New Nouveau Brunswick
CANADA

Provincial Emergency Blood Management Committee

Final Report of the

Simulation Exercise April 27th 2011

Health/Santé

May 26th, 2011

Contents

Executive Summary: 3
Preparation: 4
Simulation Exercise: 5
Table 1: 7
Lessons Learned: 8
Conclusions: 8

Executive Summary:

The Provincial Emergency Blood Management Committee (PEBMC) was formed as a result of the development of the National Blood Shortages Plan by the National Advisory Committee (NAC) on Blood and Blood Products in partnership with Canadian Blood Services (CBS). CBS operates Canada's blood supply (with the exception of the province of Quebec) and as part of their business continuity they have plans in place for any event that could seriously affect collection, production, testing or distribution of blood components to Canadian hospitals.

The PEBMC has representation from senior management of both regional health authorities as well as from the Department of Health and Canadian Blood Services. A draft plan was developed in 2010 which aligns with the national plan. Early in 2011, a tabletop exercise was held by the committee to determine if the essential elements for a successful plan were in place. The critical next step was a test to see if the plan is able to accomplish its objective. The committee approved the development of a provincial simulation exercise.

The objectives of the Provincial Emergency Blood Management simulation exercise were:

- To test the communication portion of the provincial emergency blood management plan
- To identify gaps in the provincial emergency blood management plan
- To illustrate the need for regional and zone emergency blood management plans

After approval from the provincial committee, a letter was circulated to the primary stakeholders requesting permission to proceed with planning the exercise. The simulation exercise was targeted for late April even though regional plans were in draft form and several zone plans were not developed. Consensus was that a simulation exercise would provide zones and regional health authorities with feedback and demonstrate where there was need for improvements in the draft plans. It was felt that waiting until the regional and zone plans were more developed would not produce sufficient gain in preparedness. April 27th, 2011 was agreed to as the date the simulation exercise would proceed.

A simulation toolkit was developed and provided to each facility in the province which receives notifications from Canadian Blood Services, though three of those facilities do not have functional blood banks. The toolkit was mailed to each facility six (6) weeks in advance of the simulation.

On April 14th, at a meeting of the Provincial Quality Assurance Working Group – Transfusion Medicine (PQAWG_TM) the chair of the PEBMC and a representative from CBS reviewed the exercise and answered questions for the senior transfusion medicine medical technologists in the zones.

On April 19th, the week prior to the simulation, each facility was Faxed a reminder of the

exercise with instructions to return the FAX and to indicate if their emergency blood management plan had been discussed with their laboratory manager and/or medical director.

On April 27th, the day of the simulation, CBS called the chair of the Provincial Emergency Blood Management Committee (PEBMC) to notify her of the amber phase shortage for red cells. The communication plan unfolded through the day according to the plan. There were two teleconferences held on the day of the simulation exercise. An inventory call at 1100h arranged by CBS for all NB hospitals (14 of 24 sites attended however 7 smaller sites were being represented by their regional facility on the call) and a PEBMC call was arranged at 1400h (17 of 26 members attended).

On April 29th, the PEBMC held a debrief teleconference to determine the success of the exercise. Several suggestions for improvements were identified but the overall evaluation of the exercise was positive. The commitment of the participants to become engaged in the process was essential to its success. It should be noted that the overwhelming attitude was to approach this exercise as an opportunity to develop and improve processes in the province.

Preparation:

Simulation toolkit was developed with tools to support the activities required in the exercise. All facilities were instructed to participate to the extent their plans were developed. Some facilities were further along in the process than others. It was stressed that the communication phase was the primary target of the exercise and that any information gathered would be helpful to the process.

The toolkit included:

- Introduction to the purpose of the simulation
- Notification of the simulation date
- Reminder FAX
- Hospital Simulation checklist
- Roles and responsibilities document
- Evaluation of the exercise
- Sample forms and templates for documentation of activities during the simulation

Of the 24 packages sent, one was returned since the technologist named as the person to contact was no longer in that position. A telephone call to the technologist in charge of the zone allowed for redirection of the package in plenty of time for the exercise.

Of the 24 reminder notices sent, 75% were returned within 48 hours. Two (2) facilities or 8% failed to return the documentation. A follow up telephone call was made to those who had not returned in the 48 hours to ensure the message had been directed to the correct person.

Simulation Exercise:

At 0750h, Canadian Blood Services contacted the chair of the NB PEBMC to inform her of the amber phase alert for red cells. According to the communication plan for the exercise, the chair telephoned the Provincial/Territorial Blood Liaison who serves as the administrative arm of the PEBMC.

CBS Faxed a 2 page notice to 24 facilities in New Brunswick beginning at 0755h and all FAX transmissions were completed within 35 minutes. Only 1 issue with the FAX was noted, in that the CBS machine tries 5 times and then completes its job. Georges L. Dumont Hospital (GDH) FAX line was busy and so the FAX was not received. Since it was an announced exercise, GDH Blood Bank called CBS when they did not receive their FAX and the FAX was resent and received the hospital by 0900h. CBS lab staff had discovered the transmission error at approximately the same time as hospital staff reported the missing FAX.

The Provincial Territorial Liaison emailed all members of the PEBMC that the simulation had begun and a teleconference was scheduled for 1400h. Details of the teleconference were included in the email.

The PEBMC representative at the Department of Health emailed notification of the simulation exercise to previously designated senior management officials for both Regional Health Authorities and the Department of Health. The emails were sent with a delivery response requested, and all emails were delivered. Within the facilities, key personnel were being notified from the Transfusion Medicine departments.

At 1100h, CBS held an inventory teleconference at which 21 of 24 facilities were represented. The smaller facilities which were unable to attend were debriefed by their zone supervisor. No significant issues other than the GDH FAX were noted. All facilities represented had complied with the intent of the exercise to the extent possible within the current state of their plan.

At 1400h, the PEBMC Teleconference was held and 17 of 26 members attended. A quick update was provided. Suggestions for improvements were received. Overall the simulation went very smoothly. A debrief call was scheduled for April 29th as per the communications portion of the plan.

As part of the Blood System Advisory Group meeting on April 29th, the PEBMC and Provincial Quality Assurance Working Group; composed of the Transfusion Medicine supervisors of the eight (8) regional facilities; teleconferenced in to share the results of the simulation exercise from their perspective. It was a large group but everyone was able to hear the same message and ask questions at the source.

The evaluation forms from each facility were requested to be returned by May 5th. 67% of facilities returned the evaluation form. Several facilities were included under the direction of

the regional hospitals and their responses were included in the overall regional report. Within the regional facilities, inventory counts and deferral exercises were completed. 75 % of respondents felt that the exercise positively impacted the Transfusion Medicine Laboratory awareness of the possibility of a blood shortage and their preparedness to deal with a shortage. 13% felt that the exercise did not have a positive impact on the facility awareness regarding a possible blood shortage, but this was reported from facilities which do not currently have an emergency blood management plan and so there was less overall facility involvement.

Table 1:

Zone	Total number of Facilities	Notification Rec'd from CBS within 40 minutes	Participation in CBS Inventory Call	Emergency Blood Management committee or processes in place	Inventory count performed	Transfusion deferral exercise completed	Surgery Cancellation exercise completed
Zone 1 Horizon	2	Acceptable	Y	Y (zone)	Y	Y	Y
Zone 1 Vitalité	2	In 1 facility notice was delayed due to CBS FAX operation	Y	Y (zone)	Y	Y	Y
Zone 2 Horizon	5	Acceptable	Y	Y (zone)	Y	Y	Y
Zone 3 Horizon	5	Acceptable	Y	N	Y	Y	Y
Zone 4 Vitalité	3	Acceptable	Y	Y (zone)	Y	Y	Y
Zone 5 Vitalité	2	Acceptable	Y	N	Y	Y	Y
Zone 6 Vitalité	4	Acceptable	Y	N	Y	Y	Y
Zone 7 Horizon	1	Acceptable	Y	N	Y	Y	Y

Lessons Learned:

- Identified issue with FAX machine messages, they were not delivered by support staff as a priority (15 minute delay)
- Several facilities do not have the FAX machine in the Transfusion Medicine area and suggested a telephone call in the event of a real shortage would be more effective.
- Several facilities expected that an acknowledgement page would be returned to CBS.
- Level of alert not included in the email to the senior staff was identified as a gap.
- Acceptable time for the PEBMC to respond to the alert was not specified in the plan.
- Maintenance of contact information requires considerable effort.

Conclusions:

While there is still work left to do on the emergency blood management plans in New Brunswick, the level of preparedness indicates a good understanding of the process by the majority of people who will be involved with a shortage.

Of the many strengths crucial to the success of this simulation, the collaborative manner in which the stakeholders currently function in New Brunswick was key. Our size is also an advantage because such a small community is already well versed in a cooperative approach to issues affecting health care.

The next step is to hold an unannounced simulation to ensure that the momentum to develop the regional/zone plans is not lost.

The enthusiasm and energy which was demonstrated throughout this process was wonderful and the committee is extremely grateful for the support we were given from all stakeholders.