**
(e.g. restricting the number of types of a device; reducing reliance on memory and vigilance; build-in redundant cues)

**LOW LEVERAGE - LEAST EFFECTIVE**
(e.g. education sessions, memos, etc.)
(while these are important, when used alone they will not result in sustained practice change)
In many cases, a systems-based recommended action involves a change or improvement to a process or protocol, work areas, software, order forms or equipment. A “mistake-proofing” step assists teams to determine whether the recommended action(s) will have the desired effect(s). In this step, team members assess whether the recommended action, if implemented, would have prevented the incident or mitigated the harm. It is also an opportunity to consider the potential for introducing unintended consequences to processes (e.g. creating unnecessary steps or added workload, possibly leading to unsafe work-arounds).

Consideration needs to be given to evaluating the impact of the actions before implementation. One way to do this is to conduct one or more of the methods described in Appendix N: cognitive walkthrough, heuristic evaluation or usability testing. The method selected will depend on the complexity of the sub-system being changed and the potential severity if the recommended action fails or introduces unintended consequences. In general, if the consequences are potentially more severe, it should be evaluated with usability testing or a combination of the methods, and the recommended action modified and improved before implementation. Failure Mode and Effects Analysis (FMEA) is another prospective analysis technique that can be used to evaluate the impact of a proposed process change.

The initial focus is on the elimination of risk to patients. If there are no actions that can be applied to eliminate the risk, the team should seek the most appropriate controls to reduce the possibility of recurrence. It is important to note that applying a control means that although checks will be in place, there still is a chance of reproducing the same or related circumstances that led to the original incident. There are occasionally circumstances under which a team may choose to accept one or more identified factors without further intervention. The frequency and/or severity of the incidents may not be significant, or it may be that one or more of the identified factors cannot be altered. For example, in reviewing an incident related to lack of timely access to tertiary care, the team would have to accept the fact that this level of service will not be made available in remote locations and focus attention on rapid transfer of patients when such services are needed (in other words, implement a control measure).

A few well thought out high-leverage recommendations will ultimately be more effective than a lengthy list of low-impact actions.

**Suggest an order of priority for recommended actions**

The need to prioritize the recommended actions is the result of several practical factors:

- Related to the organization:
  - Abundance of recommendations from multiple sources generated from accreditation, patient complaints, insurance claims, coroner reports and others;
  - Limited resources (budget, staff time) to ensure good follow through of quality improvement and risk management initiatives; and
  - Additional priorities and strategies described in strategic plans.

- Related to the external environment:
  - A variety of external pressures and requirements influence operations.