



# The McGill University Health Centre Policy on Sentinel Events: Using a Standardized Framework to Manage Sentinel Events, Facilitate Learning and Improve Patient Safety

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## Abstract

Promoting a culture of safety within organizations includes translating the lessons learned from sentinel events into concrete changes that will improve patient safety. In May 2005 the McGill University Health Centre Policy on Sentinel Events was implemented to provide a standardized framework to manage these events and promote that culture of safety. This framework helped implement a number of changes to improve patient safety. The O<sub>2</sub> Ticket to Ride project ensures cross-disciplinary responsibility for the transportation of oxygen-dependent patients to diagnostic testing areas. The Code Stroke Algorithm was developed to expedite the sequence of events from the time the stroke symptoms are observed to the time the CT scan is carried out.

## Background

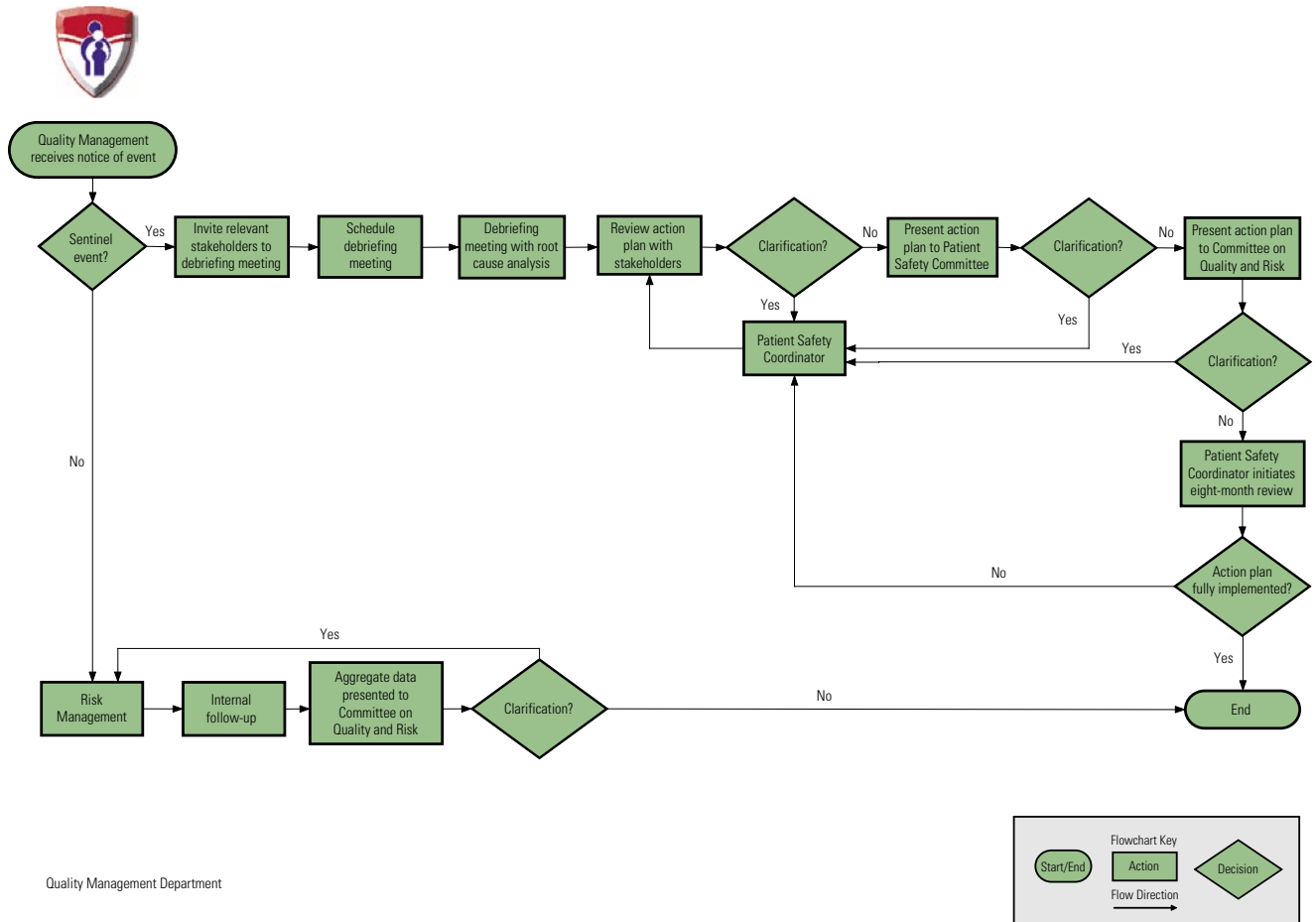
In May 2005 the McGill University Health Centre Policy on Sentinel Events was developed and implemented. This policy provides a standardized framework to manage the sentinel events. It promotes a culture of safety by ensuring that an objective process focused on identifying system issues and not assigning individual blame is respected. The Joint Commission on Accreditation of Healthcare Organizations (2002) describes

a *sentinel event* as “an unexpected occurrence involving death or serious physical or psychological injury, or risk thereof. ... Such events are called ‘sentinel’ because they signal the need for immediate investigation and response.” Sentinel events present us with an opportunity to learn. However, in order to gather the information required to learn, we must first design a credible framework (Figure 1) to review the events systematically.

Our sentinel event process consists of the following steps:

1. *Confirm that it is a sentinel event.* Once the event is reported, it is reviewed by the following individuals: Director/Associate Director of Professional Services, Director of Clinical Operations/Nursing, Director of Quality Management, Patient Safety Coordinator, the attending physician, and the department/nurse manager.
2. *Invite clinical staff, administrators and support staff to the debriefing meeting.* The Patient Safety Coordinator works with the department/nurse manager to identify the staff at the “sharp end,” in addition to other relevant stakeholders such as administrators, laboratories, security, transport, call centre.
3. *Schedule the meeting.* Our goal is to schedule the debriefing meeting within 14 calendar days from the time Quality

Figure 1. Sentinel event algorithm



Quality Management Department

Management is notified of the event. The main goals of the debriefing meeting are to:

- a. Ensure that participants have consistent and factual information
- b. Discuss contributory factors
- c. Develop recommendations and an action plan
4. *Review recommendations and action plan with all stakeholders.* Within 7 calendar days from the debriefing meeting, the participants are provided with the draft minutes and action plan for approval. Once this is approved, a final version is circulated to the participants in addition to the appropriate director or associate director.
5. *Present to the Patient Safety Committee.* A denominative summary of the events and action plan is presented to the Patient Safety Committee for review and comment. This multidisciplinary committee includes the Director and the Associate Director of Professional Services. Table 1 describes the full committee membership.

Table 1. MUHC Patient Safety Committee membership list

Director of Quality Management	Multidisciplinary Council representative
Executive Secretary: Director of Quality Management	Council of Physicians, Dentists, and Pharmacists representative: Associate Director of Professional Services
Director of Professional Services	Nursing Council representative
Director of Clinical Operations and Nursing	McGill Medical Simulation Centre
Acting Director, Health Network Development	Human Resources representative: Occupational Health and Safety
Legal counsel	Patient Safety Coordinator
Associate Director of Nursing Pediatric site	



Figure 2. Sentinel event user's guide

MUHC POLICY AND PROCEDURE User's Guide

Please keep all documentation and/or material relevant to the sentinel event

Timeline	Required Action
Immediate	Stabilize and treat patient/victim, provide information and appropriate support Notify one representative from each of group 1 and group 2 and group 3: 1. Nurse Manager or Assistant Nurse Manager or Resource Nurse Manager 2. Attending Physician or Physician-in-charge of unit or Clinical Teaching Unit Director 3. Department manager or delegate Appropriate representative from either Nursing, Physician, or Department provide information, including the measures taken up to this point, and appropriate support to patient/victim and significant others Provide support to staff Notify Security and/or Administrator-On-Call if appropriate
Within 2 Hours of the incident	Nurse Manager/delegate or Department Manager/delegate collects names/contact information of all staff and other witnesses involved Nurse Manager/delegate or Department Manager/delegate collects preliminary information using the optional pre-formatted data collection tool (to be developed as a complementary tool to the incident report form)
Within 1 Working Day from the date the incident occurred	Nurse Manager contacts the Director of Clinical Operations/Director of Nursing and appropriate Associate Director of Nursing if necessary Responsible Physician contacts Director/Associate Director of Professional Services Department Manager contacts the appropriate Director Nurse Manager and/or responsible Physician and/or Department Manager contact Quality/Risk Management at local 35663 Incident report completed and sent, with any other relevant data/information, to Risk Management at F6.10 (RVH/MCI/MNH), F1.38 (MCH), T8.105 (MGH) Decision is made if it is a sentinel event (MUHC Policy on Sentinel Events, V.3) Risk Manager contacts l'Association des hôpitaux du Québec Physician contacts CMPA if required Professionals contact their appropriate professional order if required Disclosure to the family according to the MUHC Policy on the Disclosure of Accidents to Patients, Patients' Representatives, Parents, or Guardians
Within 7 calendar days from the day the incident is reported to Quality/Risk Management	First debriefing meeting is scheduled Necessary communications are initiated should it be determined that a sentinel event occurred (MUHC Policy on Sentinel Events, V.4)
Within 14 calendar days from the day the incident is reported to Quality/Risk Management	First debriefing meeting occurs
Within 7 calendar days of the first debriefing	Draft minutes and action plan circulated to debriefing participants
Within 14 calendar days of the first debriefing	Debriefing participants provided feedback on draft minutes and action plan
Within 21 calendar days of the first debriefing	Final minutes and action plan circulated to all debriefing participants
Within 8 months from the time the incident is reported to Quality/Risk Management	Follow-up meeting with debriefing participants to review status of action plan

6. *Present to the Committee on Quality and Risk Management.* Once the Patient Safety Committee is satisfied with the summary and action plan, it is presented to our Committee on Quality and Risk Management. This is a Board committee, which fulfils the requirement of Bill 113. The Quebec National Assembly enacted Bill 113 in 2002. One of its requirements is that all institutions form a risk management committee (Gouvernement du Québec 2005).
7. *Initiate an eight-month review.* This provides an opportunity to discuss with the stakeholders the status of the recommendations, to identify any challenges and to develop a strategy to overcome the identified challenges.

The Patient Safety Coordinator is responsible for managing the sentinel event process and ensuring the above steps are completed. In addition, he or she also acts as the link between the staff who participate in the debriefing process and the senior leaders within the organization (e.g., the Patient Safety Committee and the Committee on Quality and Risk Management).

One unique feature of our Policy on Sentinel Events is the one-page User's Guide (Figure 2). This supplemental tool was developed to assist our staff, including those working evenings/nights/weekends, when faced with a potential sentinel event. It summarizes the required communications, steps and timeline to follow immediately and in the short term, and ensures long-term follow-up.

From February 1, 2005 to March 31, 2006, 71% of the recommendations resulting from sentinel events have been implemented (see Table 2).

The Policy on Sentinel Events helped initiate a number of changes to improve patient safety including the two pilot projects dubbed O<sub>2</sub> Ticket to Ride and Code Stroke Algorithm. The former ensures cross-disciplinary responsibility for the transportation of oxygen-dependent patients to diagnostic testing areas. The latter was developed to expedite the sequence of events from the time the stroke symptoms are observed to the time the CT scan is carried out.

**Table 2. Sentinel event statistics, February 1, 2005–March 31, 2006**

Number of sentinel events with recommendations	16
Total number of recommendations	65
Number of recommendations implemented	46
<b>Percentage of recommendations implemented</b>	<b>71%</b>

## **Case Study 1: O<sub>2</sub> Ticket to Ride**

### **Problem**

The transport attendant was returning an oxygen-dependent patient from a diagnostic area to the inpatient unit. Just prior to arriving on the unit, it was noted that the patient was unresponsive. Upon arrival the patient was immediately given oxygen, responded well and suffered no deleterious effects. Once the patient was stabilized it was discovered that the portable oxygen cylinder was empty when the patient arrived from the diagnostic testing area. A preliminary investigation highlighted the need to clarify the responsibility of the various participants at each transition point, and the process when transporting oxygen-dependent patients from their inpatient unit.

### **Process**

A debriefing meeting was scheduled to review the system components and identify the contributory factors. Attendees at the debriefing included clinical staff, physicians, administrators and support staff. The goal of the meeting was to review the current practice for transporting oxygen-dependent patients, identify the challenges and develop an action plan to improve the situation and minimize the likelihood of a recurrence.

Several attendees had been involved in previous discussions concerning this topic. A number of issues still existed, which led to spirited discussion. Daryl Conner (1992) describes covert and overt resistance; this was an excellent example of overt resistance. The participants put their cards on the table and described their frustrations in trying to resolve this issue. Overt resistance is often perceived as a negative activity; however, it can be a powerful tool, providing information enabling you to identify and prioritize your challenges in order to implement a change in practice.

### **Intervention**

The outcome of the meeting was the creation of a smaller workgroup that included nursing, physicians, radiology and the unit coordinator group. A pilot project was discussed that would include all patients being transported to radiology from two internal medicine units at one of the MUHC adult sites. The working group defined the criteria to be included in the tool. Once this was done, a draft document was produced and circulated to the Clinical Teaching Unit directors and all staff involved. In addition, guidelines were written in order to ensure that all stakeholders understood their role in the process.

The project was presented to the Patient Safety Committee and Committee on Quality and Risk Management according to the Policy on Sentinel Events.

The nurse professional development educator carried out in-service training to nursing staff and unit coordinators. The

chief radiology technologist was responsible for informing this group about the project and ensuring appropriate training took place, if required.

### Tool

The O<sub>2</sub> Ticket to Ride “ticket” is a two-sided form. It is printed on blue paper to differentiate it from the myriad of white sheets in the patient’s chart. The colour also serves as a visual cue to remind staff that the tool is being used to prevent a possible “code blue” from occurring when preparing an oxygen-dependent patient for transport. One side includes the information that must be completed prior to the patient’s departure by either the Nurse or the Radiology Technologist. This includes the date the patient goes to radiology, the departure time from the unit, the name of the departure unit (internal medicine or radiology), the destination, the type of oxygen device, the number of litres per minute of oxygen, the amount of pressure remaining in the cylinder, *the time the cylinder must be changed* and the initials of the Nurse or the Radiology Technologist. The reverse side includes a chart that describes how long the oxygen will last on the basis of the flow administered to the patient and the amount of pressure remaining in the cylinder.

### Evaluation

Evaluation of the project will be focused in two areas: process and outcome. The first measures compliance with using the tool. The Assistant Head Nurse will keep a master list of the oxygen-dependent patients. This list will be reviewed against the completed O<sub>2</sub> Ticket to Ride forms to evaluate if the tool was used each time an oxygen-dependent patient was transported to radiology. In addition, risk management will be asked to review the incident reports received from the two areas to identify any possible incidents involving patients lacking oxygen in transit during the pilot phase.

The pilot project has recently been completed and data analysis is under way.

## Case Study 2: Code Stroke Algorithm

### Problem

An inpatient was suspected to be exhibiting signs of a stroke. It is important to note that the patient’s admitting diagnosis was not related to a neurological condition, and therefore the patient was not admitted to a neurology ward. Upon consultation by the neurology service, it was decided that the patient required a computerized tomography (CT) scan to determine if tissue plasminogen activator (tPA) was a treatment option. The communication process at the time was not centralized, so the call centre received several independent calls to contact the radiology resident, the CT scan technologist and the transport attendant. A delay occurred from the time the CT scan was

ordered until the time that it took place. The patient received tPA and was admitted to the intensive-care unit. The event was considered a sentinel one, and a debriefing meeting was scheduled within two days.

### Process

Similarly to the O<sub>2</sub> Ticket to Ride project, attendees at the debriefing included clinical staff, physicians, administrators and support staff.

### Intervention

The key issue identified was the need to expedite the communication process. During the debriefing meeting a small working group, including radiology, nursing, transport and the call centre, was created to develop a strategy. Because of the large number of clinical staff required to provide patient care, the call centre suggested that a group page be implemented to reach the key stakeholders in one call instead of multiple calls or pages. This was the impetus for the development of the code stroke algorithm (Figure 3).

The project was presented to the Patient Safety Committee and Committee on Quality and Risk Management according to the Policy on Sentinel Events.

The algorithm will be piloted for one year on all 15 inpatient units at one of our adult sites.

### The Tool

How does the algorithm work?

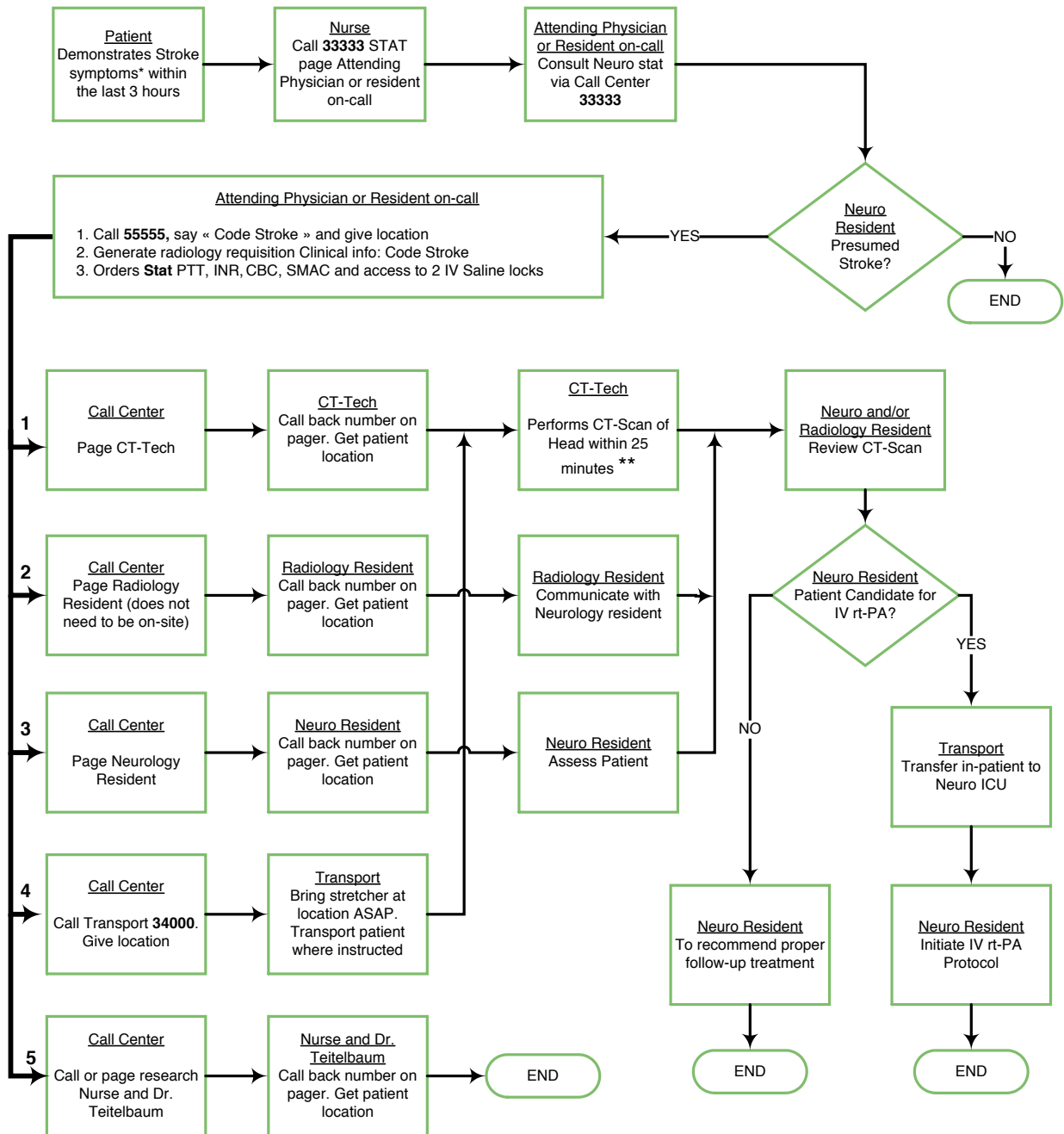
Once nurses observe the sudden onset of signs and symptoms of stroke, they immediately call the on-call physician. They consult with the neurology resident on-call. Once it is confirmed that the patient may be having a stroke, the on-call physician places a call to the Call Centre indicating a “Code Stroke.” At the same time, the on-call physician orders various STAT blood tests, including PTT, INR, SMAC and CBC, so that the results will be available when the CT scan is completed. The operator initiates the group call to simultaneously notify the CT technologist, transport, the stroke program research nurse and the physician leader, the neurology resident and the radiology resident. The research nurse is notified to ensure that other available research protocols are discussed if the patient is not a candidate for tPA treatment. The second call to the neurology resident confirms that the Code Stroke sequence has been initiated.

### Evaluation

For each Code Stroke called, the Clinical Nurse Specialist will convene a debriefing meeting to review the process. In addition, because the CNS is involved with all stroke patients, she or he will also review those cases in which a Code Stroke should have been initiated. Evaluation criteria will include the total number of codes called, the overall time it takes from initial call to initia-

Figure 3. Code stroke algorithm

Code Stroke Algorithm - RVH In-Patients



\*\* Heart and Stroke Foundation of Ontario standard  
 \* Acute Stroke Symptoms: SUDDEN ONSET OF:  
 - One sided motor weakness  
 - Loss/abnormal speech  
 - Unilateral/bilateral loss of vision  
 - Clumsiness/loss of balance  
 - Severe unusual headache

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tion of CT scan and the response times of the treating physician, neurology and radiology residents, transport and the CT technologist from their initial call.

On the basis of the guidelines published by the Ontario Heart and Stroke Foundation, the goal is to initiate the CT scan within 25 minutes of the time the stroke symptoms are observed.

### Lessons Learned

1. *A standardized framework, such as the Policy on Sentinel Events, bridges the gap between the unit-based staff and the senior leaders and improves organizational learning.* As a result of implementing our policy, we have put in place a mechanism that facilitates bidirectional communication. Information regarding a sentinel event is shared up and down the organizational hierarchy from the unit-based level to the Patient Safety Committee and Committee on Quality and Risk.

In addition, by managing the process in a standardized way, we can ensure that organizational learning and knowledge transfer occurs at all levels within the organization.

2. *A standardized framework clarifies the expectations of the participants.* The Policy on Sentinel Events and User's Guide describe in detail the expectations for the unit-based staff, department/nurse manager, Risk Manager, physicians, and Director/Associate Director of Professional Services when faced with a sentinel event.

3. *When someone is "engaged" in the process: Grab them!* Internal champions were one of the keys to both projects being implemented. They possessed the ability to enlist the support and assistance of their peers. In addition they had a willingness to contribute to resolving the system issue and improving patient safety.

4. *A nonpartisan facilitator keeps the group focused on system issues and not on trying to assign individual blame.* When an adverse event occurs, it is rarely the result of just one factor but rather a chain of events. Unfortunately there is usually at least one staff member at the sharp end. As a nonpartisan facilitator, the Patient Safety Coordinator lends an objective lens to the sentinel event process by addressing the anxiety that might be experienced by the staff at the sharp end and directing the conversation toward the system issues. Bennis (1997) described four competencies of a successful change agent: broad knowledge base, ability to listen/observe, sensitive/mature and authenticity of your behaviour with the message. These are also valuable qualities for Patient Safety Coordinators in their role of promoting a culture of safety within the organization.

5. *Communication is improved when clinical staff, physicians, administrators and support staff participate in the debriefing process.* Although both cases represented clinical issues, in order to evaluate the system components it is necessary to include all the "system" participants to review the problem. The sentinel event debriefing provides a unique forum that

challenges the "silo" mentality of problem-solving by initiating cross-disciplinary discussion in a face-to-face environment. Participants work together to analyze the event in addition to identifying, and addressing, the potential challenges involved in implementing a sustained change in practice.

The working group that developed the O<sub>2</sub> Ticket to Ride project included the unit coordinators from the clinical unit. These individuals are responsible for coordinating patient testing and transport. Their expertise in the operational aspects of the project improved the process for the staff on their units.

Including transport in the initial debriefing for the Code Stroke Algorithm was vital to the success of getting the patient to the CT scan area as quickly as possible. Expanding the working group to include the Call Centre allowed us to capitalize on their expertise in communication technology to contact the various players in the most efficient way possible.

These two pilot projects are excellent examples of what can happen when a standardized framework, including multidisciplinary participation, is used to review an adverse event. In both cases the various stakeholders identified their challenges, worked together to address them and implemented a change in practice that will improve patient safety.

For the O<sub>2</sub> Ticket to Ride form see Online Appendix at <http://www.longwoods.com/product.php?productid=18374&cat=452>

### About the Author

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### References

- Bennis, W. 1997. *Managing People Is Like Herding Cats*. Provo, UT: Executive Excellence Publishing.
- Conner, D.R. 1992. *Managing at the Speed of Change*. New York: Villard Books.
- Gouvernement du Québec. 2005. *An Act Respecting Health Services and Social Services*. R.S.Q., chapter S-4.2. Quebec, QC: Quebec Official Publisher.
- Joint Commission on Accreditation of Healthcare Organizations. 2002. "Sentinel Event Policy and Procedures." June 2005. Retrieved August 19, 2006. <<http://www.jointcommission.org/SentinelEvents/PolicyandProcedures>>