



## CANADIAN INCIDENT ANALYSIS FRAMEWORK

### *Case Study – Comprehensive Analysis: Elopement from a Long-Term Care Home*

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## J. CASE STUDY - COMPREHENSIVE ANALYSIS: ELOPEMENT FROM A LONG-TERM CARE HOME

### **Background**

The scenario for analysis is an elopement incident that occurred in the secured dementia unit of a long-term care (LTC) home. The home is located in a community in central Canada. In the summer months, temperatures regularly reach 35 degrees Celsius and in the winter, it may be as cold as minus 30 degrees Celsius.

In this home, residents deemed to be at risk of wandering are fitted with electronic monitoring bracelets and there are monitoring alarms at the main entrance, at the front of the care unit (located adjacent to the front door of the building), as well as at a fire exit at the back of the care unit, which is at the rear of the building. The fire exit is kept locked at all times and is also equipped with an alarm that sounds when the door is opened. The electronic monitoring bracelets are checked every couple of weeks to ensure they are functioning properly.

### **Incident**

At supper time, a dietary aide noticed that a 75-year old female resident was not in the dining room; a care aide was asked to look for her but could not find her in the LTC home. A Code Yellow was called. On notifying the police, it was learned that the resident had been found, cold and confused, walking on a highway two kilometres away and that police were trying to determine where she lived. The resident had been taken to a local emergency department for assessment and treatment.

### **Immediate response**

The Director of Care and Administrator were notified and took the following actions:

1. Contacted the resident's family to advise them of the incident.
2. Instructed staff to:
  - a. Ensure the safety of other residents by testing all door alarms and electronic monitoring bracelets;
  - b. Secure the health record for this resident;
  - c. Quarantine the resident's electronic monitoring bracelet upon her return to the home; and
  - d. Test the emergency exit alarms.
3. Met with the involved staff the next morning to conduct a preliminary debrief to gather and establish known facts, and provide emotional support, including advising about the availability of the employee assistance program (EAP), and the ability to arrange incident debriefing with EAP providers.
4. Ensured completion of appropriate documentation in the health record and incident report.

## Figure J.1: PATIENT SAFETY INCIDENT REPORT

### MY COMMUNITY LONG-TERM CARE HOME

Unit: <i>Memory Lane</i>	Resident Identification (Name, Age, Gender) N00000123
Date of Event: <i>Anydate</i>	<i>Jane Smith F</i> <i>123 Anystreet,</i> <i>Anytown, Canada</i>
Time of Event: <i>1840h</i>	<i>DOB 15/12/1936</i> <i>Dr. Susan Jones - Physician</i>

<p><b>Event Description:</b> (Concise facts only, how event was found) <i>76-year-old female resident cared for on secured dementia wing found by police walking along the hallway approximately two km from the home.</i></p>	<p><b>Discovered By:</b></p> <p><input type="checkbox"/> RN</p> <p><input type="checkbox"/> RPN</p> <p><input type="checkbox"/> Pharmacist</p> <p><input type="checkbox"/> Pharmacy Tech</p> <p><input type="checkbox"/> MD</p> <p><input checked="" type="checkbox"/> Other police</p>
<p><b>Patient</b> - Relevant information or interventions taken for this patient. <input type="checkbox"/> Check none necessary or describe: <i>Resident found cold (dressed only in light clothing and slippers on a cool evening [temperature 10°C]) and appeared confused. Taken to hospital by police - treated with warm blankets and given IV fluids.</i></p>	
<p><b>Outcome:</b> <input type="checkbox"/> Good Catch</p> <p><input type="checkbox"/> No Harm</p> <p><input checked="" type="checkbox"/> Harm (Required extra monitoring or interventions)</p> <p><input type="checkbox"/> Harm Major/Sentinel Event (Notify manager or delegate immediately)</p> <p><input type="checkbox"/> Death (Notify manager or delegate immediately)</p>	

Primary Notifications:				
	Date	Time	Not Applicable	Comments
Physician	Day of event	1915h		
Director of Care	Day of event	1900h		
Patient	Day of event	n/a		
Family	Day of event	1840 and 1845h		
Other				

## **Prepare for analysis**

In the days following the incident, the Director of Care and the Quality/Patient Safety Coordinator reviewed the known facts related to the incident. In consultation with the home administrator, a decision was made that a comprehensive review would be required. This decision was communicated to the resident's family by the Director of Care.

Once a decision was made to undertake a comprehensive analysis of the incident, a team was convened that included the following individuals:

- a. Unit manager
- b. Quality/patient safety coordinator
- c. Staff physician
- d. Registered nurse
- e. Registered practical nurse
- f. Care aide
- g. Resident council representative

## **Analysis process – What happened**

Prior to the first meeting with the analysis team, the Director of Care and the Quality/Patient Safety Coordinator:

1. Interviewed all staff directly and indirectly involved (e.g. all staff working the day and evening shift that day, including dietary aides, care aides, physician, nurse, etc.).
2. Interviewed others who may have helpful information (e.g. the resident's family, other family visitors).
3. Reviewed the resident's health record for information about the resident's condition that could be relevant;
4. Reviewed organizational policies and procedures related to monitoring of residents with cognitive deficits.
5. Contacted other local long-term care homes for copies of policies and procedures related to monitoring of residents with cognitive deficits and reviewed the current provincial guidelines.

At the first meeting with the analysis team, the team:

1. Reviewed information gathered by the Director of Care and the Quality/ Risk Coordinator:
  - Information from the incident report:
    - o 75-year-old female LTC resident found walking on highway two km from LTC home by local police. Resident is cold and confused.
      - Temperature 10 Celsius.
      - Resident dressed in light clothing and slippers.
    - o Resident transported to local emergency department for assessment and treatment.
    - o Police receive call from LTC home indicating that resident is missing – police advise that resident has been transported to hospital.

- o Resident assessed in ED; treated with warm blankets and IV fluids; observed overnight.
    - o Resident returned to LTC home the following morning after breakfast.
  - Policies and procedures related to monitoring of residents considered an elopement risk.
  - Results of a literature search and environmental scan for current best practices related to management of residents who are at risk for elopement.
2. Visited the unit in the LTC home and walked around pertinent areas including the resident's room, the dining room and the lounge, checking for the location of exits and alarms; conducted a "safe" simulation of the incident.
  3. Examined electronic monitoring devices available for use and reviewed manufacturer's instructions.
  4. Created a detailed timeline of the incident (*Figure J.2*).

**Figure J.2: DETAILED TIMELINE FOR ELOPEMENT INCIDENT (“Final Understanding”)**

DATE/TIME	INFORMATION ITEM	COMMENT/SOURCE
4 months prior to incident	<ul style="list-style-type: none"> <li>75-year-old female resident admitted to the secured dementia unit of the home</li> <li>Medical history: Type II diabetes, dementia</li> <li>Admission medications: Metformin 500 mg three times daily, Donepezil 5 mg daily, and multiple vitamin daily</li> <li>Initial nursing assessment: impaired cognition, poor decision-making skills, mild confusion, walks independently with a cane</li> <li>Assessed as an elopement risk and an electronic monitoring bracelet was placed on her right wrist</li> </ul>	Health record; staff interviews
6 weeks prior to incident	Resident has become increasingly confused and agitated. Assessed by physician who ordered Risperidone 0.25 mg at bedtime.	Nursing progress notes
4 weeks prior to incident	Resident found outside the home in the early evening. Resident was in the staff parking lot at the back of the building and was found by a staff member coming in for the evening shift. Staff on duty did not recall hearing any alarms sound. The resident’s electronic bracelet was tested and found to be working.	Nursing progress notes; staff interviews
2 weeks prior to incident	Resident very confused and attempting to leave unit; redirected numerous times by staff. Physician contacted; order received to increase Risperidone to 0.25 mg twice daily.	Nursing progress notes
Day of incident 1145h	Resident told nurse who gave noon medications that she “was going home”. Staff planned for resident to eat lunch in the dining room and then nap in her room per her usual routine. She was last observed eating lunch.	Staff interviews
1305h	Back door alarm sounded; reset by staff without checking as one staff member had just left the desk on lunch break and usual practice was to exit through back door to gain easy access to the parking lot.	Staff interviews
1600h	Care aide went to check on resident to get her ready for supper but did not find her in her room; assumed she was already in the common room watching TV.	Staff interviews
1730h	Dietary staff noticed that resident was not in the dining room. Discussed with care aide who went to check her room.	Staff interviews
1740h	Care aide unable to locate resident. Checked other care units and walked around perimeter of building but could not locate her.	Health record, staff interviews
1755h	Care aide reported to charge nurse that resident is missing. Overhead announcement of Code Yellow. Full search of entire facility initiated.	Health record; staff interviews

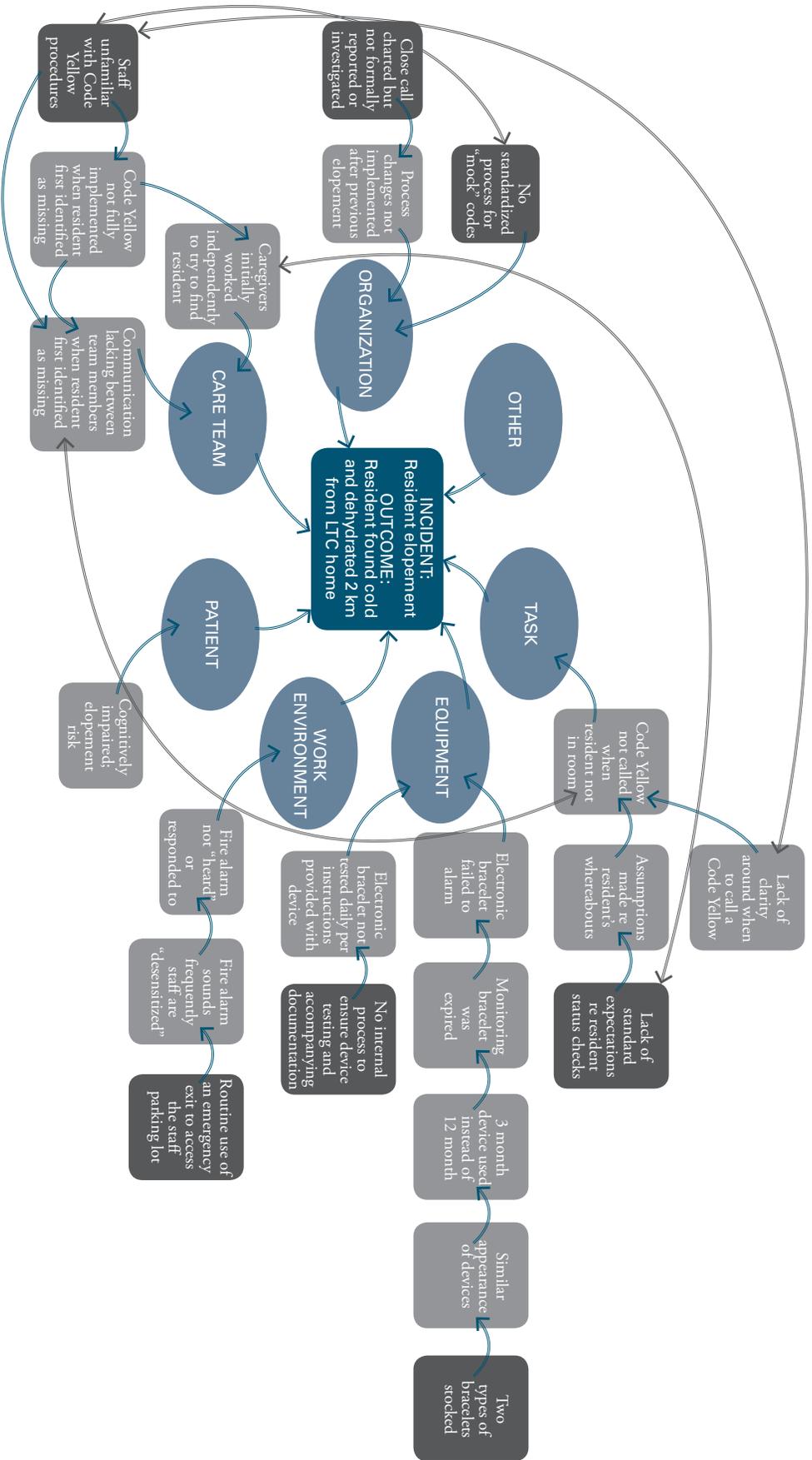
DATE/TIME	INFORMATION ITEM	COMMENT/SOURCE
1840h	Staff unable to locate resident on the grounds. Resident's family contacted. Evening staff are arriving so three of the day shift staff get in their personal vehicles and begin searching the surrounding area. Call made to local police. Police advise that an elderly woman was found walking on the highway two km from the home at approximately 1800h and that she has been transported to hospital for assessment as she was cold (dressed only in light clothing and slippers, temperature 10°C) and appeared confused.	Health record; staff interviews
1845h	Resident's family contacted to advise that resident has been found and is at local emergency department.	Health record; staff interviews
1850h	Charge nurse contacts local emergency department for report on resident condition. Resident has had IV fluids initiated and has been given warm blankets.	Health record; staff interviews
1900h	Charge nurse contacts Director of Care to provide report of situation.	Health record; staff interviews
Day after incident 0930h	Resident returned to LTC home from hospital.	Health record
1030h	Electronic alert bracelet removed and tested. Found not to be working. It was later determined that the resident had been fitted with a 90-day device, rather than a 12-month device as intended.	Health record

### Analysis process: How and why it happened

At the second analysis team meeting, the team used information provided in the timeline and their understanding of the incident from the simulation to create a constellation diagram (*Figure J.3*). The following steps are required to create a constellation diagram:

- a. Describe the incident:
  - i. Outcome: Resident found cold and dehydrated two km from LTC home.
  - ii. Incident: Resident elopement.
- b. Identify potential contributing factors using contributing factor categories and guiding questions.
- c. Define relationships between contributing factors.
- d. Identify findings.
- e. Validate the findings with the team.

Figure J.3: CONSTELLATION DIAGRAM OF ELOPEMENT INCIDENT



## Summary of findings

The analysis team identified the following findings:

### *Task*

- Lack of standard expectations regarding resident status checks decreased the likelihood that the resident elopement would be detected in a timely way.

### *Equipment*

- Two types of electronic monitoring bracelets with similar appearance stocked in the LTC home increased the likelihood that the incorrect device would be selected and applied.
- No standardized internal process to ensure testing of electronic monitoring bracelets with accompanying documentation decreased the likelihood that the bracelet would be identified as non-functioning prior to an elopement incident.

### *Work environment*

- Routine use of an emergency exit to access the staff parking lot decreased the likelihood that the alarm function would be effective as staff became “desensitized” to frequent alarms.

### *Patient*

- The resident’s cognitive impairment decreased the likelihood that she would be aware of the risk of leaving the facility.

### *Care team*

- Communication lacking between team members when resident first identified as missing, combined with lack of familiarity with Code Yellow procedures decreased the likelihood that a Code Yellow would be initiated immediately.

### *Organization*

- Lack of a formal process to report and investigate close calls decreased the likelihood that the previous incident in which the resident eloped but was found immediately, would be followed-up to identify process changes to prevent future occurrences.
- Lack of a standardized process for regular “mock” codes to provide ongoing training and assess staff understanding of processes decreased the likelihood that staff would be familiar with Code Yellow procedures.

### *Other*

- No other factors identified.

## Analysis process: What can be done to reduce the risk of recurrence and make care safer?

The analysis team proposed the following recommended actions:

### *Task (T)*

- T1: Establish routine procedures for confirming and documenting whereabouts of residents with cognitive deficiencies.

### *Equipment (E)*

- E1: Develop a standardized process for daily checks, with documentation, of electronic monitoring bracelets.
- E2: Standardize devices used to monitor residents at risk of elopement to either the 90-day or 12-month model.

### *Work environment (W)*

- W1: Implement magnetic card access technology to enable staff use of the emergency exit door, eliminating frequent nuisance alarms.

### *Organization (O)*

- O1: Work with frontline staff to develop and apply criteria for reportable incidents.
- O2: Develop a protocol for reviewing high risk near miss incidents to ensure that learning is applied to prevent recurrence (e.g. use concise incident analysis method).
- O3: Ensure staff members are familiar with the Code Yellow protocol through a scheduled in-service and ongoing inclusion in orientation sessions.
- O4: Ensure staff members are proficient in the use of the Code Yellow and other emergency protocols through quarterly unscheduled mock code exercises.

## Prioritize actions

RECOMMENDATION (category)	RISK (severity assessment)	HIERARCHY OF EFFECTIVENESS (high, medium, low leverage)	PREDICTORS OF SUCCESS (alignment, existing mechanisms, quick wins)	SYSTEM LEVEL TARGETED (micro, meso, macro, mega)	NOTE IF EVIDENCE IS AVAILABLE, AND WHAT TYPE	CONFIRM VALIDITY, FEASIBILITY	ORDER OF PRIORITY (or timeframe)
T1: Establish routine procedures for confirming and documenting whereabouts of residents with cognitive deficiencies	High	Medium	Medium	Micro	No	Medium	Within 30 days
E1: Develop a standardized process for daily checks, with documentation, of electronic monitoring bracelets	High	Medium	High	Micro	Yes, other unit is doing daily checks successfully	High	Within 30 days
E2: Standardize devices used to monitor residents at risk of elopement to either the 90-day or 12-month model	Medium	High	Low	Meso	Yes, <i>Global Patient Safety Alerts</i>	Medium	Within 6 months
W1: Implement magnetic card access technology to enable staff use of the emergency exit door, eliminating frequent nuisance alarms	Medium	High	Medium	Meso	No	Medium	Within 12 months
O1: Work with frontline staff to develop and apply criteria for reportable incidents	High	Low	High	Meso	No	Medium	Within 6 months
O2: Develop a protocol for reviewing high risk near miss incidents to ensure that learning is applied to prevent reoccurrence (e.g. use concise incident analysis method).	High	Low	High	Macro	No	High	Within 6 months
O3: Ensure staff are familiar with the Code Yellow protocol through a scheduled in service and ongoing inclusion in orientation sessions	High	Low	High	Micro	No	High	Within 30 days
O4: Ensure staff are proficient in the use of the Code Yellow protocol through quarterly unscheduled mock Code Yellow exercises	High	Low	High	Meso	Yes, simulation research paper XYZ	High	First mock code to be held within 3 months

## Follow-through

### *Evaluate implementation*

The Director of Care reviewed the status of implementation of recommended actions one year after the incident analysis was completed.

RECOMMENDATION	SOURCE AND ID#	DATE ENTERED	PROGRESS STATUS	TIMEFRAME (end date)	TARGET AREA	RISK LEVEL	INDIVIDUAL RESPONSIBLE
E1: Standardized daily device checks with documentation	IA # 1D	Sept.13	Implemented as presented Oct.1	Oct. 1	All residents	High	Director of Care
E2: Standardize devices to either the 90-day or 12-month model.	IA #1E	Sept.13	Under consideration		All residents	High	Director of Purchasing
W1: Magnetic card access technology for emergency exits	IA # 1F	Sept.13	Nothing done		All emergency exits	Med	Director of Purchasing
O1: Development and application of criteria for incident reporting	IA # 1G	Sept.13	Partially implemented	New reporting form implemented in June	All staff	High	Director of Care
O2: Protocol for review of high risk near miss incidents	IA #1H	Sept.13	Partially implemented	Two near miss events reviewed (May and July)	All staff	High	Director of Care
O3.1: Code Yellow in service for all staff	IA # 1A	Sept.13	Implemented as presented	Completed Oct.15 and 20	All staff in home	High	Director of Care
O3.2: Code Yellow inclusion in orientation	IA # 1B	Sept.13	Implemented as presented	January orientation session	All new staff	High	Director of Human Resources
O4: Quarterly unscheduled mock Code Yellow exercises	IA # 1C	Sept.13	Steps toward implementation	One mock code held Feb. 20	All staff in home	High	Patient safety leader