How to Conduct an Audit

The Emergency Department Return Visit Quality Program

November 2022

Emergency Department Return Visit *Quality Program*

Ontario Health

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Introduction

The Emergency Department (ED) Return Visit Quality Program is an initiative that aims to bring focus to the quality of ED care and supplement the performance indicators that are part of the Pay-for-Results (P4R) program. This program was recommended by a task force with expertise in quality improvement that included ED physicians as well as representatives from a number of stakeholder organizations, including the Ministry of Health, the Ministry of Long- Term Care, and legacy organizations Access to Care and Health Quality Ontario (both now part of Ontario Health).

In the ED Return Visit Quality Program, hospitals are provided with quarterly data reports summarizing their performance on two types of ED return visits and must conduct routine and random audits of return visits to identify and understand their underlying causes. Hospitals will present the results of these audits to their CEO and Quality Committee of the Board and submit results to Ontario Health annually. Ontario Health will then summarize and report on key quality issues and themes discovered as well as on the improvement strategies identified, so that these key lessons can be shared among hospitals to support ongoing quality improvement (QI).

The goal of this program is for hospitals to reflect on causes of ED return visits to identify areas for quality improvement, rather than to focus solely on reducing the rate of return visits.

Background

Types of ED return visits

ED return visits were chosen as the focus for this program based on evidence in the literature suggesting that they are useful "triggers" to identify adverse events (AEs) and quality issues (i.e., adverse outcomes related to the care received during the index visit).[1,2] In this program, a select number of cases (50+) fitting the definitions of two types of return visits will be audited to identify and analyze any AEs and quality issues. The definitions of these two types of return visits are as follows:

1. Number and percentage of ED return visits within 72 hours of discharge from the initial ED non-admit visit, to the same or a different hospital, and resulting in an admission to an inpatient unit on the second visit.

2. Number and percentage of ED return visits within 7 days of discharge from the initial ED non-admit visit, to the same or a different hospital, resulting in an admission to an inpatient unit in the second visit with a sentinel diagnosis (subarachnoid hemorrhage [SAH], acute myocardial infarction [AMI], and paediatric sepsis) and with a relevant diagnosis documented in the initial ED non-admit visit.

These definitions were chosen based on literature review and consideration of factors such as data availability and application across a broad spectrum of cases and EDs.[2-5] The 72-hour all-cause return visits were chosen to provide general insight into the causes of a variety of ED return visits. The return visits involving sentinel diagnoses were chosen to

narrow the focus to diagnoses for which there is a high likelihood of disability or death resulting from a missed diagnosis.

For more information on these types of return visits, including technical specifications, see page 11 of the EDRV Program Guidance document or contact Access to Care at ATC@ontariohealth.ca.

Data reports

Data reports summarizing the number and rate of cases meeting the definitions of these two types of return visits are available through iPort Access.™ Please see page 8 of the EDRV Program Guidance document for more information about accessing the data reports.

Audits

Hospitals will audit a set number of cases involving return visits to the ED. These cases will be selected from the data reports provided by Access to Care.

Number and type of cases to audit

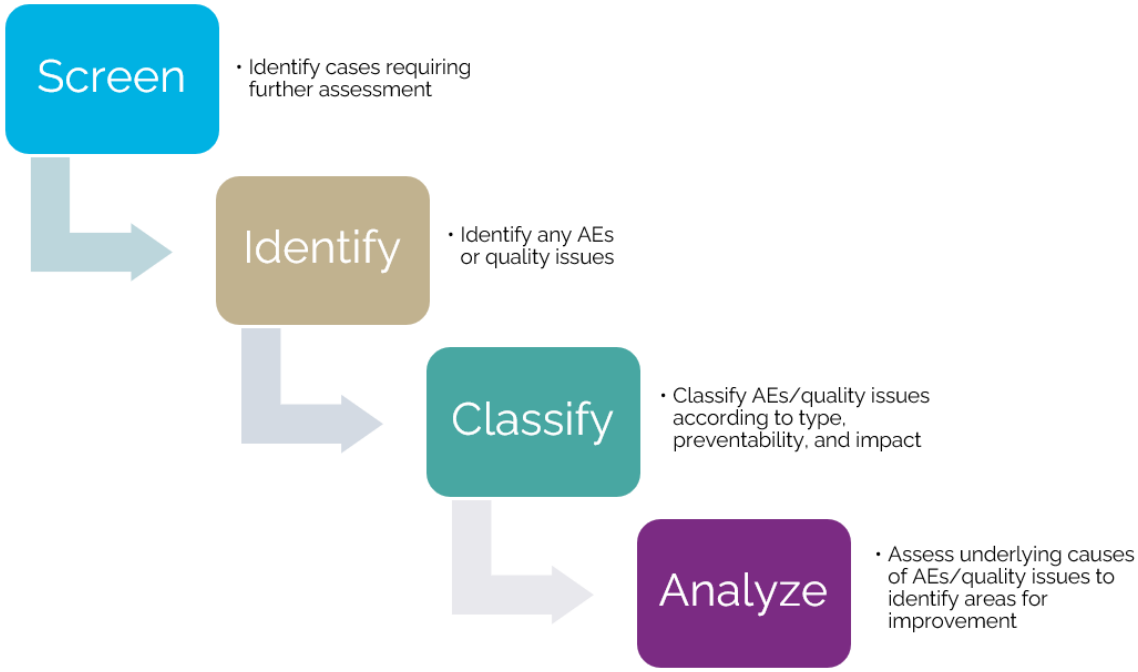
All return visits involving sentinel diagnoses must be audited. In addition to these cases, a random selection of all-cause 72-hour return visits will be audited until the required number of cases is met. The minimum number of audits to be conducted will be 50 cases.

These requirements are applied on a per-site basis; thus, multi-site organizations will be expected to conduct a minimum of 50 audits for each ED site.

The Audit Process

Overview

The following audit process is based on a study of AEs in patients with ED return visits[2]:



AE—adverse event.

Conducting the audits

As outlined above, the audits will consist of an initial screening process (Part 1) followed by a more extensive, multi-step analysis of select cases identified during the screening process (Part 2). The more extensive analysis of these cases should be conducted by an ED physician. If at any point a physician reviewer is uncertain of their review, they are advised to discuss the case among other reviewers (where available) until consensus is achieved.

If it is helpful, another qualified health care professional (e.g., nurse, physician assistant, etc.) can complete the screening process. This person should be familiar with the purpose of the program and be assigned and dedicated to completing this part of the audits.

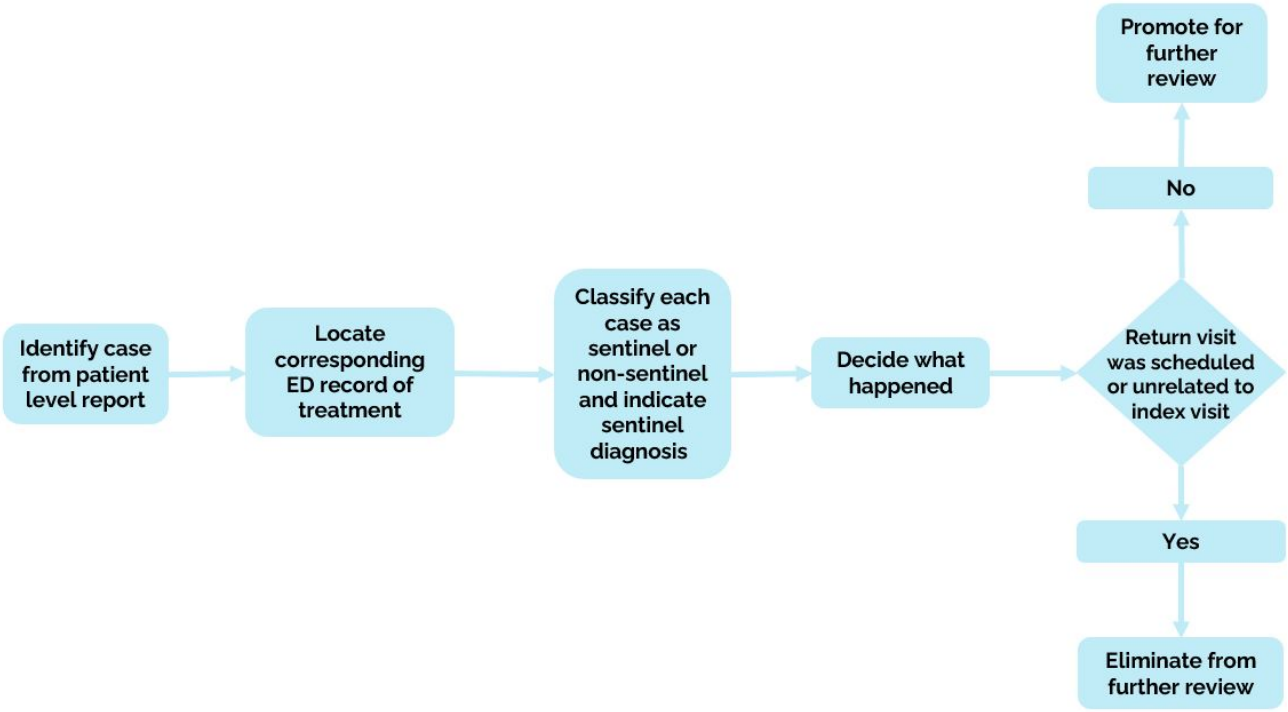
The next section will walk you through each step of completing an audit. You can follow along with the audit template, available on the ED Return Visit Quality Program website.

Part 1: Screen cases to identify those requiring further assessment

The purpose of this screening process is to conduct a preliminary assessment of each case to identify and exclude from further analysis any cases where return visits were unrelated to index visits and/or scheduled.

See Figure 1 for an overview of the screening process followed by detailed instructions for each step.

Figure 1. Overview of the screening process. Complete this process for all sentinel cases in the patient-level report first. Repeat the process for non-sentinel cases until a minimum of 50 cases have been screened.



Identifying cases to audit

Start by reviewing the aggregate and patient-level data reports provided by Access to Care. If you have not yet received these reports, refer to Question #8 in the Frequently Asked Questions document for more information on how to access them.

In the aggregate data report, refer to the column labelled "Volume Admitted with Sentinel Diagnosis within 7 Days of Non-Admit ED Visit" to determine how many return visits involving sentinel diagnoses occurred in each quarter. Identify these cases in your patient-level report by searching for those with "Yes" in the column labelled "Return within 7 Days, Sentinel." **All** of these cases will need to be audited.

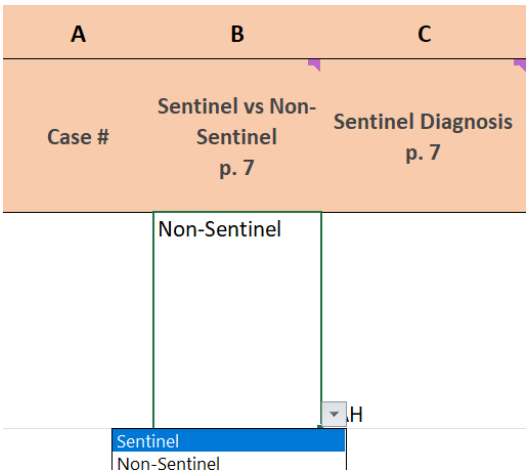
All cases with "No" in the column labelled "Return within 7 Days, Sentinel" fit the criteria for all-cause 72-hour return visits. Select a random sample of these cases to audit until,

combined with the sentinel cases, the minimum number of cases per year (50) is fulfilled. You can also select cases that represent priorities for your organization; however, be aware that if you follow this route, you may be missing cases that could reveal issues that are presently unknown to you.

Using the medical record number as a case identifier, pull the selected cases from your patient records system. Once the patient chart is accessed, remove all personal health information (PHI) and proceed to the next step.

Number and classify each case as sentinel or non-sentinel, and specify the sentinel diagnosis if applicable (Columns A, B, and C)

- For sentinel cases, select the "sentinel" option in the "Sentinel vs Non-Sentinel" column of the audit template and indicate the type of sentinel diagnosis (SAH, AMI, or pediatric sepsis) in the "Sentinel Diagnosis" column of the audit template
- For non-sentinel cases, select the "Non-Sentinel" option in the "Sentinel vs Non-Sentinel" column of the audit template and select the "N/A" option in the "Sentinel Diagnosis" column of the audit template



Describe what happened in the initial visit and the return visit (Columns D and E)

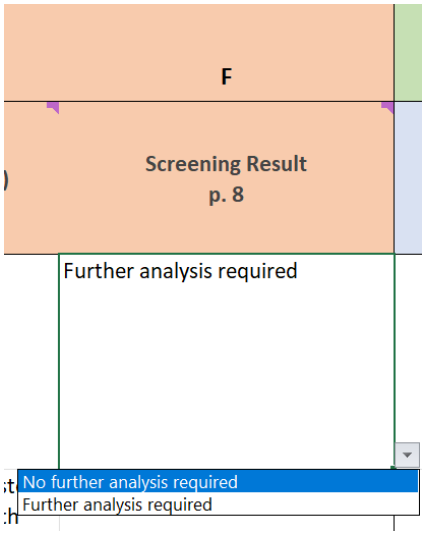
- For each case, complete a free-text response to the prompt "Please describe what happened" in the "Summary" columns of the audit template. Please elaborate in your own words what happened in visit 1 followed by what happened in visit 2. Refer to the hypothetical cases at the top of the template for guidance on the scope of information to include here; the diagnostic code alone is not enough.
- Please remove all personal health information from your summary.
- There may be times when you are unable to access the ED record of treatment because the patient's return visit

For completion By qualified health care provider	
D	E
Summary of Visit 1 (Please describe what happened) p. 7	Summary of Visit 2 (Please describe what happened) p. 7
Patient presents to ED with 5 days abdominal pain, no fever, lab work normal but some peritoneal findings. EP review of abdominal CT is normal; not reviewed by diagnostic imaging. Patient advised that doctor will call if CT abnormal	Patient called back to ED after official review of CT shows a perforated duodenum. Patient admitted.

was to another hospital. For these cases, simply indicate the admitting diagnosis in visit 2, as noted in your patient-level report, and state that the return visit was to another hospital

Eliminate cases involving scheduled or unrelated return visits from further review (Column F)

- Using your patient-level data report and the ED record of treatment, eliminate cases where return visits were scheduled or were a result of completely unrelated injuries or ailments by selecting the "No further analysis required" option in the "Screening Result" column of the audit template. No additional fields in the template need to be completed for these cases



  - Nearly all cases will involve unscheduled return visits, because most cases involving scheduled return visits will be screened out in the data collection process and will not appear in your aggregate or patient-level report

  - It is anticipated that almost all sentinel cases will have return visits related to the index visit, because the diagnoses on the two visits have been "paired." Therefore, nearly all sentinel cases will likely be promoted for further review

- If a case is not eliminated (i.e., where the index and return visits are related and unscheduled), select the "Further analysis required" option in the "Screening Result" column of the audit template

This completes the screening portion of the audit.

Please note that AEs and/or quality issues could still be identified in cases that were eliminated from further review following this screening process; they are, however, less likely to be found and, for the purposes of efficiency, are excluded from further review.

The next part of the audit process (Part 2; highlighted in green in the audit template) should be completed by an ED physician.

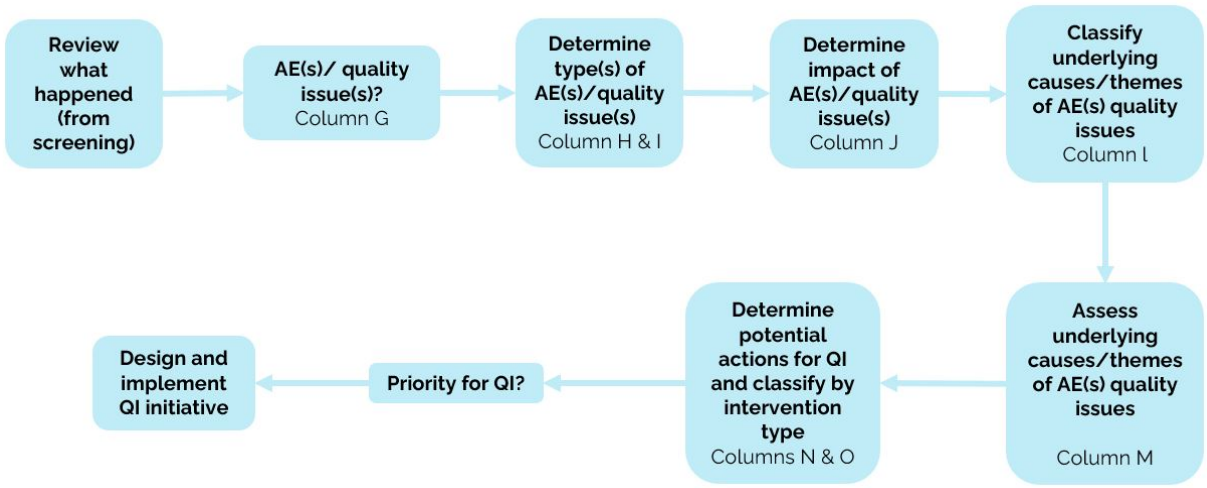
Part 2: Analyze select cases

Cases that have been identified as requiring further analysis during the screening portion of the audit will proceed to Part 2 of the audit—analysis by an ED Team, with a minimum of one ED physician. The purpose of Part 2 is to use the results of the screening process, medical records, and clinical judgment to identify any AEs or quality issues, classify AEs

and/or quality issues according to type and impact, uncover underlying causes, and develop potential actions for quality improvement.

Figure 2 offers an overview of the analysis process. Detailed instructions for each step follow.

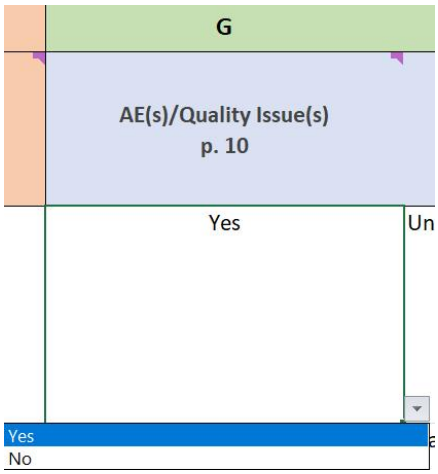
Figure 2. ED physician review process. Complete this process for all cases requiring further analysis, as identified in the screening process.



Review selected cases and identify any AEs or quality issues (column G)

- For each case with a screening result of "further analysis required" (column F), review the summaries of visits 1 and 2 in the audit template (columns D and E)

  - If the description in visit 2 indicates that the second visit occurred at a different site, continue with the analysis based on the summary of visit 1 and the admitting diagnosis for visit 2. The focus of the analysis should be on the initial visit because this is when AEs and quality issues are more likely to have occurred.

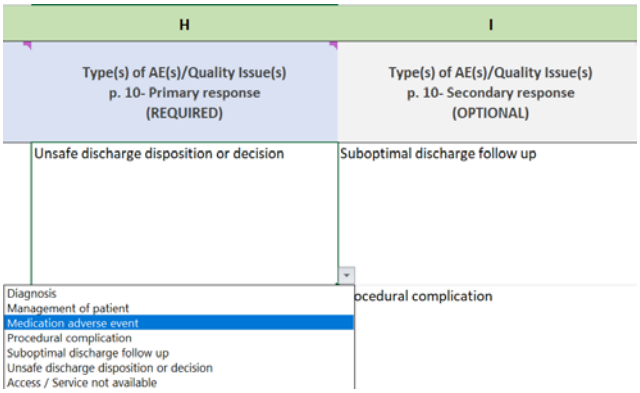


- Use the summaries of the two visits, medical records, and clinical judgment to identify any AEs or quality issues. AEs or quality issues are adverse outcomes related to the care received during the index visit. Consider whether the outcome for this patient could have been different had they received different care during the index visit.

- Where no AEs or quality issues are identified (for example, where return visits are due to natural disease progression), select "No AEs/quality issues identified" in the "AE(s)/Quality Issue(s)" column of the template. You do not need to complete any additional fields in the template for these cases.

Classify AEs/quality issues (Columns H and I)

- Classify the type of each AE or quality issue (Columns H and I). Groups are now able to identify a primary AE or quality issue in column H, and a secondary AE or quality issue in column I.



- Refer to the following definitions in Table 1 below (adapted from Calder et al, 2015)[2]:

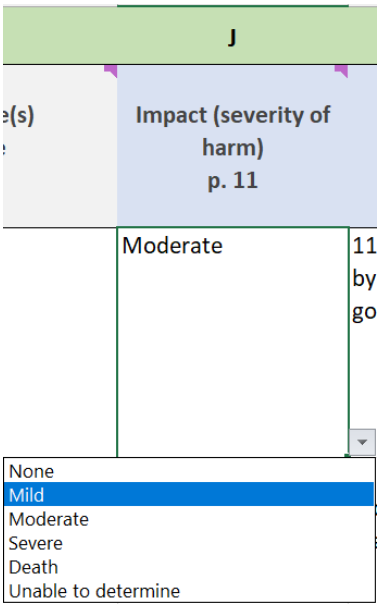
- Select the type in the "Type(s) of AE(s)/Quality Issue(s)" column of the audit template. If none of the types listed above appear to fit the AE/quality issue, you may ignore the drop-down list and write a type that you think better captures the issue directly in the cell.

Table 1. Quality issues and their definitions

AE/Quality issue	Definition
Diagnosis	Not acting on documented signs, symptoms, laboratory tests or imaging, or not ordering an indicated diagnostic test
Management issue	Suboptimal management plan despite accurate diagnosis or based on an inaccurate diagnosis
Medication adverse effect	Occurring when a patient experiences a symptom related to a medication regardless of whether the medication was appropriately prescribed or taken
Procedural complication	Occurring when a patient experiences adverse consequences of a procedure.
Suboptimal discharge follow-up	Problems with follow-up arrangements that led to the development of new symptoms or unnecessary prolongation of symptoms. This could be due to inadequate availability of a follow-up appointment or due to inappropriate follow-up arrangements.
Unsafe discharge disposition or decision	When a patient is placed at an unnecessary risk of experiencing death or major disability by being sent home
Access/service not available	When a service (e.g., ultrasound) is unavailable at the time

Classify the impact or severity of harm of each AE or quality issue (Column J):

- Select from the following options[7]:



1. None—patient outcome is not symptomatic, or no symptoms detected, and no treatment is required.
2. Mild—patient outcome is symptomatic, symptoms are mild, loss of function or harm is minimal or intermediate but short term, and no or minimal intervention (e.g., extra observation, investigation, review, or minor treatment) is required.
3. Moderate—patient outcome is symptomatic, requiring intervention (e.g., additional operative procedure; additional therapeutic treatment), an increased length of stay, or causing permanent or long-term harm or loss of function.
4. Severe—patient outcome is symptomatic, requiring life-saving intervention or major surgical/medical intervention, shortening life expectancy, or causing major permanent or long-term harm or loss of function.
5. Death—on balance of probabilities, death was caused or brought forward in the short term by the incident.
6. Unable to determine.

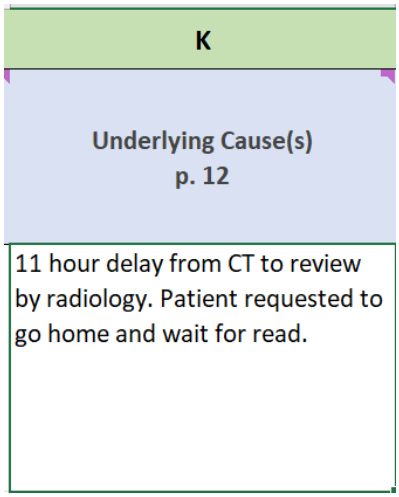
Assess underlying causes and themes of AEs or quality issues and identify actions for improvement (Columns K, L, M, and N)

Underlying causes are the deepest yet still modifiable factors that contribute to an AE or quality issue.[8] Analysis of these causes will reveal opportunities for improvement for which achievable projects can be designed.[8]

Remember that these assessments should be blame free and promote a just culture, as the goal of this program is systemic improvement and individual learning.

Identify the underlying causes of the AE/quality issue (Column K)

- It is recommended that you consult the team involved in treating the patient for this portion of the audit. Although it can be difficult to recall a case that occurred more than 3 months ago, it is important that individuals try to recreate the thought process and environment that existed during the index visit in order to understand why actions that appear inappropriate in retrospect made sense at the time[9]



K
Underlying Cause(s) p. 12
11 hour delay from CT to review by radiology. Patient requested to go home and wait for read.

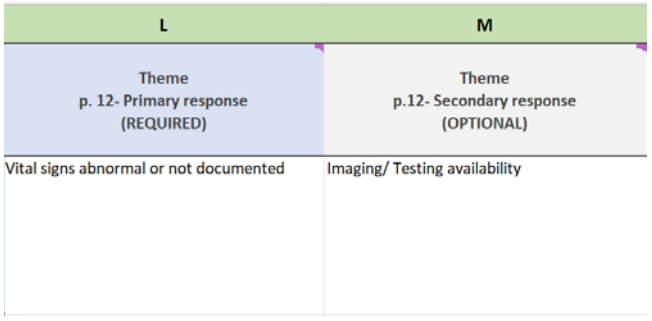
- You may consider involving patients and their families in the analysis as well. If this seems appropriate, first contact your department head to help you coordinate with the Patient Relations department to ensure that this is carried out in a sensitive manner[10]

- Guiding questions from the Canadian Incident Analysis Framework (pp. 89–91)[11] can be used to uncover underlying causes

- For each cause, add a new row to the template (see hypothetical cases #1 and #3 for reference)

Identify one or more theme(s) of the AE/quality issue (Columns L and M)

In the first year of this program, Health Quality Ontario (now part of Ontario Health) and a team of clinicians analyzed all audits in which adverse events/quality issues were identified. Eleven themes were identified through this analysis. These themes, including descriptions and examples for each, are presented in the audit template in a separate worksheet titled "Underlying Cause Themes." They are also listed in Table 2. To learn more about these themes and how they were identified, read the year 1 report (specifically Section 3).



L	M
Theme p. 12- Primary response (REQUIRED)	Theme p.12- Secondary response (OPTIONAL)
Vital signs abnormal or not documented	Imaging/ Testing availability

- Using the drop-down menu, indicate which of these themes is present in the case in question. Groups may identify a primary theme (in Column L) and a secondary theme (in Column M)

- There will likely be cases that do not correspond to any of the 11 themes listed here. If this is the case, enter "Other" in this cell

Table 2: A list of themes, descriptions, and examples identified during the audit process

Theme	Description	Example
Patient risk profile/patient factors	Failure to account for high-risk characteristics of patients (e.g., age, comorbidities, psycho-social status, etc.) when determining evaluation and management	40-day old patient presenting with inconsolable crying and irritability; no consideration given or evaluation for sepsis. Had a return visit to another hospital and found to have *E. coli* meningitis
Elder care	Failure to consider unique presentations and needs of elder patients	81—year-old from nursing home; had an unwitnessed fall causing fracture of patella; treated conservatively with Zimmer splint; discharged back to nursing home. Returned next day, confused. CT scan showed subdural hematoma as a result of the first fall. Patient admitted for monitoring
LAMA or LWBS	Patients who left against medical advice or who left without being seen	37-year-old presented to ED. Prolonged wait time and LWBS recorded after 4 hours. No re-triage. Patient returned with meningitis; admitted to ICU.
Documentation	Suboptimal documentation, which may have contributed to the return visit that the patient experienced	Patient's positive troponin was not documented in the chart, and it is unclear whether the MD had seen it; patient returned 5 hours later for admission
Physician cognitive lapses	Knowledge gap or failure to act on signs and symptoms	Immunocompromised patient presents with abdominal pain after recent bowel perforation. MD failed to consider intra-abdominal abscess and performed an abdominal plain film

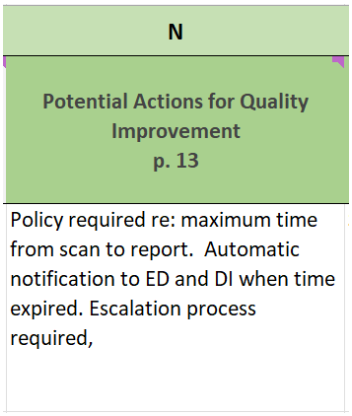
Theme	Description	Example
High-risk medications or medication interactions	Failure to account for high-risk medications in assessment and management	Xarelto prescribed to patient with increased creatinine level (this medication contraindicated with elevated creatinine levels)
Vital signs abnormal or not documented	Failure to explain abnormal vital signs or vital signs that are not repeated for many hours during stay in ED and/or prior to discharge	Patient with chronic atrial fibrillation and heart rate of 126 bpm at triage (not re-documented or re-checked during visit). Presented with lightheadedness in setting of URTI, discharged home with plan to see GP after long weekend. Patient had syncopal episode at home (heart rate on return visit of 155 bmp) and sustained head injury requiring admission.
Handovers/communication between providers	Suboptimal communication, especially during handovers or between physicians and nurses	Nursing documentation states patient reports this is the worst headache of their life but in MD documentation patient states similar headache in past
Radiology	Failure to diagnose correctly by the emergency physician, to communicate by the radiologist, or to appropriately note discrepancies in a timely manner	Patient visited ER with LLQ abdominal pain and had an abdominal CT scan to rule out diverticulitis. Initial radiologist read was negative. Pt was discharged home with a diagnosis of abdominal pain NYD. Next day, patient called back as the radiologist reinterpreted the CT as a query sigmoid volvulus. Pt was admitted to surgery and eventually underwent colostomy for treatment of volvulus

Theme	Description	Example
Imaging/testing availability	Availability of timely access to imaging or other tests (e.g., after hours)	Patient presented in evening hours with RLQ abdominal pain brought back next day for ultrasound; positive diagnosis of appendicitis
Discharge planning/community follow-up	Failing to assess baseline functioning, ability to cope, and support systems available prior to discharge from the ED, as well as availability of follow-up care in the community	Patient with chest pain was discharged to follow-up with cardiologist, but cardiologist was not available for 2 months

ICU—intensive care unit, LAMA—left against medical advice, LLQ—left lower quadrant, LWBS—left without being seen, NYD—not yet determined, RLQ—right lower quadrant, URTI—upper respiratory tract infection.

Provide a summary of tangible actions that could be taken to address each underlying cause (Column N)

- Not all quality problems can be tackled at once. However, the goal for this section is to identify changes that are doable, manageable, and can be monitored for future goals.
- Focus on concrete actions to be taken and avoid vague conclusions such as "we should try harder next time," which are not likely to result in change[10,11]



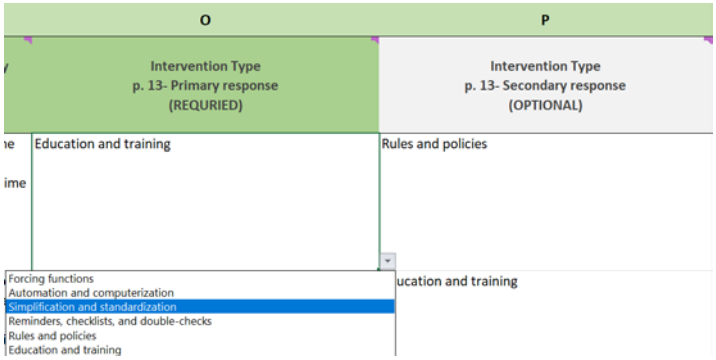
- Hospitals may not have the resources available to address every underlying cause of every preventable quality issue; it is therefore recommended that hospitals prioritize three to five underlying causes and their resulting potential actions for improvement. Ideally, a SMART format (Specific, Measurable, Attainable, Realistic, Timely) will be used when planning to implement these actions.12 Leave columns N and O) L and M blank for audits for which you will not be designing actions for improvement.
- Hospitals may wish to prioritize by focusing on underlying causes that are common across two or more AEs/quality issues and/or are associated with the greatest degree of harm. A useful guide for prioritization can be found on pages 58 to 60 of the Canadian Incident Analysis Framework[11]
- It is recommended that hospitals work with their CEO, Quality Committee of the Board, and/or Medical Advisory Council (or other appropriate committee) when

reviewing audit results and prioritizing underlying causes to ensure that chosen actions to improve quality are aligned with overall hospital strategy

- For guidance about how to design and implement a quality improvement initiative, please refer to the Ontario Health's QI Essentials

Indicate the intervention type (Column O & P)

The intervention types are based on the Hierarchy of Effectiveness.[13] As you choose interventions, consider whether you can target interventions that are ranked as being more effective according to this hierarchy. Please note that you do not need to propose an intervention for every AE/quality issue you uncover. In these cases, please leave the "Potential Actions for Quality Improvement" and "Intervention Type" columns blank.



Full descriptions and examples of each intervention type are presented in the audit template in a separate worksheet titled "Intervention Types" and outlined in the Table 3 below

Table 3: A list of intervention types, descriptions, and examples identified during the audit process

Intervention type	Description	Example
Forcing functions	This represents the most powerful way to change behaviour because it is designed to limit the user's ability to deviate from a planned course of action.	Creating a force function at triage requiring all patients to have a sepsis screen/trigger tool completed in order to complete triage process.
Automation and computerization	These address human fallibility (including reliance on memory) for simple, routine and/or repetitive tasks.	Creating a visual cue that appears on the electronic patient tracking board to remind clinicians to consider sepsis for patients who meet sepsis criteria on their triage vital signs.
Simplification and standardization	These decrease variability and simplify complex steps by bundling them into a single decision or action.	Creating an order set for patients with sepsis, which encourages evidence-based care by providing suggestions of timely intravenous infusions and antibiotic therapy depending on the presumed source of sepsis.

Intervention type	Description	Example
Reminders, checklists, and double-checks	These increase redundancy and include methods to remind providers of the necessity to perform certain actions.	Creating conspicuous posters about sepsis in the physician lounge (e.g., "Have you ordered antibiotics within three hours for sepsis?").
Rules and policies	These can help resolve complex issues at the organizational level. They are often very detailed, but the details are usually poorly understood by users, who may forget or disregard them.	Adopting a medical directive that stipulates nurses should draw sepsis panel blood work, start an intravenous normal saline bolus, and administer acetaminophen before physician evaluation on all patients meeting sepsis criteria.
Education and training	These are an essential part of a comprehensive change initiative in that they are the most powerful way to create motivation for action, but alone they are often insufficient to achieve and sustain the level of change that is desired.	Developing a multi-modal education strategy (e.g., physician rounds, nursing huddles, monthly emails) may help attune providers to the importance of the problem.

Adapted from: Chartier L, Stang A, Vaillancourt S, Cheng A. Quality improvement primer part 2: executing a quality improvement project in the emergency department. CJEM. 2018;20(4): 532–8.

Reflecting on the Results of the Audits

Once a minimum of 50 cases have been audited, hospitals will be asked to reflect on the findings as well as any actions for quality improvement and associated outcomes in a Narrative section that will be submitted to Ontario Health in January of each year. For example, based on ED return visit audits, teams have been asked to identify quality issues and relevant initiatives/improvement work undertaken to address these issues, as well as provide updates on QI initiatives identified in the previous year's submission.

The CEO will need to review and sign off on this Narrative. The Narrative template is available from the ED Return Visit Quality Program website: www.hqontario.ca/ED-Return-Visit

Hospitals may also wish to consider sharing their narrative and learnings with their department and/or hospital, being sure to remove all identifying patient and provider information. Sending feedback to your department about any changes that have resulted from the audit program is also a good way to demonstrate how the program is improving care.[8]

References

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