



ARCHIVED - Archiving Content

Archived Content

Information identified as archived is provided for reference, research or recordkeeping purposes. It is not subject to the Government of Canada Web Standards and has not been altered or updated since it was archived. Please contact us to request a format other than those available.

ARCHIVÉE - Contenu archivé

Contenu archivé

L'information dont il est indiqué qu'elle est archivée est fournie à des fins de référence, de recherche ou de tenue de documents. Elle n'est pas assujettie aux normes Web du gouvernement du Canada et elle n'a pas été modifiée ou mise à jour depuis son archivage. Pour obtenir cette information dans un autre format, veuillez communiquer avec nous.

This document is archival in nature and is intended for those who wish to consult archival documents made available from the collection of Public Safety Canada.

Some of these documents are available in only one official language. Translation, to be provided by Public Safety Canada, is available upon request.

Le présent document a une valeur archivistique et fait partie des documents d'archives rendus disponibles par Sécurité publique Canada à ceux qui souhaitent consulter ces documents issus de sa collection.

Certains de ces documents ne sont disponibles que dans une langue officielle. Sécurité publique Canada fournira une traduction sur demande.



Government
of Canada

Gouvernement
du Canada

Office of Critical
Infrastructure Protection and
Emergency Preparedness

Bureau de la protection
des infrastructures essentielles
et de la protection civile



A National Assessment of Emergency Planning in Canada's General Hospitals

Acknowledgments

This publication has been prepared by:

Office of Critical Infrastructure Protection and Emergency Preparedness

2nd Floor, Jackson Bldg.
122 Bank St.
Ottawa, ON K1A 0W6
Tel.: (613) 944-4875
Toll Free: 1-800-830-3118
Fax: (613) 998-9589
Email: communications@ocipep-bpiepc.gc.ca
Internet: www.ocipep-bpiepc.gc.ca

Author:

Norman Ferrier
Toronto EMS, Toronto, ON

This material is based upon work supported by the Directorate of Research and Development (DRD) in the Office of Critical Infrastructure Protection and Emergency Preparedness (OCIPEP), formerly Emergency Preparedness Canada, under Contract Reference No. 2000D012. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the Office of Critical Infrastructure Protection and Emergency Preparedness.

© Minister of Public Works and Government Services
Catalogue No.: D82-69/2002E-IN
ISBN: 0-662-32434-X

Executive Summary

The ability of Canada's hospitals to respond to emergencies is critical to the nation's level of emergency preparedness. For many years, the most commonly cited reasons for poor levels of emergency preparedness, out of date emergency plans, and a lack of exercise programs in Canada's network of general hospitals have been time, resources, funding and staff training.

In an attempt to better understand and quantify the current level of emergency preparedness in Canadian hospitals, a survey questionnaire was mailed to the CEO or Director General of 343 administrative units of acute care hospital sites in Canada. The questionnaire posed a series of questions designed to allow an assessment of the perceived and actual level of emergency preparedness in the responding hospital or its representative regional health authority. This report presents a summary and interpretation of the responses received during the survey and data collection period which ran from October 2000 to February, 2001. The analyses conducted on the survey data are not meant to be overly analytical. Rather, the intent of this report and the accompanying discussion is to motivate improvement in emergency preparedness and planning in Canadian hospitals.

Survey responses were grouped and analysed in various categories including community size, number of beds, and experience with emergencies. Respondents were also grouped geographically, according to their province or territory. Using their responses to specific benchmark preparedness questions, an average "actual preparedness" score for each group was calculated. The responses to the survey questions were varied, and highlighted strengths and weaknesses in hospital emergency preparedness across the country. Some shortcomings identified seemed to be associated with local conditions or policies, while others appear to be near universal. While all responding hospitals reported having an emergency plan, there were only 10 full-time emergency planners among them, and the level of coordination with other agencies or community plans was low (53%). Other shared weaknesses included lack of independent staff recall systems in the case of an emergency, having only informal arrangements for staff sharing, and a lack of awareness regarding the hospital's ability to evacuate patients in an emergency.

Overall, this study suggests that much can be done to improve the emergency preparedness of Canadian hospitals. Fortunately, the survey results and comments received from respondents suggest that emergency planners are an enthusiastic and well-educated group who want to work towards addressing the problems that exist. In order to increase the level of awareness and understanding of emergency management principals in Canada's hospitals, this study recommends:

- Ensuring regional health authorities, networks and corporations unify all emergency preparedness activities within their jurisdictions;
- Enhancing training and development opportunities for hospital emergency planners through the development of national standards; and
- Including emergency preparedness training standards as part of the regular hospital accreditation process.

Table of Contents

Executive Summary.....	iii
1. Introduction: The Changing Face of Canadian Healthcare.....	1
2. Methodology	2
2.1 Data Collection.....	2
2.2 Analyses	2
3. Results.....	3
3.1 Hospital Size and Preparedness.....	5
3.2 Community Size and Preparedness	8
3.3 Isolation and Preparedness	11
3.4 Experience with Emergencies	13
3.5 Perceived Risk and Preparedness	15
3.6 Emergency Planners in Hospitals	16
3.7 Plans, Training and Exercises.....	18
4. Regional Analyses: The Provinces and Territories.....	21
4.1 Newfoundland.....	21
4.2 Nova Scotia	24
4.3 Prince Edward Island.....	26
4.4 New Brunswick.....	28
4.5 Quebec.....	30
4.6 Ontario.....	33
4.7 Manitoba.....	35
4.8 Saskatchewan	37
4.9 Alberta.....	39
4.10 British Columbia	41
4.11 Northwest Territories	43
4.12 Yukon Territory.....	45
4.13 Nunavut	47
5. Discussion	49
5.1 Weaknesses	49
5.2 Strengths.....	50
5.3 Barriers to Preparedness.....	51
6. Recommendations	52
7. Conclusions.....	53
I. Appendix I : The Survey Questionnaire	I-1
II. Appendix II : Regional Respondents – Sample Sizes.....	II-9

1. Introduction: The Changing Face of Canadian Healthcare

A variety of forces, primarily economic, have influenced a dramatic restructuring of Canada's network of general hospitals. While there are still 696 general hospitals in Canada, restructuring of health care administration has resulted in only 343 administrative structures, usually in the form of regional health care networks. These operate under a variety of names, depending upon the province or territory being examined, some being Regional Health Authorities (in the west) or Regional Health Networks (in the Maritimes), or as independent corporate entities (Ontario and Quebec). The process of amalgamation is ongoing, with some provinces being at very advanced stages and operating only a small number of administrative structures to supervise all hospitals. In other provinces, the process is in its' infancy, where some regional structures are just developing and large numbers of independent hospitals still exist.

For many years, the most commonly cited reasons for poor levels of emergency preparedness, the lack of current emergency plans, and the lack of exercise programs, have been time, resources, funding and staff training. The party nominally responsible for the hospital's emergency plan would receive no funding for training or exercises, and the emergency planning portfolio would be added on to a long list of other responsibilities. This person received little or no training in the writing of emergency plans or the development of exercises, and was given no opportunity to receive this training. In many circumstances, hospitals would not demonstrate any interest in emergency plans or exercises, except when accreditation time was approaching. When this happened, a committee would be hastily struck, an exercise planned, and a cosmetic rewrite of the emergency plan attempted. The results would then be forgotten until the next accreditation round, the committee disbanded, and any acquired expertise in exercise development would be lost.

The ability of Canada's hospitals to respond to emergencies is critical to the nation's level of emergency preparedness. This report presents an assessment of the current status of emergency planning and preparedness arrangements in Canada's general hospitals. The methodology used in this assessment, and the subsequent analyses, are not meant to be overly analytical; rather the intent of this assessment and the following discussion paper is to motivate improvement in emergency preparedness and planning in Canadian hospitals.

2. Methodology

2.1 Data Collection

A mail out questionnaire was used for this survey (Appendix I), which was conducted between October, 2000 and February, 2001. The questionnaires were mailed to those members of the Canadian Healthcare Association who indicated that they operated acute care hospitals of any size, anywhere in Canada. The survey was addressed to the CEO or Director General of the hospital or Regional Health Authority, and included a self-addressed stamped return envelope, in order to maximize the number of completed questionnaires returned. In a covering letter, the CEO or Director General was asked to have the questionnaire completed by the person responsible for emergency planning and exercises in their institution. Where there was no such person, the CEO or Director General was asked to complete and return the form personally.

All of the hospitals in Nova Scotia, Prince Edward Island, Alberta and British Columbia are administrated by regional health authorities. When collating and analyzing data for this survey each responding regional health authority was treated as a single hospital, regardless of the number of sites that care was actually provided at.

2.2 Analyses

The research focused upon a number of simple questions, e.g., Does each hospital have a current emergency plan? What tools does Canada's healthcare system require to prepare effectively for emergencies? (see: Appendix I for full survey text) All responses were entered into a database, using the institution's postal code as the 'key' data entry. This method permitted data to be sorted by province or territory, by using the first letter and number in the postal code. This method of using unique 'keys' for data entry also eliminated the possibility of inadvertent duplication of data, either through accidental double entry or through more than one response from the same site.

Responses to community and hospital size questions provided some bases for comparison of the levels of preparedness that were reported. Information on past emergencies were also used to compare preparedness in those facilities with previous disaster experience to those with no experience. This information was also used to determine which scenarios most often affected hospital operations in Canada. Answers relating to emergency plans currently in place were compared to factors such as the date of last review, date of last exercise, and date of last major emergency, in order to determine whether the institution did indeed have a current emergency plan. Any institution which indicated either an internal or external emergency within the preceding two years was judged to have tested its plan, and the plan was considered current.

Questions were also asked which assessed the perception of the respondent as to level of preparedness. These responses were then measured against 'benchmarks' of actual preparedness, in order to compare perceived preparedness against actual preparedness. Actual preparedness was measured on a 10-point scale, which is presented in Table 1.

Table 1 : Benchmark questions for assessing actual level of emergency preparedness.

BENCHMARK CRITERIA	If yes, score
Are back-up sources available for: Food? Potable Water? Medication? Medical Equipment? Linen?	1 point 1 point 1 point 1 point 1 point
Is an alternate site of operation (hospital or community facility) formally arranged? ¹	2 points
Are staff callback arrangements (communications plans) in place, and non-redundant? ²	2 points
Are formal arrangements in place to “borrow” staff from other institutions? ³	1 point
TOTAL POSSIBLE POINTS	10

¹A maximum of two points were awarded for having a formally arranged alternate site in a hospital, and another in a community facility, such as a school. In the case of respondents in urban areas, the second point was awarded if the respondent mentioned more than one alternate hospital site.

²An attempt was made to identify primary and secondary methods of staff call back notification. Two points were potentially available, but in order to receive both, the backup system could not be dependent on the primary system (e.g. pagers and telephones). Considerable allowances were made in permitting the respondents to report two independent methods, e.g., full marks were awarded if a small community indicated going door to door to reach staff as a call-back method.

³Respondents were asked to identify specific formal arrangements for the use of medical or nursing staff from other facilities, receiving one point only if a formal arrangement was in place.

When calculating benchmark scores, special consideration was given for the extremely isolated hospitals in the Northwest Territories, the Yukon, and Nunavut. Details of this treatment can be found in the individual regional reports (Section 5.0).

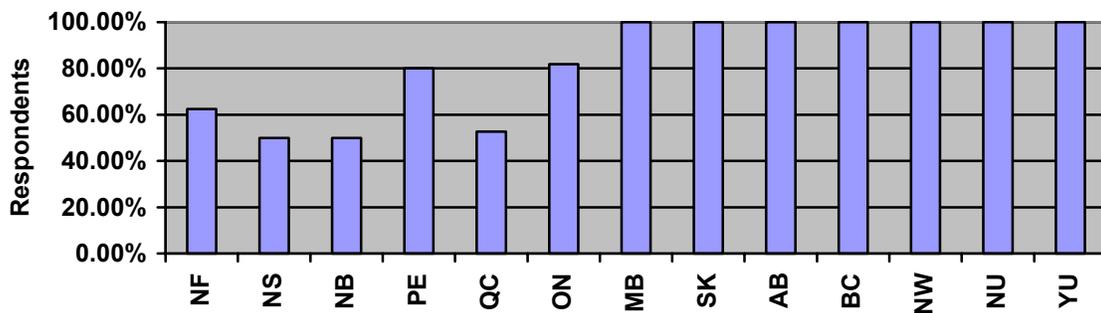
Finally, responses were used to contrast performance by province or territory. The responses were also compared by hospital size and community size. Isolated community facilities were examined and compared to other sites. For the purposes of this research, **isolated communities** are defined as any facility indicating that there was no access by road to the next nearest facility and/or any facility that indicated a distance greater than 50 kilometers to the next hospital. This is important because at 50 kilometers or greater distance, the affected community would be required to deal with any emergency without outside assistance for at least the first hour of the event.

3. Results

Results are given primarily as percentages. To provide context and aid in interpretation, readers are referred to the sample size information presented in Appendix II.

When this research was being planned, it was assumed that, with all of the incentives provided, a reasonable level of response to the questionnaires would be in the 35% range. However, by the deadline of January 31, 2001, a total of 60% of all questionnaires had been returned. A two-week grace period was added to the deadline, so that late responses could be captured, and this has resulted in a final response rate of 77% for the entire country by February, 2001. Several provinces and all territories had response rates of 100%. Follow up telephone calls were also made over the two week grace period in order to ensure adequate representation of data from all provinces and territories.

Fig. 4.1 SURVEY RESPONSES - BY PROVINCE/TERRITORY



This research received a significant response from those hospitals serving many of Canada's smaller communities. In the preliminary reporting phase communities with less than 50,000 people made up 62% of the total responses. This is important, because these can be the communities in which major incidents can often occur, and become disasters. Communities with large populations are more likely to have the resources to cope with a major incident internally, therefore avoiding an event which exceeds their ability to cope, creating a disaster.

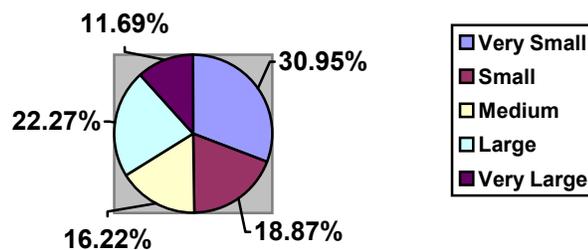
3.1 Hospital Size and Preparedness

Canada’s communities vary greatly in size, and so do the hospitals that serve them. The hospitals responding to this survey can be categorized by size, using the following criteria:

<u>Description</u>	<u>No. Of Beds</u>
Very Small	0-49 Beds
Small	50-99 Beds
Medium	100-199 Beds
Large	200-499 Beds
Very Large	500+ Beds

While all sizes of hospitals responded to the research, it is encouraging to note the Very Small and Small groups are well represented. These smallest community healthcare providers, which are often overlooked in research, responded to the opportunity to add their voices to this study.

Fig. 4.2 Canadian Hospitals Responding
- by Size



3.1.1 Very Small

Respondents in the Very Small category made up 32% of the responses to this research. The very small sites were unique in that 94% of them also met the criteria for isolated sites. Only about 40% of Very Small respondents reported any prior experience with emergencies (internal or external). While all reported current emergency plans, these sites did not score well against specific benchmarks of preparedness. The average score for sites in the Very Small category was 4.6 out of a possible ten marks. Only 10% of respondents scored 9 or more and 23.4% scored 2 out of ten or less. Deficiencies in the benchmarked items were reported across the board, with the most notable shortfalls being in communications strategies. Twenty percent of respondents reported no contingency plans whatsoever for critical supplies such as food or medications.

3.1.2 Small

Small hospitals and health care regions made up 20% of the total responses to this survey. As with their very small counterparts, many (over 61%) of these institutions met the

definition for isolated status. Approximately 55% of the respondents in this group reported prior experience with emergencies. The average preparedness scoring for Small sites was 8.6 out of ten. Twenty percent of sites scored 9 or better, and 7.5% scored 2 or less. Areas of weakness included communications strategies and formal staff sharing arrangements; 65% of sites received full marks for contingency arrangements for critical supplies.

3.1.3 Medium

Hospitals in the Medium size category made up 18% of the total respondents to the survey. Most of these sites were located in medium sized population centers, although some exceptions did exist, such as a single medium sized facility serving all of Nunavut. All reported current emergency plans. The average score for Medium sized institutions was 7.3 out of ten. Some 37.2% of respondents scored 9 or more, while 6.9% scored 2 or less. Once again, the areas of weakness included communications strategies, with most plans having a backup method of staff recall that was directly dependent on the primary method. In addition, while many sites reported informal arrangements to share staff during a crisis, almost none had formal arrangements for such staff sharing in place, calling into question the reliability of this resource during a crisis. Contingency arrangements for critical supplies were much better developed, with 80% receiving full marks for all of the critical supplies. Ten percent of respondents reported no contingency arrangements whatsoever.

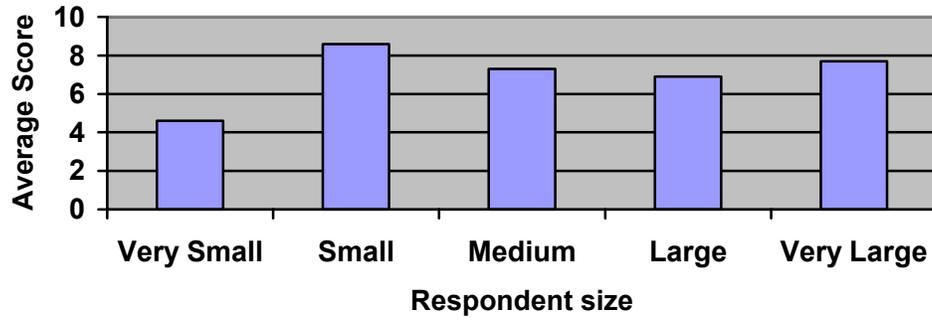
3.1.4 Large

Large sites made up 18% of the total respondents to this survey. These sites were located, with few exceptions, in larger population centers. Only 26.7% of sites met the criteria for definition as isolated. Fully 66.6% of these respondents reported prior experience with an emergency. While all reported the presence of current emergency plans, preparedness scores indicated room for improvement. The average score for Large sites was 6.9 out of ten. Those scoring 9 or more made up 23.3% of the total, while those scoring 2 or less made up 8.3%. As was found elsewhere, the most common single failings reported were communications strategies and formal plans for staff sharing. While 60% of sites received full marks for contingency arrangements for critical supplies, a further 11.7% had made no contingency arrangements.

3.1.5 Very Large

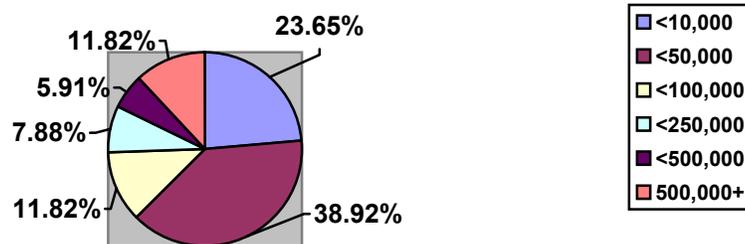
Sites in the Very Large group made up 12% of the respondents to this survey. These sites were located exclusively in urban centers. 87.5% of these sites had prior experience with a major emergency. All but one of the sites reported the presence of a current emergency plan. Nonetheless, the preparedness scoring revealed room for improvement. The average score for Very Large sites was 7.7 out of ten; 41.9% of respondents scored 9 or better, and a further 10% scored 2 or less. Again, the most commonly reported shortcomings in planning were in communications strategies and in formal staff sharing. While 52.5% of respondents received full marks for contingency arrangements, 10% reported that they had no contingency arrangements for critical supplies in place.

Figure 4.3 - Average Preparedness Score By Respondent Size



3.2 Community Size and Preparedness

Fig. 4.4 Canadian Communities Responding - by Population



The responses from Canada’s hospitals can also be described by community size, using the following descriptors:

Very Small	< 10,000
Small	< 50,000
Medium	<100,000
Large	<250,000
Very Large	<250,000+

3.2.1 Very Small

Respondents in the Very Small category made up 24% of the responses. Some 30% of sites reporting from the Very Small communities also met the criteria for definition as isolated sites. Only about 30% of respondents located in Very Small communities reported any prior experience with emergencies. While 98.5% reported current emergency plans, the sites located in Very Small communities did not score well against the specific benchmarks of preparedness. The average score for sites in Very Small communities was 6.3 out of ten. Only 13.3% of respondents scored 9 or more and 18.3% scored 2 out of ten or less. Deficiencies in the benchmarked items were reported across the board, with the most notable shortfalls being in communications strategies; 55% scored full marks for contingency planning for critical supplies, while 18.3% of respondents reported no contingency plans for critical supplies such as food or medications.

3.2.2 Small

Hospitals and health care regions located in Small communities made up 38% of the total responses. Of these, 59.1% met the definition for isolated status. Approximately 57% of the respondents in this group reported prior experience with emergencies. All reported that they had current emergency plan. The average preparedness scoring for sites reporting from Small communities was 6.9 out of ten. Of the small communities, 12.9% scored 9 or better, and 7.5% scored 2 or less. Areas of weakness included communications strategies and formal staff sharing arrangements. Full marks for

contingency arrangements for critical supplies were received by 62.3%, while 9.7% of sites in Small communities reported no contingency plans in place.

3.2.3 Medium

Hospitals in Medium sized communities made up 12% of the total respondents to the survey. Some 86.1% of respondents had experienced some type of emergency. All reported current emergency plan. The average score for sites in Medium sized communities was 7.2 out of ten. Some 27.7% of respondents scored 9 or more, while 8.3% scored 2 or less. Contingency arrangements for critical supplies were somewhat better developed, with 58.3% receiving full marks for all of the critical supplies; 13.9% respondents reported no contingency arrangements.

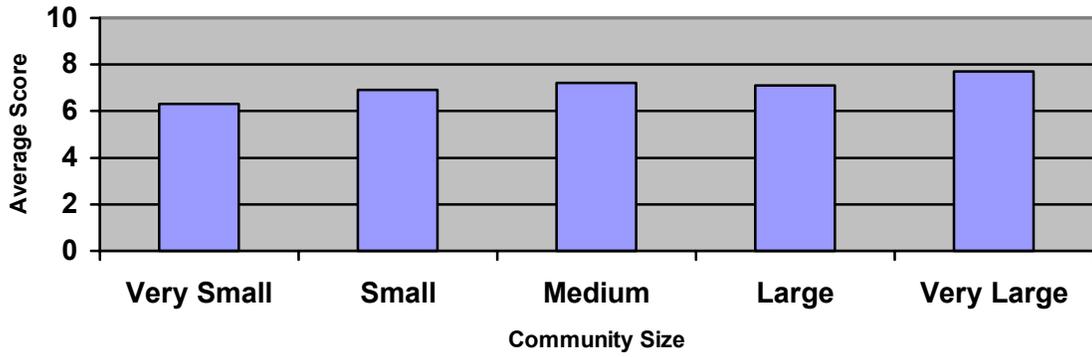
3.2.4 Large

Sites reporting from Large communities made up 8% of the total respondents to this survey. Fully 64% of these respondents reported prior experience with an emergency. All reported the presence of current emergency plans. The average preparedness benchmark score for sites in large communities was 7.1 out of ten. Sites scoring 9 or more made up 36% of the total; no scores of 2 or less were recorded. As found elsewhere, the most common single failings reported were communications strategies and formal plans for staff sharing. 64% of sites received full marks for contingency arrangements for critical supplies, while 4% had made no contingency arrangements.

3.2.5 Very Large

Sites in Very Large communities made up 18% of the respondents to this survey. These sites were located exclusively in urban centers. A full 87.5% of these sites had experienced a major emergency. All but one of the sites reported the presence of a current emergency plan. The average score for Very Large community sites was 7.7 out of ten; 41.9% of respondents scored 9 or more, and a further 10% scored 2 or less. As with other size groups, the most commonly reported shortcomings in planning were in communications strategies and in formal staff sharing. While 52.5% of respondents received full marks for contingency arrangements; 10% reported that they had no contingency arrangements for critical supplies in place.

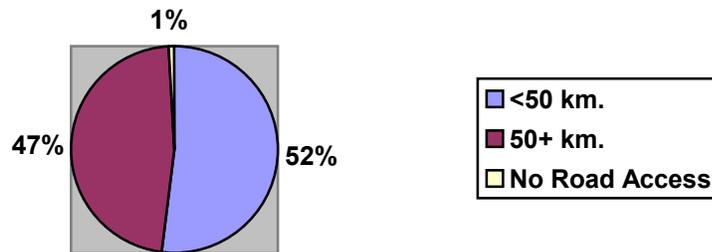
Fig. 4.5: Average Preparedness Score by Community Size



3.3 Isolation and Preparedness

One notable factor revealed in the research was the relative isolation of Canada's hospitals. While the complete absence of road access to the next hospital was infrequent, the distance between sites nonetheless isolated many hospitals. In 46.7% of cases the next closest hospital is more than 50 kilometers away. This means that the closest hospital will not only bear the full brunt of the disaster alone in the early stages, any aid which does respond will take a minimum of 30 minutes to arrive, and any patients sent to more distant hospitals will strip the impacted community of a needed resource (e.g. an ambulance) for more than an hour.

Fig. 4.6 - Distance to Next Hospital



3.3.1 Isolated Facilities

Isolated facilities made up 48% of the respondents to this survey. Nearly 60% of them had previously experienced a major emergency. All but one respondent claimed to have a current emergency plan, however, 2.5% of respondents reported not reviewing their plans within the preceding 5-10 years, and 25% reported conducting no exercises within the same time period. In addition, 25.9% reported that no training on the emergency plan was provided to staff. The level of preparedness, as reflected in the average score, clearly shows room for substantial improvement in this sector. The average score for sites meeting the definition of isolated was 6.4 out of ten; 18.1% of sites reporting received scores of 9 or greater while 12.9% received scores of two or less. As might be expected, the Isolated Facilities generally scored well with respect to contingency arrangements; 58.6% received full marks for having arrangements in place for replacing critical supplies. Unfortunately 12% reported that they had no contingency arrangements in place, although it should be recognized that some issues contributing to this low score, such as the absence of alternate communications methods, are beyond their control.

3.3.2 Urban/Very Large Facilities

Sites in the Very Large group made up 12% of the respondents to this survey, and were located exclusively in urban centers. Of these, 87.5% had previously experienced a major emergency. All but one of the sites reported the presence of a current emergency plan. The average score for Very Large sites was 7.7 out of a possible ten marks. This

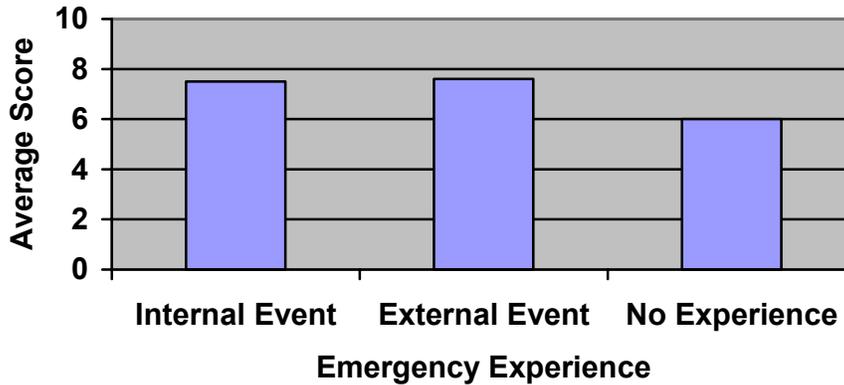
placed the average level of preparedness for Very Large sites behind that of the average Small hospital in this survey. Only 41.9% of respondents scored 9 or better, and a further 10% scored 2 or less. As with other size groups in this survey, the most commonly reported shortcomings in planning were in communications strategies and in formal staff sharing. While 52.5% of respondents received full marks for contingency arrangements, a further 10% reported that they had no contingency arrangements for critical supplies in place.

3.3.3 Analysis

Very large facilities in urban centers tend to score well for preparedness, particularly in contrast to isolated facilities. This is to some extent probably due to larger operating budgets, greater availability of resources locally, and greater levels of experience. These factors could account for the differences in average preparedness score between these two types of sites (6.4/7.7). It is interesting to note that isolated sites were slightly better at contingency planning for critical supplies. Isolated sites tended not to take last minute access to critical supplies for granted; 58.6% received full marks for contingency planning, while 52.5% of the Very Large sites got the same full marks. Although the difference is small, it might suggest a certain level of complacency in the midst of plenty.

3.4 Experience with Emergencies

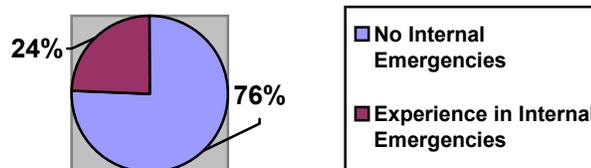
Fig. 4.7 - Average Preparedness Score Compared to Experience with Emergencies



There is no question that past experience plays a major role in the influencing preparedness activities. This survey showed that the nature of the past experience was not particularly important, but the fact that something had occurred was. The difference between average scores of respondents which experienced either an internal or external emergency was negligible (average scores of 7.5 and 7.6 respectively), while those reporting no prior disaster experience had an average preparedness score of 6.0 points.

3.4.1 Previous Internal Emergencies

Fig. 4.8 - Previous Experience - Internal Emergencies

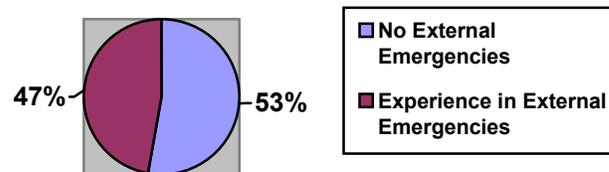


Sites reporting previous experiences with internal emergencies made up 24% of the respondents to this survey and all reported having current emergency plans. Full coordination of plans was reported by 52.4% of respondents, while limited coordination was reported by an additional 41%. However 5% subsequently reported that their plans had not been reviewed in the preceding 5 years, and 5% reported that their plans had not

been tested by exercise within the same time period. Only 91.9% reported the training of staff in emergency plan procedures. The average preparedness score for sites experiencing previous internal emergencies was 7.6 out of ten. 34.4% scored 9 or better, while 3.2% scored 2 or less. Again, the areas of greatest weakness were reported as communications and staff sharing. Contingency plans for critical supplies were better developed than most for this group, with 62.3% receiving full marks for contingency supplies, and only 8.1% of sites reporting no contingency arrangements in place.

3.4.2 Previous External Emergencies

Fig. 4.9 - Previous Experience - External Emergencies



Sites that had experienced previous external emergencies made up 48.8% of respondents. All reported that their site had a current emergency plan. Full emergency plan coordination was reported by 57.8% of these sites, with a further 40.2% reporting limited coordination. 3.5% of respondents had not reviewed their emergency plans in the preceding 5 years, 22.5% had not tested their plans with an exercise in the same time period, and 17.6% reported that staff received no training on the emergency plan or its use. The average preparedness score for sites across the country that had previously experienced an external emergency was 7.5 out of ten. 32.3% of sites earned scores of 9 or more; only 2.5% scored 2 or less. As with other sub groups in this research, there were problems with communications strategies for staff recall, and few had formal staff sharing arrangements. A majority, 75.5%, scored full marks for contingency plans for critical supplies, while 5.8% reported that they had no contingency plans at all.

3.4.3 No Emergency Experience

Sites with no prior experience with internal or external emergencies made up 54% of all respondents; 98.5% of them reported that they had a current emergency plan in place. Full coordination of plans was reported by 49.6% of respondents while 47.7% reported limited coordination. 6% of respondents also reported that they had not reviewed their emergency plans within the past 5 years, and that 23.3% had not tested their plans with an exercise within the same time frame. 25.6% of respondents reported that no training on the emergency plan was provided for staff. The average preparedness score for sites with no prior emergency experience was 6.0 out of ten. Only 13.5% of respondents in this group scored 9 or more; 15% scored 2 or less. Again, the major problems were the lack of a robust communications strategy, and the lack of formal agreements for staff sharing. Full marks for contingency arrangements for critical supplies were given to 52.6% while 17.3% reported no contingency plans in place.

3.5 Perceived Risk and Preparedness

In almost all cases respondents were able to identify the historical natural hazard risks in their communities, and/or technological risks might affect the community. There were no respondents who indicated that they were not at risk from at least one of these two sets of phenomena. Thus, there appeared to be no good method for comparing preparedness in communities which perceived risk to those that did not since virtually all reported some risk perception or knowledge.

Fig. 4.10 - Technological Risk Factors



Fig.4.11 - Natural Hazard Risk Factors

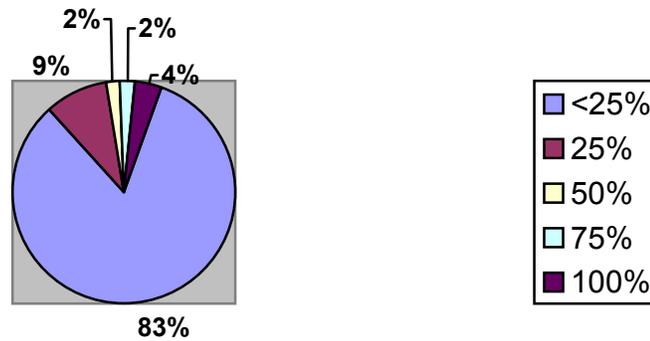


It has been well established that adults learn best when the subject material is directly relevant to their lives. Therefore, it is important to note here that the scenarios used in exercises to test a site's emergency plans were not greatly influenced by the identified local risk factors. Since an exercise is an educational experience as well as a test, and since virtually all respondents complain about the lack of funds or time for exercises, it follows that exercises that are conducted should be directly relevant to the participants risk environment. There appeared to be no relationship at all between the reported perceived risk and the scenarios selected. This fact may play a role in the difficulty of motivating staff to treat exercise programs with credibility.

3.6 Emergency Planners in Hospitals

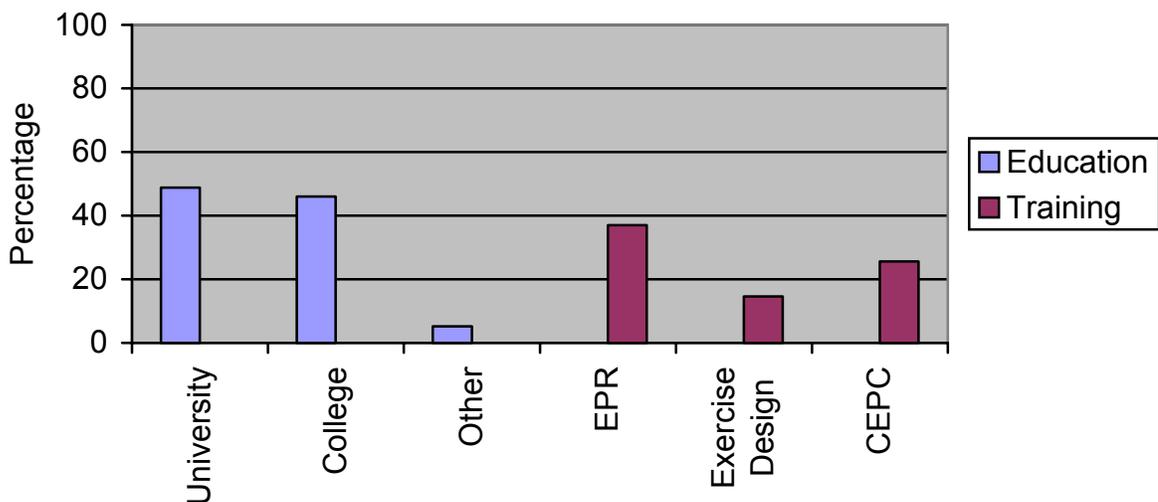
In the past, many individual hospitals assigned emergency planning responsibilities to an individual who spend less than 25% of their time on emergency planning and exercises. Now, a coalition of hospitals might have the opportunity to share one properly trained full time emergency manager, ensuring that each member facility benefits fully from this resource. For example the Calgary Regional Health Authority has a trained and experienced full-time emergency planner who provides services to four large urban hospitals. Unfortunately, among the respondents of this survey, there were only ten full time emergency planners working in Canada's hospital sector. Even when the demand for such personnel is recognized, it cannot always be fulfilled. One hospital advised that they had been eight months without anyone responsible for emergency planning, since they could find no one to fill the position.

Fig. 4.12 - Emergency Preparedness Activities - Percentage of Workload



Those conducting emergency planning in our nation’s hospitals tend to be well educated, in a general sense, but lacking in specific training. Emergency planning is conducted by those with a community college (or equivalent) education in 46% of the institutions responding. A further 48.8% of emergency planners have university degrees. However, only 37% have completed a provincial or territorial Emergency Preparedness and Response course, only 14.6% have completed an Exercise Design course, and only 25.6% have completed any courses through the Canadian Emergency Preparedness College (CEPC), run the by Office of Critical Infrastructure Protection and Emergency Preparedness in Amnrior, Ontario.

Fig. 4.13 - Education and Training of Health Care Emergency Planners

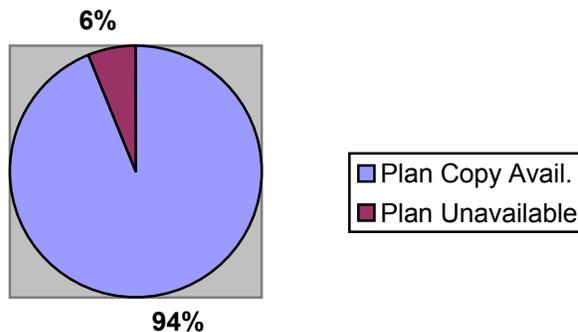


The amalgamation of administrative structures may provide not only improved management of the nation's hospitals, but also provides opportunities for growth which did not previously exist. One of these areas of growth and improvement may well be in the field of emergency management. Newly amalgamated hospitals should have opportunities to pool resources in order to ensure access to certain resources, including emergency management, which they have found difficulty in justifying in the past. Accomplishing this, however, will require a greater focus on training for health care staff than has been the case in the past.

3.7 Plans, Training and Exercises

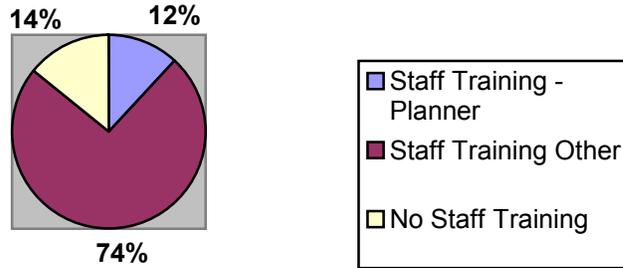
Many of those responsible for emergency planning in the hospital sector lack basic information about standards with respect to training, review and access to emergency preparedness resources. Virtually every hospital that responded advised that they had a current emergency plan, but of these 5.2% had not reviewed their plan in the past five years. It is an accepted standard in the emergency management community that a plan must be reviewed every two years (at a minimum), in order to be considered current. While many met this standard, a substantial number did not. When viewed in context with some of the other (low) reported levels of preparedness, the current high level of plan review in our hospitals may be one of the longer term benefits of Y2K preparations. If true, then the time for a new set of reviews is now upon us.

Fig. 4.14 - Plan Availability in Work Area



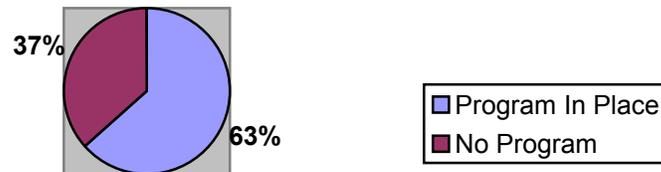
Of the respondents, 6% did not make copies of their emergency plan available in workplaces (where it would be needed in a real emergency), and 22.3% indicated that they provided no training to their staff on the hospital emergency plan or its use. Of the balance, training on the plan was provided by a variety of individuals, 85.4% of whom did not appear to be the party with primary responsibility for the plan.

Fig. 4.15 - Emergency Plan Training



Only 59.6% of the hospitals responding indicated that a scheduled exercise program was operating. 10.9% of the hospitals claiming scheduled exercise programs also reported that they had not conducted an exercise in the preceding 5-10 years, and many (39%) were uncertain as to when the exercise preceding the most recent had occurred. This suggests that in a many cases no scheduled exercise program is operating, despite reports to the contrary.

Fig. 4.16 - Reported Scheduled Exercise Programs



In addition, a great many of the emergency exercises reported appeared to actually be fire drills. Many respondents specifically reported monthly fire drills in the “Comments” section associated with these questions, or noted the information beside the check off response. Nationally, only 11.6% of respondents had tested power failure procedures, 33.4% had tested their own ability to evacuate their institution, and 8.6% had tested their ability to receive evacuees from other hospitals or nursing homes.

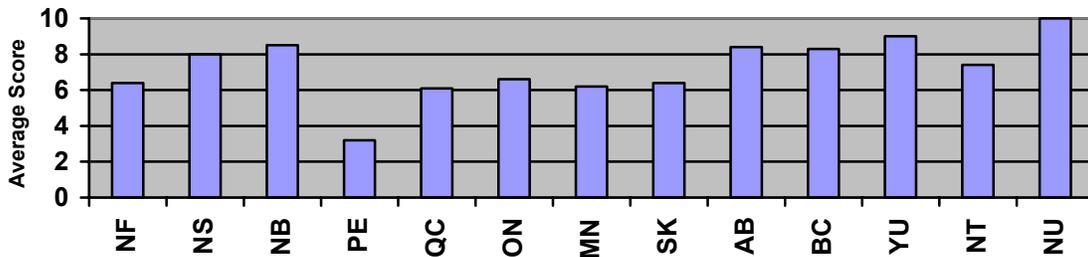
The coordination of emergency plans with those of others in the community did not appear to be a priority in many cases. Only 53% of the respondents reported that their plans were “fully coordinated”, with an additional 44.3% reporting ‘limited coordination.’ A further 2.7% of respondents reported that there was no coordination

between their emergency plans and those of the surrounding community. When asked whether outside emergency response agencies, such as police, fire or EMS, or disaster relief groups, such as the Salvation Army or Red Cross, participated in their exercises, 75% responded in the affirmative. However, on many of the returned questionnaires at least one of the groups listed for possible coordination had been crossed out, indicating only one group participated. In other cases, statements like “it depends” qualified the response.

4. Regional Analyses: The Provinces and Territories

Figure 5.1 - Average Preparedness Scores by Province or Territory*

*modified scoring system used for territories (see text)



4.1 Newfoundland

4.1.1 Hospital Size/Type

Hospitals within the province of Newfoundland and Labrador tend to be smaller and more isolated than in other parts of the country. Out of eight possible respondents, five returned completed surveys. Of these, sixty percent of the responses came from hospitals in the Small category, 20% were Medium sized, and 20% were Large. All respondents met the definition of isolation. Eighty percent of the responding institutions identified themselves as Acute Care sites, and the other 20% identified mixed uses. Sixty percent of respondents reported that they were administered as multi-site operations.

4.1.2 Past Experience with Emergencies

Newfoundland's hospital respondents were able to readily identify risks, both from community installations and from natural hazards. Community based risk factors, such as an airport, were identified by 80% of the respondents. All hospitals identified natural hazards, the most common being severe winter storms (100%) and high winds (80%). In addition, 40% indicated a risk from forest fire. Of the respondents, 40% reported that they had experienced a major internal emergency at some point in the past, although all of these experiences were more than ten years old. Sixty percent of the respondents reported having to cope with a major external emergency at some point in the past, although only one of these had occurred within the past ten years. The actual emergencies reported by the respondents included a shipwreck, among other things.

4.1.3 Emergency Plans and Exercises

Eighty percent of hospitals had a single identifiable person who was responsible for the emergency plan and for exercises, but that person spent less than 25% of the workday on these activities. Other duties included patient care, administration, patient/staff teaching, engineering, and security. Eighty percent of those responsible for emergency planning in Newfoundland's hospitals had a post secondary education, with 40% at the college level, and 40% holding university degrees.

All of the respondents from Newfoundland and Labrador indicated that they had a current emergency plan, and that the plan itself was "fully integrated." All provided copies of the plan in the required work areas, and 20% provided employees with their own personal copies. Twenty percent reported that they conducted no staff training on the emergency plan, and it appeared that staff training was conducted by someone other than the person responsible for the plan.

All respondents reported that their plans had been reviewed within the past two years, and 40% of them had been reviewed within the past six months. Despite the lack of actual emergencies, all were also able to report that their plans had been tested on some level within the preceding two years. The testing included Paper Drills (40%), Tabletop Exercises (20%), and Full Scale Exercises (40%). 60% of hospitals indicated that they had a scheduled exercise program.

The types of emergencies tested by exercise varied only slightly, with 60% using external scenarios and 40% using internal scenarios. The internal scenarios were invariably fire related. Eighty percent of the external scenarios involved transportation incidents, and 20% involved a chemical spill. All respondents reported participation by community emergency services and/or volunteer agencies. None reported testing for power failure related scenarios. None had tested their ability to receive patients evacuated from another hospital or nursing home, and only 40% had tested their own ability to evacuate. Apart from the exercises described, 40% of hospitals had conducted another exercise within the preceding two years, another 40% within the preceding 10 years, while 20% were unaware of when the last exercise had been conducted.

The lack of focus on evacuation exercises is troubling, considering that 40% of the respondents were either unable to provide estimates of the time necessary to evacuate, or gave evacuation estimates that were unrealistic (99 patients in under one hour). While all respondents had a plan for the use of another community facility, usually a school, only 40% had a contingency arrangement to use another hospital. It is understood that these are isolated facilities, but raises a question of what would occur if the entire community required evacuation.

4.1.4 Benchmark Preparedness Scores

The average preparedness score for responding hospitals in Newfoundland and Labrador was 6.4 points out of ten. One respondent received 10 points, while another received a single point out of ten. In eighty percent of cases, the respondents reported a backup plan

for recalling staff that involved the use of pagers, if the telephone system were not functioning. Only 20% had the required two independent methods. Forty percent had no contingency arrangements for potable water; 20% reported no contingency arrangements for any of the required supplies.

4.1.5 Training and Barriers

None of the responding hospitals in Newfoundland and Labrador reported the funding of emergency preparedness through a separate budget line. In most cases the funding source was cited as discretionary funding. Eighty percent of respondents reported that the person responsible for emergency planning had completed a provincial Emergency Preparedness and Response course, 40% had completed an Exercise Design course, and 60% had completed one or more courses at the Canadian Emergency Preparedness College. Forty percent had also completed FEMA distance learning courses, and 20% reported completed training from other sources. This level of training is quite high relative to that reported by many other regions.

The respondents were asked to identify substantial barriers to emergency preparedness activities in their institutions. Staff knowledge and staff attrition were the largest barriers cited, with 60% of respondents citing these. Funding is the next most commonly reported barrier, at 40%. Community support and the availability of staff for training and exercises were also identified by 20% of respondents as barriers. All respondents felt that they would benefit from a national training program for hospital-based emergency planners.

4.2 Nova Scotia

4.2.1 Hospital Size/Type

Health care provision in Nova Scotia has a more centralized administrative structure. There are only four regional health authorities to manage the province's hospitals, two of which responded to the survey. One of the respondents came from a region in the Small category; the other met the criteria for the Large category (as measured by the total number of beds the region is responsible for). All hospitals met the definition of isolation. Both of the responding health authorities identified themselves as operating Acute Care sites only. One respondent reported that they were administered as a multi-site operation.

4.2.2 Past Experience with Emergencies

Nova Scotia's respondents were able to readily identify risks, both from community installations and from natural hazards. While both respondents identified major highways as risk factors, the presence of airports in both centers was not identified as a risk factor. One respondent identified severe winter storms and high winds as natural hazards in their area. The other respondent identified no natural hazards. Neither respondent reported experiencing a major internal emergency, but both reported having had to cope with a major external emergency within the past two years.

4.2.3 Emergency Plans and Exercises

Both of the regional respondents indicated that they had a current emergency plan, and that the plan itself was "fully integrated." Both provided copies in the required work areas. One of the two respondents, however, reported that they conducted no staff training on the emergency plan, and it appeared that in the other case did the person responsible for the plan did not conduct the staff training.

Both respondents reported that their plans had been reviewed within the past year. The reports of actual emergencies also confirmed that their plans had been tested on some level within the preceding two years. One respondent reported that a scheduled exercise program was in place, and that a Paper Drill had been conducted within the past year. Despite their claim of an ongoing program, they were unsure when the previous exercise had taken place. The second respondent reported no exercise program in place, but that they had conducted a Full Scale exercise within the past five years. They were unsure as to when the previous exercise had occurred.

The types of emergencies tested by exercise varied only slightly, with both using external scenarios. The external scenarios both involved transportation incidents, and one of them involving a chemical spill. Both respondents reported the participation of community emergency response agencies and/or volunteer agencies in their exercises. Neither reported testing for power failure scenarios, nor had they tested their ability to receive patients evacuated from another hospital or nursing home or their own ability to evacuate.

While both respondents had a plan for the use of another hospital during an evacuation, only one had a backup plan to use a community facility. It is understood that these are isolated facilities, but nonetheless raises questions of what would occur if the entire community required evacuation or whether surrounding hospitals would be prepared to receive evacuated patients.

4.2.4 Benchmark Preparedness Scores

The average preparedness score for the two Nova Scotia sites was 8 points out of ten. One respondent received 9 points, while the other received 7 points out of ten. One respondent reported that their only plan for recalling staff that involved the use of pagers, which has doubtful effectiveness, if the telephone system were not functioning. The other had the required two independent methods. Contingency arrangements for the required supplies were good.

4.2.5 Training and Barriers

Neither hospital reported the funding of emergency preparedness through a separate budget line. In one case the funding source was cited as discretionary funding. The other respondent reported that no funding was available. Both of respondents had a single identifiable person who was responsible for the emergency plan and for exercises, but that person spent less than 25% of the workday on these activities. Other duties included a broad range of hospital functions. Both of those responsible for emergency planning in the reporting Nova Scotia health regions had post secondary education, one at the college level, and the other holding a university degree.

The survey responses show Nova Scotia has work to do with respect to specific emergency management training in its health care system. Neither respondent reported that the person responsible for emergency planning had completed a provincial Emergency Preparedness and Response course, none had completed an Exercise Design course, and none had completed any courses at the Canadian Emergency Preparedness College. One respondent reported completed training from other sources.

Substantial barriers to emergency preparedness activities in their institutions were identified by respondents as: funding (50%) and time available (50%). One respondent felt that they would benefit from a national training program for hospital-based emergency planners.

4.3 Prince Edward Island

4.3.1 Hospital Size/Type

Health care provision in Prince Edward Island has a more centralized administrative structure. There are only five regional health authorities to manage the province's hospitals, four of which responded to this survey. Two of the respondents fall in the Very Small category, one was in the Medium category, and one fell in the Large category. Only one responding region met the definition of isolation. All of the responding health authorities identified themselves as operating Acute Care sites only, and all reported that they were administered as single site operations.

4.3.2 Past Experience with Emergencies

Prince Edward Island's regional authorities were able to readily identify risks, both from community installations and from natural hazards. All four respondents identified a variety of major community risk factors. All identified natural hazards in their area, the most common being severe winter storms (100%) and high winds (75%). In addition, 50% indicated a risk from forest fire. All of the respondents reported that they had experienced a major internal emergency. None of the respondents reported having to cope with a major external emergency within the past two years, and only 25% reported experiencing a major external emergency within the past 5 years.

4.3.3 Emergency Plans and Exercises

All of the regional respondents indicated that they had a current emergency plan. Only 50% identified their plan as "fully integrated"; the remainder described their plans as having "limited integration." All reported that their emergency plans had been reviewed within the past two years, and provided copies in the required work areas. One respondent reported making individual copies of the emergency plan available to staff members. One of the four (25%) reported that they conducted no staff training related to the emergency plan, and it appeared that in the other three the person responsible for the plan did not conduct the staff training.

All respondents reported that their plans had been reviewed within the past two years. The reports of exercises also confirmed that in 75% of the respondents, their plans had been tested on some level within the preceding two years. Again, 75% reported that a scheduled exercise program was in place, however, 50% reported that their previous exercise had occurred five years ago, 25% in the 5-10 year range, and 25% were unsure when the previous exercise had been conducted. The exercises conducted focused almost exclusively on the Full Scale model.

The types of emergencies tested by exercise varied only slightly, with 75% using external scenarios and 25% reporting the use of internal scenarios. The internal scenarios focused heavily on fire incidents, and one external scenario involved a transportation related incident. All respondents reported the participation of community emergency response and/or volunteer agencies in their exercises. None of the hospitals reported testing for power failure related scenarios. One site had tested their ability to receive patients

evacuated from another hospital or nursing home, and two had tested their own ability to evacuate.

All respondents had a plan for the use of another hospital in the case of an evacuation, and a backup plan to use a community facility. Estimates of time required to evacuate the hospitals were somewhat unrealistic. Given the limited numbers of ambulances available, it is questionable many of the respondents could fully evacuate their hospitals (to anywhere other than the front lawn of the hospital) in less than one hour. Despite this, three out of four authorities claimed that this speed of evacuation was possible.

4.3.4 Benchmark Preparedness Scores

The average preparedness score for the four responding sites in Prince Edward Island was 3.2 points out of ten. One respondent received 7 points, while another received 2 points. None of the respondents reported an independent backup plan for recalling staff if the telephone system were not functioning. With the exception of a single respondent, contingency arrangements for any of the required supplies were nonexistent. All four had alternate operating site plans.

4.3.5 Training and Barriers

One of the regions in Prince Edward Island reported the funding of emergency preparedness through a separate budget line. For two sites, the funding source was cited as discretionary funding. The last respondent reported that no funding was available. All of the respondents had a single identifiable person who was responsible for the emergency plan and for exercises, but that person spent less than 25% of the workday on these activities. Other duties included a broad range of hospital functions. All of those responsible for emergency planning in the reporting regions had post secondary education, with one at the college level, and three holding university degrees.

Only one of the respondents reported that the person responsible for emergency planning had completed a provincial Emergency Preparedness and Response course, suggesting a need for better training. Another individual had completed an Exercise Design course, and only one (again, not the same person) had completed any courses at the Canadian Emergency Preparedness College.

The respondents identified substantial barriers to emergency preparedness activities in their institutions. Funding and time were the most commonly reported barriers, at 75% and 25% respectively. All felt that they would benefit from a national training program for hospital-based emergency planners.

4.4 New Brunswick

4.4.1 Hospital Size/Type

Hospitals within the province of New Brunswick are operated as part of a regional health care system. There are eight regions in the province, four of which responded to this survey. All fell in the Large category (as measured by the total number of beds the region is responsible for). Two respondents met the definition of isolation. Three of the responding regions identified themselves as managing Acute Care sites, and the last identified mixed uses. All of New Brunswick's respondents reported that they were administered as multi-site operations.

4.4.2 Past Experience with Emergencies

Community based risk factors, such as an airport, were identified by all four respondents. Natural hazards, the most common being severe winter storms (100%) and forest fires (100%), were also identified by all. In addition, two indicated a risk from high winds. None of the respondents reported that they had experienced a major internal emergency, but all said they have had to cope with a major external emergency at some point in the past 5-10 years.

4.4.3 Emergency Plans and Exercises

All respondents indicated that they had a current emergency plan, and that the plan itself was "fully integrated." All provided copies in the required work areas, and provided employees with their own personal copies of the plan. All respondents reported that they conducted staff training on the emergency plan, but it appeared that the person responsible for the plan did not conduct this training.

All four responding regions reported that their emergency plans had been reviewed within the past year; 50% had been reviewed within the past six months. Despite the lack of actual emergencies, all were also able to report that their plans had been tested on some level within the preceding two years. The testing included Tabletop Exercises (25%), and Full Scale Exercises (75%). All of the respondents indicated that they had a scheduled exercise program, and additional information provided supported this claim in all cases.

The types of emergencies tested by exercise varied only slightly, with 50% using external scenarios and 50% using internal scenarios. The scenarios were generally transportation related (75%); one scenario involved a chemical spill. All respondents reported participation by community emergency services and/or volunteer agencies. None of the health authorities reported the use of fire or power failure related scenarios. Only one had tested their ability to receive patients evacuated from another hospital or nursing home, and again only one had tested their own ability to evacuate. Apart from the exercises described, all hospitals had conducted another exercise within the preceding two years.

Three out of four respondents claimed they could fully evacuate in less than one hour. Given the size of the facilities reporting, and the limited availability of community resources such as ambulances and buses, it seems unlikely that these regions could meet their claimed performance for evacuation. This suggests a need further development in evacuation planning and testing. All respondents had a plan for the use of another community facility (usually a school), and also had a contingency arrangement to use another hospital.

4.4.4 Benchmark Preparedness Scores

The average preparedness score the four respondents in New Brunswick was 8.5 points out of ten. One respondent received 10 points, while the balance received eight points out of ten. The staff recall system was robust, with multiple options for recalling staff in an emergency in all hospitals. An area of weakness was staff sharing, where in 75% of cases a plan was claimed, but had never been formalized. When emergency planning, one cannot assume that anything will be available without advance arrangements. Contingency arrangements for critical supplies were well developed.

4.4.5 Training and Barriers

None of New Brunswick reporting authorities fund their emergency preparedness activities through a separate budget line. In most cases the funding source was cited as discretionary. All of the respondents had a single identifiable person who was responsible for the emergency plan and exercises, but that person spent less than 25% of the workday on these activities. Other duties were primarily focused on administration. All of those responsible for emergency planning in New Brunswick's hospitals have had post-secondary education, one at the college level, and three holding university degrees.

Three of the four respondents reported that the person responsible for emergency planning had completed one or more courses at the Canadian Emergency Preparedness College, although none had completed either a provincial Emergency Preparedness and Response course, or a provincial Exercise Design course.

Funding and staff knowledge were cited by 75% of respondents as substantial barriers to emergency preparedness activities. Attrition is the next most commonly reported barrier, at 50%, followed by community support at 25%. All of the respondents felt that they would benefit from a national training program for hospital-based emergency planners.

4.5 Quebec

4.5.1 Hospital Size/Type

Responding hospitals within the province of Quebec tended to quite diverse, with 48 of 91 responding to the survey. Very Small hospitals made up 12.5% of the responses; another 12.5% of responses came from hospitals in the Small category, 18.7% were Medium sized, 39.6% were Large institutions, and 16.7% of responses came from Very Large institutions. Less than half of the hospitals responding met the definition of isolation (40.4%). Only 36.1% of the responding institutions identified themselves as only Acute Care sites, and the other 63.9% identified mixed uses. Of the respondents, 40.4% reported that they were still administered as single-site operations.

4.5.2 Past Experience with Emergencies

Most responding hospitals were able to identify risks, both from community installations and from natural hazards. Community based risk factors, such as an airport, were identified by 95.8% of the respondents. The most common hazard reported was a major highway. Most hospitals identified natural hazards in their catchment areas (89.4%); the most common being severe winter storms (74.4%) and high winds (57.4%). A further 36.1% reported experience with earthquakes. Of the respondents, 34% reported that they had experienced a major internal emergency at some point in the past, but most of these experiences are more than five years old. Having had to cope with a major external emergency at some point in the past was reported by 40.4%. Only 15% of these emergencies had occurred within the past ten years.

4.5.3 Emergency Plans and Exercises

All respondents from Quebec indicated that they had a current emergency plan. Only 44.7% reported that the plan itself was “fully integrated”, and 55.3% reported “limited integration”. Of the respondents, 85.5% indicated they provided copies of the plan in the required work areas; a very small number provided employees with their own personal copies. Unfortunately 26% reported that they conducted no staff training on the emergency plan, and it appeared that in only 12.8% of cases was the staff training conducted by the person responsible for the plan.

Nearly all respondents (93.7%) reported that their plans had been reviewed within the past two years, with the remainder reporting that 2-5 years had elapsed since their last plan review. Despite the lack of actual emergencies, many (76.6%) were also able to report that their plans had been tested on some level within the preceding two years. The testing included Paper Drills (29.8%), Tabletop Exercises (4.2%), and Full Scale Exercises (74.4%). Only 68% of hospitals indicated that they had a scheduled exercise program.

The types of emergencies tested by exercise varied only slightly, with 21.3% reporting the use external scenarios and 36.2% reporting the use of internal scenarios. Internal scenarios were often fire related (70.2%); 10.6% involved a chemical spill. Only 66% of

the respondents reported participation by community emergency services and/or volunteer agencies. 8.5% of the hospitals reported testing for power failure related scenarios. Only 6.4% had tested their ability to receive patients evacuated from another hospital or nursing home, but 46.8% had tested their own ability to evacuate. Apart from the exercises described, 70.2% of hospitals had conducted another exercise within the preceding five years, and another 29.8% had staged an exercise within the preceding ten years, or were unaware of when the last exercise had been conducted.

Eighty-three percent of the respondents provided estimates of the time necessary to evacuate that seemed credible. In many other cases evacuation estimates were incredibly optimistic (99 patients in under one hour). In reviewing other plan elements, such as alternate operating sites, it became clear that evacuation plans required considerably more development. While some of the respondents had a plan for the use of another community facility (usually a school), or had a contingency arrangement to use another hospital, very few had both.

4.5.4 Benchmark Preparedness Scores

The average preparedness score for responding hospitals in Quebec was 6.1 points out of ten. Two respondents received 10 points, while another three received a single point out of ten. In almost all cases the respondents reported a backup plan for recalling staff that involved the use of pagers if the telephone system were not functioning. Only 12.7% had the required two independent methods. Only 17.2% of respondents reported formal plans for staff sharing in an emergency, and 21.3% reported no contingency arrangements for any of the required critical supplies.

4.5.5 Training and Barriers

Only 17% of the hospitals reporting from Quebec said funding of emergency preparedness was done through a separate budget line. In most cases the funding source was cited as discretionary. All hospitals had a single identifiable person who was responsible for the emergency plan and exercises, but that person typically spent 25% or less of the workday on these activities. Other duties included a broad range of hospital functions, which tended to be focused away from patient care related activities. Only 6.3% of responding Quebec hospitals reported employing full time emergency planners. Most of those responsible for emergency planning in Quebec's hospitals had post secondary education (82%), with 36.1% at the college level, and 53.1% holding university degrees.

In Quebec only 38.3% of respondents reported that the person responsible for emergency planning had completed a provincial Emergency Preparedness and Response course, only 14.9% had completed an Exercise Design course, and 27.6% had completed one or more courses at the Canadian Emergency Preparedness College. A large number of the hospital based emergency planners (31.9%) reported that they had completed no training at all for these duties, suggesting an area of weakness.

Funding was the most commonly cited barrier to emergency preparedness activities in Quebec hospitals (61.7%). Staff knowledge and staff attrition are also identified as considerable barriers, with 42.5% of respondents citing each of these, while 8.5% identified competing demands for time as a barrier. Of the respondents, 89.4% felt that they would benefit from a national training program for hospital-based emergency planners.

4.6 Ontario

4.6.1 Hospital Size/Type

Ontario's hospitals covered a broad range of both sizes and administrative systems, and 110 out of 133 sites responded to the survey. Very Small hospitals made up 31.8% of the responses. Another 20.0% of responses came from hospitals in the Small category, 15.5% were Medium sized, 20.0% were Large institutions, and 12.7% of responses came from Very Large institutions. 29.1% met the definition of isolation. Only 37.2% of the responding institutions identified themselves as purely Acute Care sites, and the other 62.8% identified mixed uses. About half of Ontario's responding hospitals reported that they were still administered as single-site operations (48.2%).

4.6.2 Past Experience with Emergencies

Community based risk factors, such as an airport, were identified by 93.7% of the respondents. The most common reported was a major highway. Of respondents, 92.8% identified natural hazards in their catchment areas, the most common being severe winter storms (80%) and summer storms (62.7%). A further 29% reported experience with tornadoes. Past experience with a major internal emergency was reported by 18.2% but most of these experiences were more than five years old. Experience coping with a major external emergency at some point in the past was reported by 41.8% of respondents.

4.6.3 Emergency Plans and Exercises

All Ontario respondents indicated that they had a current emergency plan. Only 60% reported that the plan itself was "fully integrated"; the remainder reported "limited integration". All but two respondents provided plan copies in the required work areas, and a very small number provided employees with their own personal copies. No staff training on the emergency plan was reported by 16.4%. Of the remainder who did train their staff on the plan, it appeared that in only 9.1% of cases was the staff training conducted by the person responsible for the plan.

Nearly all respondents (96.4%) reported that their plans had been reviewed within the past two years, the remainder reporting that 2-5 years had elapsed since their last plan review. Despite the lack of actual emergencies, many were also able to report that their plans had been tested on some level within the preceding two years (80%). The testing included Paper Drills (21.8%), Tabletop Exercises (19.1%), and Full Scale Exercises (62.7%). Only 63.4% of hospitals indicated that they had a scheduled exercise program.

The types of emergencies tested by exercise varied only slightly, with 58.2% favoring the use of external scenarios and 21.8% reporting the use of internal scenarios. The internal scenarios were often fire related (25.4%), and 10% involved a chemical spill. The majority (80.9%) reported participation by community emergency services and/or volunteer agencies. Ten percent had tested for power failure related scenarios. Only 9.1% had tested their ability to receive patients evacuated from another hospital or nursing home while 33.6% had tested their own ability to evacuate. Apart from the exercises described, 69.1% of hospitals had conducted another exercise within the

preceding five years. The remainder had not staged another exercise within the preceding five years, or they were unaware of when the last exercise had been conducted.

Of respondents, 78.2% provided estimates of the time necessary to evacuate which seemed credible. In other cases evacuation estimates were very optimistic (99 patients in less than one hour). Some respondents had a plan to use another community facility (usually a school), or had made contingency arrangements to use another hospital, while slightly more than half (58.2%) had both.

4.6.4 Benchmark Preparedness Scores

The average preparedness score for hospitals in Ontario was 6.6 points out of ten. Despite the large number of sites and respondents in Ontario, only two respondents received 10 points, while another 24.5% of respondents received a score of five or less out of ten. In almost all cases, the respondents reported a backup plan for recalling staff that involved the use of pagers, if the telephone system were not functioning. Only 69.9% had the required two independent methods. Only 24.5% of respondents reported formal plans for staff sharing in an emergency, and 10% reported no contingency arrangements for any of the required critical supplies.

4.6.5 Training and Barriers

Only 5.4% of the responding hospitals in Ontario reported the funding of emergency preparedness through a separate budget line. In most cases the funding source was cited as discretionary funding, while 34% of reported that there was no funding available for preparedness activities. Most hospitals (90%) had a single identifiable person who was responsible for the emergency plan and for exercises, but that person typically spent 25% or less of the workday on these activities. Other duties included a broad range of hospital functions. Only one Ontario hospital reported employing full time emergency planners. Of those responsible for emergency planning in Ontario's hospitals, 86.4% have had post secondary education, and 43.6% have university degrees.

Training in emergency preparedness could be significantly improved in Ontario hospitals. A large number of the hospital based emergency planners (67.3%) reported that they had completed no training for these duties. 24.5% of respondents reported that the person responsible for emergency planning had completed a provincial Emergency Preparedness and Response course, only 12% had completed an Exercise Design course, and 13.6% had completed one or more courses at the Canadian Emergency Preparedness College.

Barriers to emergency preparedness activities were identified as follows: funding (61%), staff knowledge (38.2%), staff attrition (24.5) and competing demands for time (30%). Nearly all of the respondents felt that they would benefit from a national training program for hospital-based emergency planners (94.6%).

4.7 Manitoba

4.7.1 Hospital Size/Type

Hospitals within the province of Manitoba tend to be diverse, and all 19 contacted returned completed surveys. Very Small hospitals made up 31.6% of the responses; 15.8% were in the Small and Medium categories. Large hospitals each made up 26.3% and 10.5% came from Very Large institutions. More than half (57.9%) of the hospitals responding met the definition of isolation. Only 31.6% of the identified themselves as Acute Care sites, with the remainder identifying mixed uses. Of the Manitoba respondents, 63.2% reported that they were still administered as single-site operations.

4.7.2 Past Experience with Emergencies

Community based risk factors, such as an airport, were identified by 100% of the respondents. The most common hazard reported was a major highway. All hospitals identified natural hazards in their catchment areas, the most common being severe winter storms (100%) and high winds (84.2%). Of the respondents, 26.3% reported that they had experienced a major internal emergency in the past. All of these experiences are less than five years old. Only 10.5% of the respondents reported having to cope with a major external emergency in the past; only one of these had occurred within the past ten years.

4.7.3 Emergency Plans and Exercises

All respondents indicated that they had a current emergency plan; 42.1% reported that the plan was “fully integrated”, 52.6% reported “limited integration”, and 5.3% were unsure how well their plans were integrated. All provided copies of the plan in the required work areas, and 20% provided employees with their own personal copies. 31.6% reported that they conducted no staff training on the emergency plan. It appeared that in only 57% of cases was the staff training conducted by the person responsible for the plan.

Nearly all respondents reported that their plans had been reviewed within the past two years, but 15.8% then reported that 2-5 years had elapsed since their last plan review. Despite the lack of actual emergencies, many (63.7%) could report that their plans had been tested on some level within the preceding two years. The testing included Paper Drills (10.5%), Tabletop Exercises (36.8%), and Full Scale Exercises (42.1%). An additional 10.6% provided no details on their exercises. Only 31.6% of hospitals indicated that they had a scheduled exercise program.

The types of emergencies tested by exercise varied only slightly, with 36.8% using external, and 31.6% using internal scenarios. The internal scenarios were often fire related. External scenarios mainly involved transportation incidents (80%); 10% involved a chemical spill. Only 73.7% of the respondents reported participation by community emergency services and/or volunteer agencies. Twenty-five percent reported testing for power failure related scenarios. Only 5.2% had tested their ability to receive patients evacuated from another hospital or nursing home, while 42.1% had tested their own ability to evacuate. Apart from the exercises described, 63.1% of hospitals had

conducted another exercise within the preceding five years; another 26.2% had done so within the preceding ten years, or were unaware of when the last exercise had been conducted.

Only 31.6% of the respondents provided estimates of the time necessary to evacuate that seemed credible. While all respondents had a plan for the use of another community facility (usually a school) only 40% had a contingency arrangement to use another hospital. Together these suggest more development is needed in evacuation planning.

4.7.4 Benchmark Preparedness Scores

The average preparedness score for hospitals in Manitoba was 6.2 points out of ten. Two respondents received 9 points; another two received two points out of ten. In almost all cases, the respondents reported a backup plan for recalling staff that involved the use of pagers if the telephone system was not functioning. Only 20% had the required two independent methods. Forty percent had no contingency arrangements for potable water; 20% had no contingency arrangements for any of the required supplies.

4.7.5 Training and Barriers

Only 15.8% of the hospitals in Manitoba reported the funding of emergency preparedness through a separate budget line. In most cases the funding source was cited as discretionary funding. Of responding hospitals, 84.2% had a single identifiable person who was responsible for the emergency plan and exercises, but that person spent 25% or less of the workday on these activities. Other duties were heavily focused on administration (77.4%). Of those responsible for emergency planning in Manitoba's hospitals, 36.8% had college-level post-secondary education, and 31.6% hold university degrees.

Of the Manitoba respondents 42.1% reported that the person responsible for emergency planning had completed a provincial Emergency Preparedness and Response course; 10.5% had completed an Exercise Design course, and 36.8% had completed one or more courses at the Canadian Emergency Preparedness College. The majority of the hospital based emergency planners (52.6%) reported that they had completed no training for these duties.

Major barriers to emergency preparedness activities in Manitoba hospitals were identified by respondents as: funding (73.7%), competing demands for time (52.6%), staff knowledge (36.8%) and staff attrition (21%). The majority (94.7%) of respondents felt that they would benefit from a national training program for hospital-based emergency planners.

4.8 Saskatchewan

4.8.1 Hospital Size/Type

Hospitals within the province of Saskatchewan tend to be smaller, and more isolated; all 39 sites contacted returned completed surveys. The majority (64.1%) of hospitals responding were in the Very Small category, followed by 17.9% from the Small category, 12.8% were Medium sized, and one hospital each fell into the Large and Very Large categories. Most hospitals responding met the definition of isolation (75.6%), and were Acute Care sites (73%). The other 27% identified mixed uses. Most of Saskatchewan's responding hospitals reported they were administered as multi-site operations (70.3%).

4.8.2 Past Experience with Emergencies

Community based risk factors, such as an airport, were identified by 89.2% of the respondents. All hospitals identified natural hazards in their catchment area, the most common being severe winter storms (86.4%) and high winds (72.9%). 21.6% indicated a risk from tornadoes. Of the respondents, 16.2% reported that they had experienced a major internal emergency in the last five years, while 35.1% reported having had to cope with a major external emergency within the same time frame.

4.8.3 Emergency Plans and Exercises

The majority of the respondents from Saskatchewan indicated that they had a current emergency plan (97.3%); 35.1% described the plan as "fully integrated", while 64.9% reported "limited integration", and 2.7% reported that plans were "not coordinated" with the community. Most of the respondents (94.6%) indicated the emergency plan had been reviewed within the past two years. Copies of the plan were provided in the required work areas by most facilities (89.2%), but 10.8% reported that copies were not distributed. No staff training on their emergency plan was reported by 35.1%. For those who did train, it appeared that in very few cases the person responsible for the plan actually conducted the staff training.

Of Saskatchewan respondents, 37.8% reported they did not have scheduled exercise programs, and that 29.7% had not conducted any exercises in the past 5-10 years. Of those who had conducted exercises, the Full Scale type was favored (45.9%), with Tabletop (37.8%) and Paper exercises (32.4%) also being conducted. External scenarios were heavily favored (48.6%) over internal scenarios (13.5%) for those reporting exercise details. Most scenarios were focused on fire (35.1%), and to a lesser extent transportation, power failures and chemical spills. Only 8.1% of respondents reported testing power failure procedures. Only 32.4% reported that they had tested the evacuation of their own hospital, and only 5.4% had tested their ability to receive patients evacuated from elsewhere. Only about half of the hospitals reporting invited outside emergency response agencies or volunteer groups to participate in their exercises.

A number of the respondents were either unable to provide estimates of the time necessary to evacuate, or gave evacuation estimates that were unrealistic (99 patients in under one hour). In reviewing other plan elements, such as coordination with local

agencies, it became clear that evacuation plans required more development. While all respondents had a plan for the use of another community facility (usually a school) only about 40% reported an additional contingency arrangement to use another hospital.

4.8.4 Benchmark Preparedness Scores

The average preparedness score for hospitals in Saskatchewan was 6.4 points out of ten. Four respondents received 10 points, while six received a single point out of ten. In over 80% of cases the respondents reported a backup plan for recalling staff that involved the use of pagers, if the telephone system were not functioning. Thus, less than 20% had the required two independent methods. While many hospitals had fully developed contingency plans for various types of critical operating supplies, 20% reported no contingency arrangements for the provision of any of them.

4.8.5 Training and Barriers

Only 13.5% of the hospitals reporting from Saskatchewan reported the funding of emergency preparedness through a separate budget line. Over 50% reported that there was no funding available for emergency preparedness activities; in other cases the funding source was cited as discretionary funding. Most hospitals (83.8%) had one person who was responsible for the emergency plan and for exercises, but they spent 25% or less of the workday on these activities; 16.2% had no primary person responsible for the emergency plan and exercises. Of those of those responsible for emergency planning in Saskatchewan's hospitals 72.9% have post secondary education, 40.5% at the college level, and 32.4% holding university degrees.

Only 45.9% of respondents reported that the person responsible for emergency planning had completed a provincial Emergency Preparedness and Response course, 13.5% had completed an Exercise Design course, and 13.5% had completed one or more courses at the Canadian Emergency Preparedness College.

The biggest barriers to emergency preparedness activities in Saskatchewan hospitals were identified as: funding (59.4%), staff knowledge (56.7%), community support (40.5%). Time to run a program was cited by 32.4% of respondents, and attrition rounded out the barrier list at 29.7%. Nearly all of the respondents felt that they would benefit from a national training program for hospital-based emergency planners (94.6%).

4.9 Alberta

4.9.1 Hospital Size/Type

Hospitals within the province of Alberta are governed by Regional Health Authorities, and it was to these regions that survey was sent. All 17 sites who received surveys returned them completed. Of the respondents, 11.8% were from the Very Small range (as measured by the total number of beds the region is responsible for), 29.4% were in the Small category, 35.3% were Medium, 17.6% were Large, and 5.9% were Very Large. Nearly half of the regions responding met the definition of isolation (47.0%), 58.8% identified their hospitals as Acute Care sites, while the remainder identified mixed uses. Most of Alberta's respondents reported that their hospitals were administered as multi-site operations (88.2%).

4.9.2 Past Experience with Emergencies

Community based risk factors, such as an airport, were identified by all respondents. So too were natural hazards, the most common being both summer and winter severe storms (94.1% each), and tornadoes (52.9%). Some also indicated a risk from forest fire (29.4%). Of respondents, 64.7% reported that they had experienced a major internal emergency, and 58.8% reported having had to cope with a major external emergency sometime within the past five years.

4.9.3 Emergency Plans and Exercises

All Alberta respondents indicated that they had a current emergency plan, with 88.2% reporting that the plan was "fully integrated". All provided copies in the required work areas, but few provided employees with their own personal copies of the plan. No staff training on their emergency plan was reported by 11.8% of respondents. Where training did occur, it was conducted by the person responsible for the plan in only 23.5% of cases.

Nearly all (94.1%) of respondents reported that their plans had been reviewed within the past two years; 47.0% of reviews were conducted within the past six months. With the relatively high number of actual emergencies, all but 5.9% were also able to report that their plans had been tested on some level within the preceding two years. The testing included Paper Drills (5.8%), Tabletop Exercises (88.2%), and Full Scale Exercises (23.5%). Only 58.8% of hospitals indicated that they had a scheduled exercise program.

The types of emergencies tested by exercise varied somewhat. Half of the respondents did not provide details of their exercise activities. The balance was evenly split between those using external scenarios and those using internal scenarios. The internal scenarios were more focused on power failures (35.3%). Many of the external scenarios involved transportation incidents, although surprisingly few (5.8%) involved a chemical spill. Most of the respondents reported participation by community emergency services and/or volunteer agencies (82.3%). One third of the hospitals reported testing for power failure related scenarios. Only 11.8% had tested their ability to receive patients evacuated from another hospital or nursing home, and the same number had tested their own ability to

evacuate. Apart from the exercises described, 5.9% of hospitals had not conducted another exercise within the preceding five years.

Of respondents, 82.3% were either unable to provide estimates of the time necessary to evacuate, or gave evacuation estimates that were unrealistic (99 patients in under one hour). In reviewing other plan elements it became clear that there was in most cases a strong basic evacuation plan that required more practice and testing. Almost all of the respondents reported a plan for the use of another community facility (usually a school) and nearly all also had a contingency arrangement to use another hospital.

4.9.4 Benchmark Preparedness Scores

The average preparedness score for hospitals in Alberta was 8.4 points out of ten. Four respondents received the full 10 points, and 83.3% scored 8 or better. One respondent received two points out of ten. The area of greatest weakness was with staff recall; 17.6% of the respondents reported a backup plan for recalling staff that involved the use of pagers if the telephone system were not functioning. The balance had the required two independent methods. Contingency arrangements for any of the required supplies were, for the most part, well developed.

4.9.5 Training and Barriers

Many (41.1%) of the health care regions in Alberta reported the funding of emergency preparedness through a separate budget line. In most other cases the funding source was cited as discretionary funding. Only 23.5% reported that there was no funding available. Most regions had a single identifiable person who was responsible for the emergency plan and for exercises (88.2%). In 64.7% of the respondents said that person spent less than 25% of the workday on these activities. Other duties included a broad range of hospital functions including patient care, administration, patient/staff teaching, engineering, and security. On an unusual note, 23.5% of the health regions in Alberta employed full time emergency planners. Most of those responsible for emergency planning in Alberta's hospitals had post secondary education (88.2%), 29.4% at the college level, and 58.8% holding university degrees.

Alberta health authorities reported higher levels of emergency management training than most provinces; 58.8% reported that the person responsible for emergency planning had completed a provincial Emergency Preparedness and Response course, 23.5% had completed an Exercise Design course, and 52.9% had completed one or more courses at the Canadian Emergency Preparedness College. 5.8 percent had also completed FEMA distance learning courses, and 27.8% reported completed training from other sources.

Substantial barriers to emergency preparedness activities in their regions were identified by respondents as follows: staff knowledge (64.7%), staff attrition (41.1%), time availability (35.3%), funding (23.5%) and community support (11.7%). The majority (94.1%) of respondents felt that they would benefit from a national training program for hospital-based emergency planners.

4.10 British Columbia

4.10.1 Hospital Size/Type

Hospitals within the province of British Columbia are administered as a series of regional health authorities, similar to Alberta. These authorities returned 12 of the 13 surveys sent (1 site was closed in the interim). Responses showed that 16.66% of the authorities fell into the Very Small category, 16.66% were Small, 25.00% were Large, and 41.66% of regions responding were classed as Very Large (as measured by the total number of beds the region is responsible for). One third (33.33%) of the regional health authorities responding had hospitals which met the definition of isolation. Of responding regions, 16.66% identified themselves as providing exclusively Acute Care; the other 83.34% identified mixed uses. The majority of British Columbia's health care regions reported that they were administered as multi-site operations (91.66%).

4.10.2 Past Experience with Emergencies

Community based risk factors, such as an airport, were identified by all respondents. All regions also identified natural hazards in their catchment areas, the most common being high winds (66.66%), forest fires (58.33%) and severe winter storms (50.00%). Of the respondents, only 8.33% reported that they had experienced a major internal emergency, and 16.66% of the respondents reported having had to cope with a major external emergency, at some point in the past.

4.10.3 Emergency Plans and Scenarios

Most of the respondents from British Columbia indicated that they had a current emergency plan (91.7%); 25% were reported as "fully integrated," while 75% described coordination as "limited." All respondents provided copies in the required work areas, but none provided employees with their own personal copies of the plan. All regions reported that they conducted staff training on the emergency plan, and it appeared that in 25% of cases the person responsible for the plan conducted the staff training.

All respondents reported that their plans had been reviewed within the past two years; most (83.33%) were within the past year. Despite the lack of actual emergencies, all were also able to report that their plans had been tested on some level within the preceding two years. The testing included Paper Drills (8.33%), and Tabletop Exercises (83.33%). No Full Scale Exercises were reported. Most hospitals indicated that they had a scheduled exercise program (83.33%).

Some regions in British Columbia declined to report the details of their exercise programs. Those that did report showed a preference for external scenarios (58.33% of all respondents), with the balance (16.66% of all respondents) using internal scenarios. Most of the respondents reported participation by community emergency services and/or volunteer agencies (91.66%). Of the scenarios tested, 16.66% reported testing for power failure related scenarios, and 25% had tested their ability to receive patients evacuated from another hospital or nursing home. Only 8.33% had tested their own ability to evacuate. Apart from the exercises described, most of the regions had conducted another

exercise within the preceding five years, but 25% had not, and 16.66% were unaware of when the last exercise had been conducted.

Of the respondents, 33.33% did not report having contingency plans in place for more than one alternative operating site. All respondents had a plan for the use of another community facility (usually a school), and 75.00% reported a contingency arrangement to use another hospital.

4.10.4 Benchmark Preparedness Scores

The average preparedness score for hospitals in British Columbia was 8.3 points out of ten. Five respondents received 10 points while one received only two points out of ten. The greatest area of weakness appeared to be the lack of evacuation alternatives. In most cases the contingency arrangements for any of the required supplies appeared well developed, but one region reported having no contingency arrangements in place.

4.10.5 Training and Barriers

Only 8.33% of the hospitals in British Columbia reported the funding of emergency preparedness through a separate budget line. In most cases the funding source was cited as discretionary funding. Another 16.66% reported no funding available. Most of regions had a single identifiable person who was responsible for the emergency plan and for exercises (91.66%), but that person spent 25% or less of the workday on these activities. Other duties included a broad range of hospital functions, including patient care, administration, patient/staff teaching, engineering, and security. Two regions reported employing full time emergency planners. Of those responsible for emergency planning in British Columbia's hospital regions, most had post secondary education (83.33%), 33.33% at the college level, and 50% holding university degrees.

British Columbia still has some work to do with respect to specific emergency management training. Of respondents, 41.66% reported that the person responsible for emergency planning had completed a provincial Emergency Preparedness and Response course, 25% had completed an Exercise Design course, and 41.66% had completed one or more courses at the Canadian Emergency Preparedness College. Unfortunately, all of this role-specific training was concentrated in only 50% of those responsible for emergency planning in the province's hospitals.

The respondents identified substantial barriers to emergency preparedness activities in their institutions. Time to perform preparedness activities was reported as the greatest (75%) single barrier. Funding was the next most commonly reported barrier (41.66%), followed by staff knowledge (33.33%) and staff attrition (25.00%). The majority of the respondents felt that they would benefit from a national training program for hospital-based emergency planners (91.7%).

4.11 Northwest Territories

4.11.1 Hospital Size/Type

Hospitals within the Northwest Territories tend to be smaller and far more isolated than is typical in Canada. Of four hospitals sent surveys, three responded and 1 site closed in the interim. Two responses came from hospitals in the Very Small category, and the final response met the criteria for Small hospitals. All respondents met the definition of isolation, and identified themselves as providing both acute and long-term care. Two out of three hospitals reported that they were administered as multi-site operations.

4.11.2 Past Experience with Emergencies

Community based risk factors, such as an airport or tank farm, were identified by all of the respondents. All hospitals also identified natural hazards in their catchment areas, the most common being severe winter storms (66.6%) and forest fires (66.6%). None reported experiencing a major emergency, either internal or external, at any point in the past.

4.11.3 Emergency Plans and Exercises

All of the respondents indicated that they had a current emergency plan. Only one site reported that the plan itself was “fully integrated”. Again, only one site provided copies in the required work areas, and none provided employees with their own personal copies of the plan. One of the three reported that staff received no training on the plan. For the two that did conduct staff training, it appeared that the training was not conducted by the person responsible for the plan.

All respondents reported that their plans had been reviewed within the past two years. Despite the lack of actual emergencies, all were also able to report that their plans had been tested on some level within the preceding two years. The testing included Paper Drills (1), and Full Scale Exercises (2). Only one hospital indicated that they had a scheduled exercise program.

The types of emergencies tested by exercise varied only slightly. All three used external scenarios, heavily favoring transportation incidents. Two reported participation by community emergency services and/or volunteer agencies. None of the hospitals reported testing for power failure related scenarios, their ability to receive patients evacuated from another hospital or nursing home, or their own ability to evacuate. Apart from the exercises described, two of the hospitals had conducted another exercise within the preceding five years. The third respondent was unaware of when the last exercise had been conducted.

All three hospitals had alternate operating sites, suggesting the need effective evacuation plans was recognized. While all respondents had a plan for the use of another community facility (usually a school), evacuation to another hospital was largely impractical due to distances between sites. It is understood that these are isolated facilities, but raises a

question of what would occur if the entire community required evacuation; this would probably be the greatest emergency challenge that these hospitals could face.

4.11.4 Benchmark Preparedness Scores

The isolated nature of hospitals in the Northwest Territories posed some special problems in terms of assessment methodology. The physical isolation of communities made some of the criteria used to measure other Canadian hospitals impractical. Given that the intent of this assessment was to motivate improvement, it was decided not to penalize these particular isolated hospitals for the absence of certain items (such as staff sharing) that were clearly impossible over the short term. In light of this, the average preparedness score for hospitals in the Northwest Territories was 7.4 points out of ten. One respondent received 9 points, while the lowest scoring hospital received 5 points. Backup plans for recalling staff were nonexistent if the telephone system was not functioning. All had contingency arrangements that were missing one or more critical items, and one reported contingency arrangements only for medications.

4.11.5 Training and Barriers

None of the hospitals from the Northwest Territories reported the funding of emergency preparedness through a separate budget line, and two out of three reported that there was no funding available for preparedness activities. Two also had a single identifiable person who was responsible for the emergency plan and for exercises, but that person spent less than 25% of the workday on these activities. Other duties included patient care and administration. Both of those responsible for emergency planning in Northwest Territory hospitals had university degrees.

The hospitals of the Northwest Territory are significantly deficient with respect to specific emergency management training. None of the respondents reported that their emergency planner had received any training, either in Emergency Preparedness and Response, Exercise Design, or any other Canadian Emergency Preparedness College courses. Substantial barriers to emergency preparedness activities in their institutions were identified equally by respondents as funding, staff knowledge and staff attrition. All three respondents felt that they would benefit from a national training program for hospital-based emergency planners.

4.12 Yukon Territory

4.12.1 Hospital Size/Type

A Very Small, single site hospital serves the Yukon Territory. This hospital provides acute care only, and meets the definition of isolation, in that it is far in excess of 50 kilometers from the next closest hospital.

4.12.2 Past Experience with Emergencies

The Yukon hospital was able to identify risks, both from community installations and from natural hazards. Community based risk factors, such as an airport or tank farm, were identified. The respondent also identified the following natural hazards in their catchment areas: severe winter storms, high winds, and earthquakes. They also reported that the hospital had not experienced a major emergency, either internal or external, at any point in the past.

4.12.3 Emergency Plans and Exercises

The respondent from the Yukon indicated that the hospital had a current emergency plan, and that the plan was “fully integrated.” Copies of the plan were provided in the required work areas, but the hospital did not provide employees with their own personal copies. It was also reported that staff received training on the plan and that the person responsible for the plan conducted this training. The plan had been reviewed within the past two years. Despite the lack of actual emergencies, the respondent was also able to report that their plans had been tested on some level within the past year. The testing included a Full Scale external exercise, with a transportation focus. The respondent indicated that they had a scheduled exercise program.

The respondent reported participation by community emergency services and/or volunteer agencies. It was not reported that the hospital had tested using power failure related scenarios. No evacuation testing had occurred. Apart from the exercise described, the respondent reported that the hospital had conducted another exercise about one year earlier.

The hospital had a plan for the use of another community facility, since evacuation to another hospital was largely impractical. If the entire community required evacuation, the challenge would be great.

4.12.4 Benchmark Preparedness Scores

The isolation of this hospital posed some special problems in terms of assessment methodology. The physical isolation of northern communities made some of the criteria used to measure other Canadian hospitals impractical. Given that the intent of this assessment was to motivate improvement, it was decided not to penalize these isolated hospitals for the absence of items (such as staff sharing) that were clearly impossible over

the short term. Thus, the preparedness score for the Yukon hospital was 9 points out of ten. Backup plans for recalling staff were reportedly nonexistent, if the telephone system were not functioning. The hospital reported contingency arrangements for critical supplies that were well developed.

4.12.5 Training and Barriers

Funding of emergency preparedness was reportedly drawn from discretionary spending, with no official funds available for preparedness activities. The hospital had a single identifiable person who was responsible for the emergency plan and for exercises, but that person spent less than 25% of the workday on these activities. Other duties included patient care, staff teaching and administration. The person responsible for emergency planning in the Yukon's hospital had a college diploma.

The hospital fared relatively well, with respect to specific emergency management training of their emergency planner. They had completed both an Emergency Preparedness and Response course and Canadian Emergency Preparedness College courses. No substantial barriers to emergency preparedness activities in the institution were identified by the respondent, but they did feel that their hospital would benefit from a national training program for hospital-based emergency planners.

4.13 Nunavut

4.13.1 Hospital Size/Type

Canada's newest territory is served by a Medium sized, single site hospital. This hospital provides both acute and long-term care, and met the definition of isolation. It is far in excess of 50 kilometers from the next closest hospital, and would not have been accessible by road in any case.

4.13.2 Past Experience with Emergencies

Nunavut's hospital was able to identify risks, both from community installations and from natural hazards. Community based risk factors, such as a major highway, were identified, as were severe winter storms, high winds, and forest fires. The respondent reported that the hospital had not experienced a major emergency, either internal or external, at any point in the past.

4.13.3 Emergency Plans and Exercises

The respondent from Nunavut indicated that the hospital had a current emergency plan which was "fully integrated." Copies of the plan were provided in the required work areas, but the hospital did not provide employees with their own personal copies of the plan. Staff received training on the plan but the person responsible for the plan did not conduct this training. The plan had been reviewed within the past two years. Despite the lack of actual emergencies, the respondent was also able to report that their plans had been tested on some level within the past year. The testing included a Tabletop external exercise, with a transportation focus. The respondent indicated that they had a scheduled exercise program. The respondent reported participation by community emergency services and/or volunteer agencies. It was not reported that the hospital had tested power failure related scenarios. Evacuation of the hospital had been tested, but not the ability to receive patients from another site. Apart from the exercise described, the respondent reported that the hospital had conducted another exercise about one year earlier.

While the hospital had a plan for the use of another community facility, evacuation to another hospital was largely impractical. Evacuation would likely be the biggest challenge a remote hospital like this could face.

4.13.4 Benchmark Preparedness Scores

The isolation of this hospital posed some special problems in terms of assessment methodology. The physical isolation of northern communities made some of the criteria used to measure other Canadian hospitals impractical. Given that the intent of this assessment was to motivate improvement, it was decided not to penalize these isolated hospitals for the absence of items (such as staff sharing) that were clearly impossible over the short term. Therefore, the preparedness score for the hospital in Nunavut was 10 points out of ten, not because of excellent planning per se, but because it would be almost

impossible to correct the deficiencies. Backup plans for recalling staff were reportedly nonexistent if the telephone system were not functioning. The hospital did, however, report contingency arrangements for critical supplies that were well developed.

4.13.5 Training and Barriers

Funding of emergency preparedness was reportedly drawn from discretionary spending, with no official funds available for preparedness activities. The hospital had a single identifiable person who was responsible for the emergency plan and for exercises, who spent less than 25% of the workday on these activities. Other duties included patient and staff teaching. The person responsible for emergency planning in the Nunavut's hospital had a university degree, and had completed some specific emergency management training through Canadian Emergency Preparedness College courses. The respondent identified staff attrition as the most substantial barrier to emergency preparedness activities in the institution, and felt that their hospital would benefit from a national training program for hospital-based emergency planners.

5. Discussion

5.1 Weaknesses

A number of weaknesses were noted in Canada's general hospitals. Some of the shortcomings identified seemed to be associated with local conditions or policies, while others appear to be symptoms of a greater problem, specifically a general lack of understanding of the principals of emergency management. There were several benchmarks preparedness criteria that the majority of hospitals failed to meet. These included a fundamental flaw in most emergency communications strategies. Over and over again, hospitals and health care districts reported that their backup plan for recalling staff in an emergency was the use of the pager system. Respondents did not seem aware that telephone and pagers share the same infrastructure, thus if one was not working, it is unrealistic to think the other would. Using pagers and telephones as your two options for staff recall overlooks a fundamental principle of emergency management: the backup systems must not be directly dependent upon the function of primary systems.

The majority of hospitals also reported that they had no plans for sharing staff during a crisis, or that plans to share staff existed, but had never been formalized. This again shows a lack of knowledge regarding the fundamentals of emergency management: respondents simply assuming that an item would be present when they required it, without taking the time to secure an agreement for its use in advance.

A great many hospitals also made assumptions about their ability to evacuate their patients in an emergency, without ever having tested the process. In some cases, hospitals with 200-500 beds reported that they could fully evacuate the facility in less than one hour. In other cases, much smaller hospitals with only one or two ambulances reported that they could do the same. While it might be possible, in some circumstances, to move everyone to the front lawn during a fire drill, the relative wisdom of such a step in the middle of a Canadian winter, or during a chemical spill is somewhat suspect. Nor were most of the respondents ready to receive patients from another evacuated site, such as another hospital or a nursing home. Nationally only 33.4% of responding sites reported having tested their own evacuation procedures, and only 8.6% reported testing their ability to receive patients who had been evacuated from other sites. While sites receiving full marks for contingency arrangements for food, water, linen, medical equipment and medications typically ranged between 50-60% in each size group, a further 10-20% reported having no contingency plans whatsoever in place. Again the assumption appears to be that alternative sources would be available and at hand when they needed, without prior arrangement.

For the most part those preparing emergency plans did not appear to make the connection between risk identification, in terms of the historical incidence of community hazards, and the need to develop appropriate exercises that reflected these risks. When comparing the hazards reported by a respondent and the types of exercises staged, there appeared to be no correlation. Sites located outside of major centers, where significant risk from a winter storm or a chemical plant existed, reported testing bomb threat procedures as their only exercise within a five-year period. This mismatch between actual and perceived risk

can contribute greatly to the relevance and credibility gaps normally reported by staff following hospital exercises.

Hospitals are part of the greater community, and in some communities there is likely the expectation that the hospital will fulfill a leadership role in a time of crisis. Despite this, nearly half of the respondents reported only limited coordination of their emergency plans with those of the community, and some reported no coordination at all. Nationally, 25.6% of those sites that conducted exercises did not have participation from either local emergency services or volunteer disaster assistance groups like the Red Cross or the Salvation Army. Of those who did report outside participation, many qualified this by indicating that this was an irregular occurrence, or indicating only the participation of a single group. Contrary to what these numbers suggest, hospitals cannot work in isolation response to community emergencies, and greater emphasis must be made on coordination.

Historically, Canada's hospitals have not placed sufficient emphasis on planning for their responses to emergencies. The assignment of someone to write an emergency plan has generally been an afterthought, often made as accreditation was approaching. Of this country's reporting acute care facilities, 22.3% said they conducted no emergency plan training for their staff. Of those who did offer training, the person responsible for writing the plan – presumably the one most familiar with it, was rarely (14.6% of the time) the person who trained the staff in emergency procedures. Furthermore, only 37% of those responsible for emergency planning in Canada's hospitals have completed an Emergency Preparedness and Response course, only 14.6% have completed an Exercise Design course, and only 25.6% have completed any courses at the Canadian Emergency Preparedness College. This lack of training was a concern for many of the respondents, who also reported a need for training that was site-specific for hospitals, as they had difficulty in transferring concepts from the community based training available across the country to the health care environment. This type of required site-specific training has not been available since 1996.

5.2 Strengths

There were a number of strengths in the hospital respondents which were noted through the course of this survey. The first strength was the fact that those in the system acknowledge both the problems and the need to address them. The fact that a mail out survey in the busy health care community achieved a response rate of over 77% suggests the relative importance with which the respondents view this matter. Requests for assistance to correct problems through education occurred repeatedly on the returned surveys. Nationally, 93.6% of respondents indicated their support for a national training program for healthcare-based emergency planners. Of the remainder, half were uncertain, and requested more information. Only about 3% of those conducting emergency planning in Canada's hospitals indicated no interest in such a program.

Another strength that was noted deals with the reactionary nature of health care. While emergency planning as measured by this survey was not what it could be, one must also

remember that the health care system is continually responding to emergencies, albeit usually on a smaller scale. It is reasonable to assume that if a local emergency occurred, the local hospital and health care system would respond. While all plans may not be in place, there is no doubt that the health care system would be able to respond to local crises, the only question is whether the response was as effective as it might be, and how quickly it might become overwhelmed.

Perhaps the greatest strength in the system lies with the individual planners themselves. The nature of healthcare is such that most people who work in the field have an above average education. Those responsible for emergency planning in Canada's hospitals are nearly evenly divided between community college (or the provincial equivalent) graduates, and those with university degrees. Only 7.1% of respondents reported no post secondary education of any type. Emergency planners are not only a well-educated group, they are enthusiastic; throughout the course of this research the author received telephone calls and e-mails from across the country from people who wanted to be sure that their information would be included. With this level of enthusiasm and education in the target group, implementing a program to address weaknesses should be considerably easier to achieve.

5.3 Barriers to Preparedness

Across the country respondents provided clear commentary on the issue of barriers to better emergency preparedness. Funding for preparedness activities such as planning, training, and exercises was the foremost issue, reported by 57.1% of respondents. The next most commonly reported barrier to preparedness was staff knowledge, with 42.1% of respondents reporting that this was a problem. Staff attrition, which also creates a knowledge gap, was reported by 30.4% of all respondents. Finding the time to conduct training and exercises was reported as a problem by 28.9% of respondents and community support was identified as a barrier by only 15% of respondents.

At the moment, almost all of those responsible for emergency planning in Canada's health care system do this work on a part-time basis, along with their other duties (these cover a broad range of hospital functions that vary somewhat by region). They spend less than 25% of their workday on emergency preparedness activities. This is true even as hospitals merged into regional health authorities, networks or corporate entities, with four or five hospitals belonging to a single authority. Each authority still had just one person spending under 25% of their workday on preparedness activities, which helps explain the apparent lack fundamental knowledge among this group. There were only 10 full-time emergency planners among the group that responded to this research.

Any one of these barriers is large enough that it would be difficult for a single, part-time emergency planner to overcome. Unfortunately, in many cases, more than one of these barriers is reported at the same site, and the result is cumulative. These barriers are not, however, insurmountable and could be addressed through the recommendations in this report.

6. Recommendations

The changing face of Canadian health care can provide opportunities to address many of the deficiencies identified during this research. Canada's new Regional Health Authorities, Networks and Corporations should look at the unification of all emergency preparedness activities within their jurisdictions as a necessary step towards achieving appropriate levels of preparedness. This is a cost-effective road towards the development of the expertise required to meet the needs of their institutions. The combination of duties from 3-4 facilities (along with responsibility for the required staff training and community outreach) assigned to a single corporate position makes the prospect of a full-time professional emergency manager a feasible goal. The joint approach also reduces costs, since several hospitals can benefit from a single exercise, or send staff to a single training session.

Systems such as the Calgary Regional Health Authority are already moving in this direction, appointing one or more full-time emergency planners to address the preparedness needs of several hospitals at once. In doing so, they try to ensure that the responses of their sites are fully coordinated, both among themselves and also with the community at large. The result is a healthcare system which begins to deliberately acquire the skill and expertise necessary to ensure that facilities are prepared to cope with any unexpected problem or emergency that may occur.

The development of national standards in hospital emergency training is the next appropriate step to take in improving overall preparedness. As part of this, efforts must be made to ensure that the proper tools (such as standards for hospital emergency plans and exercises), and resources (such as a national exercise bank) are available to those who need them. No matter how motivated, those currently conducting emergency planning in the nation's health care system cannot measure up if they don't know what standards to use. Once national standards are adopted, they should become a part of the hospital accreditation process.

Finally, those who administer the health care community in Canada need to help ensure that the new profession of hospital emergency planners develops without hindrance. Joint exercises between facilities, or between the health care facility and the community, should be viewed as an opportunity for growth, not a reason for concern. Hospital administrators should be required to nurture these fledgling professionals, ensuring that they are available for training opportunities and able to develop critical contacts in the balance of the community. They should also ensure that all staff members are trained in the emergency plan, and that the party with responsibility for the plan is the party conducting the training. The long-term benefits from these initiatives will flow back to the region, network or corporation.

7. Conclusions

There is clearly room for improvement in the manner in which emergency planning is conducted in Canada's health care system. The past culture has clearly been one of limited time, funding, resources, staff, training and interest. This must change if our nation's health care providers are to be fully prepared to support us in times of crisis. The days of becoming the emergency planner by walking past the CEOs office at the "wrong time" must end. The nation's health care system needs a new type of professional, one who understands the contemporary standards of emergency management, and can translate those effectively to the health care environment.

Fortunately, the opportunity to make these changes currently exists. In many respects, Canada's health care providers are currently in a state of tremendous change; regional health authorities or networks are slowly but surely replacing older management methods. Inherent in this change is the merger of resources and the seeking of economies of scale that were never available to single site hospitals. This is critical point for change, but one with a limited life-span. Eventually, the system of health care administration in this country will have succeeded in reinventing itself, and will once again become resistant to change. Before this occurs, it is necessary to seize the opportunity to redefine emergency planning for health care as a regional or corporate responsibility. If successful, this will permit the development of full-time practitioners in the field of emergency management to serve the health care system.

Those who conduct emergency management in the community and those who do so in the health care system must be brought much closer together, in terms of knowledge, standards and practices. Health care and community-based emergency managers must work hand in hand to ensure that their communities are prepared to cope with any emergency on all levels. Like any mitigation measure, these actions are an investment in the future.

The recommendations contained in this document for the pooling of emergency planning resources through regional systems and the establishment of a national training program and standards for health care based emergency planners would greatly mitigate the weaknesses identified in this study. However, more than anything else the will and commitment to achieve these goals must be demonstrated. The raw material required for success is already there.

13. Has your community ever experienced any of the following incidents? (*Tick all that apply.*)

Tornado # High Winds # Severe Summer Storm # Severe Winter Storm #
Hurricane # Earthquake # Tsunami (Tidal Wave) # Forest Fire #

14. Has your hospital ever experienced a major internal emergency (e.g. fire)? Yes # No #

15. If Yes, please describe briefly, giving circumstances, no. of patients/staff affected:

16. How long ago did this occur?

< 6 mos. # < 1 yr. # < 2 yrs. # < 5 yrs. # < 10 yrs. #

17. Has your hospital ever experienced a major external emergency (20+ patients)? Yes # No #

18. If Yes, please describe briefly, giving circumstances and number of patients:

19. How long ago did this occur?

< 6 mos. # < 1 yr. # < 2 yrs. # < 5 yrs. # < 10 yrs. #

20. Does your hospital have a current Emergency/Disaster Plan? Yes # No # Unsure #

21. Is your Emergency/Disaster Plan co-ordinated with those of the local community, such as the local municipal Emergency Plan, and with those of local emergency response agencies (police, fire, EMS)?

Not Co-ordinated # Limited Co-ordination #
Fully Co-ordinated # Not Sure #

22. When was your Emergency/Disaster Plan last reviewed/revised?

< 6 mos. # < 1 yr. # < 2 yrs. # < 5 yrs. # < 10 yrs. #

23. Is a copy of the Emergency/Disaster Plan available in each work/care area? Yes # No #

24. Does each member of your staff receive a copy of the Emergency Plan? Yes # No #

25. Do new employees receive training in the Emergency Plan? Yes # No #

26. If Yes, please identify (by position) the individual responsible for conducting this training.

27. Does your hospital have a scheduled emergency exercise program? Yes # No #

28. When did your hospital conduct its most recent emergency exercise?

< 6 mos. # < 1 yr. # < 2 yrs. # < 5 yrs. # < 10 yrs. #

29. What type of exercise took place? Paper drill # Tabletop # Full Scale #

30. What type of scenario was used? (*Tick all that apply.*)

Internal Emergency # External Emergency # Bomb Threat # Fire #
Chemical Spill # Power Failure # Transportation # Other #

30. Did your exercise involve:

Evacuation # Evacuation to your hospital by another hospital/nursing home #

31. When did your hospital conduct the exercise immediately prior to the most recent exercise?

< 1 yr. # < 2 yrs. # < 5 yrs. # < 10 yrs. # Not Sure #

32. Who designed your hospital's last exercise?

Staff Member # Committee # Consultant # Other (specify) #

33. Do local emergency response agencies (police, fire, EMS) and volunteer groups (e.g. Red Cross, Salvation Army) participate in your exercises?

Yes # No # Not Sure #

34. How are off duty staff recalled in the event of a major emergency? (*tick all applicable*)

Telephone fan-out # Pagers # Media # Other (*specify*) # _____

35. Does your hospital have an evacuation plan that includes:

Reciprocal arrangement with another hospital? Yes # No #
Temporary use of another community facility? Yes # No #

36. Recognizing that patient loads and conditions can vary greatly, please estimate the time required on an "average" day to fully evacuate your hospital in an emergency:

< 1 hour # < 2 hours # < 3 hours # < 4 hours # 4+ hours #

37. Does your hospital have a reciprocal arrangement with another hospital that permits the sharing of essential staff (medical, nursing) during an emergency?

Yes # No # Not Sure #
Plan exists, but has not been formalized #

38. Does your hospital emergency plan have emergency sources and delivery arrangements for:

Water Yes # No #
Food Yes # No #
Linen Yes # No #
Medical Equipment Yes # No #
Medications Yes # No #

39. How does your hospital fund emergency planning and exercises?

Separate Budget Line # Drawn from discretionary funding #
No funding available # Other (*Please specify*) #

40. Does your hospital have an identifiable person who is responsible for the emergency plan and emergency exercises?

Yes # No #

41. What percentage of this person's workload is devoted to emergency planning, staff training, and emergency exercises?

< 25 % # 25 % # 50 % # 75 % # Full Time #

42. If this position is not full time, what do the employee's other responsibilities include?

Patient Care # Patient/Staff Teaching #
Administration # Maintenance/Engineering #
Other (*specify*) # _____

43. What is the level of education of this employee?

College Diploma # University Degree # Other (*specify*) # _____

44. What formal training/certifications in emergency planning does this employee possess?

Prov./Terr. Emergency Preparedness and Response Course #
Prov./Terr. Exercise Design Course #
Canadian Emergency Preparedness College Course(s) #
Federal Emergency Management Agency (U.S.) Course(s) #
Other (*specify*) _____ #

45. In your opinion, what are the greatest obstacles faced by your hospital when developing your Emergency Plan, staff training, and exercises? (*tick all that are applicable*)

Funding # Community Support # Staff Knowledge # Staff Attrition #

Other (*specify*) #

46. In your opinion, would general hospitals in Canada benefit from a training program specifically directed at hospital-based emergency planners?

Yes # No #

Please include any additional comments or observations that you feel might benefit this research. If the space provided is insufficient, additional comments may be attached.

This concludes the survey. Please forward the completed survey, using the enclosed postage-paid envelope, **no later than November 30, 2000**, to:

Hospital Emergency Planning Project
P.O. Box #####
Whitby, Ontario
###-###

Thank you for participating in this important research to improve Canada's response to major emergencies of all types. This project is scheduled for completion by March 28, 2001. Requests for copies of the Final Report should be directed to Emergency Preparedness Canada.

Protection civile Canada Enquête sur la planification d'urgence en milieu hospitalier

N° de

formulaire

Merci de votre participation à cette enquête, qui fera une évaluation nationale de la planification d'urgence dans les hôpitaux généraux du Canada. Nous avons l'intention d'utiliser les résultats de façon à promouvoir la planification des mesures d'urgence dans le secteur des soins actifs en décelant les points forts et les lacunes et en établissant un cours national de formation pour les planificateurs des mesures d'urgence en milieu hospitalier.

Cette enquête est menée pour le compte de Protection civile Canada et avec son appui financier. Cet organisme du ministère de la Défense nationale est chargé de remplir diverses fonctions liées à la protection civile, notamment celles de promouvoir la sensibilisation du public, de mener de la recherche relative à l'analyse et l'évaluation de l'état de préparation des autorités civiles aux situations d'urgence, d'exécuter ou de parrainer des programmes, des conférences et des séminaires de formation, ainsi que de servir de centre de moyens électroniques pour les opérations d'urgence du gouvernement.

On vous demande de prendre le temps de répondre à chaque question de la façon aussi complète et franche que possible. Toutes les réponses sont confidentielles. Aucun établissement ne se verra nommément identifié dans le rapport qui suivra. Les formulaires d'enquête ne sont numérotés qu'aux seules fins de dépistage par le chercheur, et la liste de distribution correspondante sera détruite une fois recueillies les données nécessaires. Ce questionnaire devrait être rempli par la personne responsable de la planification d'urgence pour votre établissement ou, en son absence, par l'administrateur ou l'administratrice d'hôpital ou la personne désignée. Toutes les réponses devraient être retournées dans l'enveloppe prévue, **au plus tard le 30 novembre 2000**. Toute question au sujet de ce projet de recherche doit être adressée au **chercheur principal, M. Norm Ferrier**.

1. Veuillez inscrire le code postal de votre hôpital :
2. Nombre de lits : 0-49 # 50-99 # 100-199 # 200-499 # 500+ #
3. Nombre d'employés : 0-49 # 50-99 # 100-199 # 200-499 # 500+ #
4. Catégorie d'hôpital : soins actifs # mélange de soins actifs/soins de longue durée #
5. Mode d'administration de votre hôpital : en site unique # en sites multiples #
6. Votre hôpital accepte-t-il régulièrement des malades réorientés d'hôpitaux plus petits? oui # non #
7. Votre hôpital est-il associé à une université/école de médecine? oui # non #
8. Y a-t-il d'autres hôpitaux dans votre communauté? oui # non #
10. Quelle est la taille de la collectivité desservie par votre hôpital?
 < 10 000 # < 50 000 # < 100 000 # < 250 000 # < 500 000 # 500 000+ #
10. Distance de l'hôpital de soins actifs le plus proche de votre hôpital :
 < 5 km # < 10 km # <25 km # < 50 km # 50+ km #
11. L'hôpital le plus proche du vôtre est accessible par la route? oui # non #
12. Votre collectivité renferme-t-elle aucun des établissements suivants? (*cocher ceux qui sont pertinents.*)
 centrale électronucléaire # aéroport # grand port de mer # gare de
 marchandises ferroviaires # parc de stockage de pétrole et de gaz # usine
 chimique # autoroute #

13. Les incidents suivants se sont-ils produits dans votre collectivité?? (Cocher ceux qui sont pertinents.)

tornade # vents violents # rages violents # tempête d'hiver violente #
ouragan # tremblement de terre # tsunami (raz de marée) # feu de forêt #

14. Votre hôpital a-t-il fait l'expérience d'un cas d'urgence interne grave (p. ex. incendie)? Oui # Non #

15. Dans l'affirmative, veuillez en faire une brève description : circonstances, nombre de malades/personnel touché :

16. Quand cet incident s'est-il produit?

< 6 mois # < 1 an # < 2 ans # < 5 ans # < 10 ans #

17. Votre hôpital a-t-il fait l'expérience d'une situation d'urgence externe grave (20+ malades)?

oui # non #

18. Dans l'affirmative, veuillez en faire une brève description : circonstances, nombre de malades :

19. Quand cet incident s'est-il produit?

< 6 mois # < 1 an # < 2 ans # < 5 ans # < 10 ans #

20. Votre hôpital a-t-il un plan de mesures d'urgence à jour? oui # non # ne sais pas #

21. Votre plan de mesures d'urgence est-il coordonné avec ceux de la collectivité locale, comme le plan de mesures d'urgence municipal, et avec ceux des organismes locaux d'intervention d'urgence (police, services d'incendie, secours médical d'urgence (SMU)?

non coordonné # coordination restreinte #
coordination intégrale # ne sais pas #

22. Quand votre plan de mesures d'urgence a-t-il été examiné/révisé la dernière fois?

< 6 mois # < 1 an # < 2 ans # < 5 ans # < 10 ans #

23. Y a-t-il un exemplaire du plan de mesures d'urgence à chaque lieu de travail/soins?

oui # non #

24. Chacun des employés reçoit-il un exemplaire du plan de mesures d'urgence?

oui # non #

25. Les nouveaux employés reçoivent-ils de la formation dans le cadre du plan?

oui # non #

26. Dans l'affirmative, veuillez indiquer la personne (le poste) qui est chargée de dispenser cette formation.

27. Est-ce votre hôpital a un programme établi d'exercice de mesures d'urgence?

oui # non #

28. Quand votre hôpital a-t-il tenu son dernier exercice de mesures d'urgence?

29. De quel genre d'exercice s'agissait-il? sur papier # sur maquette # exercice complet #

30. Quel genre de scénario a-t-on utilisé? (Cocher tous ceux qui sont pertinents.)

urgence interne # urgence externe # menace à la bombe # incendie #
déversement de produits chimiques # panne de courant # transport # autre #

30. Votre exercice a-t-il comporté :

une évacuation # une évacuation vers votre hôpital d'un autre hôpital/maison de soins infirmiers
#

31. À quand remonte l'exercice qui a précédé immédiatement l'exercice le plus récent?

< 1 an # < 2 ans # < 5 ans # < 10 ans # ne sais pas #

32. Qui a conçu le dernier exercice de votre hôpital?

membre du personnel # comité # conseiller # autre (préciser) #

33. Est-ce que les organismes locaux d'intervention d'urgence (police, incendie, SMU) et les groupes de services bénévoles (p. ex. Croix-Rouge, Armée du Salut) participent à vos exercices?

oui # non # ne sais pas #

34. De quelle façon le personnel en repos est-il rappelé en situation d'urgence grave? (Cocher ceux qui sont pertinents.)

chaîne téléphonique # radiomessagers # médias # autre (préciser) #

35. Votre hôpital a-t-il un plan d'évacuation qui comporte :

une entente réciproque avec un autre hôpital? oui # non #
l'utilisation temporaire d'une autre installation communautaire? oui # non #

36. Sachant que le nombre de malades et les conditions peuvent varier grandement, veuillez évaluer le temps requis au cours d'une journée « moyenne » pour l'évacuation complète de votre hôpital en situation d'urgence :

< 1 heure # < 2 heures # < 3 heures # < 4 heures # 4+ heures #

37. Votre hôpital a-t-il une entente réciproque avec un autre hôpital qui permette le partage du personnel essentiel(médical, infirmier) en situation d'urgence?

oui # non # ne sais pas #
Il existe un plan qui n'est pas officiel #

38. Le plan de mesures d'urgence de votre hôpital prévoit-il des sources d'approvisionnement et des dispositions de livraison d'urgence des produits suivants :

eau	oui # non #
nourriture	oui # non #
linge	oui # non #
équipement médical	oui # non #
médicaments	oui # non #

39. De quelle façon votre hôpital finance-t-il la planification et les exercices de mesures d'urgence?

poste budgétaire distinct # tiré des fonds discrétionnaires #
aucun financement disponible # autre (veuillez préciser) #

40. Votre hôpital a-t-il une personne désignée qui est chargée du plan et des exercices de mesures d'urgence?

oui # non #

41. Quel pourcentage de la charge de travail de cette personne est-il consacré à la planification, à la formation du personnel et aux exercices de mesures d'urgence?

< 25 % # 25 % # 50 % # 75 % # plein temps #

42. Si ne s'agit pas d'un poste à plein temps, qu'elles sont les autres fonctions de l'employé?

soin des malades # formation des malades/personnel #
administration # entretien/travaux techniques #
autres (*préciser*) # _____

43. Quel est le niveau d'éducation de cet employé?

diplôme collégial # diplôme universitaire # autre (*préciser*) # _____

44. Quelle formation/accréditation officielle en planification des mesures d'urgence cet employé possède-t-il?

Cours de protection civile et d'intervention d'urgence prov./terr. #
Cours prov./terr. de conception d'exercice #
Cours du Collège de la protection civile Canada #
Cours de la *Federal Emergency Management Agency (U.S.)* #
Autre (*préciser*) _____ #

45. À votre avis, quels sont les plus grands obstacles que doit affronter votre hôpital au moment d'établir son plan de mesures d'urgences, formation du personnel et exercices? (*Cocher ceux qui sont pertinents.*)

financement # appui communautaire # connaissances du personnel #
attrition du personnel # autre (*préciser*) #

46. À votre avis, les hôpitaux généraux du Canada profiteraient-ils d'un programme de formation destiné particulièrement aux planificateurs de mesures d'urgence en milieu hospitalier?

oui # non #

Veuillez apporter toutes autres observations qui, à votre avis, pourraient profiter à cette recherche. S'il vous manque de place, vous n'avez qu'à joindre une feuille distincte.

L'enquête est terminée. Veuillez faire parvenir l'enquête dûment remplie, en utilisant l'enveloppe affranchie ci-jointe, **au plus tard le 30 novembre 2000**, à l'adresse suivante :

Projet de planification des mesures d'urgence en milieu hospitalier
Boîte postale #####
Whitby (Ontario)
###-###

Nous tenons à vous remercier d'avoir participé à cette importante recherche visant à améliorer les possibilités d'intervention du Canada face à des cas d'urgence graves de toutes sortes. On prévoit terminer ce projet d'ici le 28 mars 2001. Veuillez acheminer toute demande d'exemplaires du Rapport final à Protection civile Canada.

II. Appendix II : Regional Respondents – Sample Sizes

Appendix IIa: Survey responses

PROVINCE	NUMBER OF SURVEYS SENT	NUMBER OF SURVEYS RETURNED	SURVEY RETURN RATE (%)	NUMBER CLASSIFIED AS URBAN
Newfoundland	8	5	62.5%	1
Nova Scotia	4	2	50%	1
Prince Edward Island	5	4	80%	2
New Brunswick	8	4	50%	4
Quebec	91	48	52.7%	16
Ontario	133	110	81.9%	37
Manitoba	19	19	100%	4
Saskatchewan	39	39	100%	4
Alberta	17	17	100%	6
British Columbia	13	12 (1 site closed)	100%	5
Northwest Territories	4	3 (1 site closed)	100%	0
Yukon	1	1	100%	0
Nunavut	1	1	100%	0

Appendix IIb: Hospital size breakdown

PROVINCE	Very Small (0-49 beds)	Small (50-99 beds)	Medium (100-199 beds)	Large (200-499 beds)	Very Large (500+ beds)
Newfoundland	0	3	1	1	0
Nova Scotia	0	1	1	0	0
Prince Edward Island	2	0	1	1	0
New Brunswick	0	0	0	4	0
Quebec	6	6	9	19	8
Ontario	35	22	17	22	14
Manitoba	6	3	3	5	2
Saskatchewan	25	7	5	1	1
Alberta	2	5	6	3	1
British Columbia	2	2	0	3	5
Northwest Territories	2	1	0	0	0
Yukon	1	0	0	0	0
Nunavut	1	0	0	0	0