

Greetings!

It has been an extremely busy time at the SIMTEC office since the last newsletter in late May. What's been happening?

Public Security Science and Technology (PS S&T) Summer Symposium

In mid-June I was able to attend the PS S&T Summer Symposium outside of Ottawa and presented a poster on the SIMTEC project (see below). It seemed to be well accepted and I received a number of questions about the project from first responders.



The poster for the Simulation Training and Exercise Collaboratory (SIMTEC) features a blue background with white and yellow text. At the top left is the SIMTEC logo and the URL <http://simtec.jibc.ca/>. The main content is organized into several sections: 'Research Purpose' (to intervene in the decision making process with new insights and knowledge designed to: increase awareness, disseminate knowledge, influence culture, change behaviour), 'Methodology' (using functional tabletop exercises to analyze decision making & psychosocial considerations, including Klein's Prime Recognition Model and Ethnographic Decision Making), '5 Tabletop Exercises' (1. Winter Blues, 2. Decontamination, 3. Disease, 4. Natural Hazard, 5. CBRNE), 'Research Outputs' (Training Tools, Guide Books), and 'Decontamination Psychosocial Protocols' (Guide for Family Physicians, Forensic Psychosocial Protocols, EOC Psychosocial Intervener). At the bottom, logos for various partners are displayed, including François Legault, Health Canada, Sarah Canada, Ahmad Khorchid, Laurie Pearce, JIBC, Colleen Vaughan, and Robin Cox, along with the Royal Roads University logo.

I, along with Co-Principal Investigator Robin Cox, was also able to participate in the “Psychosocial Community of Practice” (previously known as the “Psychosocial Cluster”) and there were lots of comments and questions around our “Winter Blues” exercise. It is beginning to attract more interest as we are approaching our final exercise. However, given that many of Canada’s leading researchers in the area of CBRNE (Chemical, Biological, Radiation, Nuclear and Explosive) were in attendance at the Summer Symposium it is not surprising that our next decontamination exercise became a focal point of many discussions.

Many of the issues that we are considering in our decontamination exercise have not been thoroughly considered by many in the CBRNE world. As we are completing the literature review we have collected a lot of information regarding decontamination issues.

We will be posting our reference list for psychosocial issues related to decontamination on the EWG Forum. Please review the list and let us know what we are missing!

What we are realizing as we move into this area of research is that as well as gaining a good understanding of what we need to account for in the training and development of the “Psychosocial Guidelines for Decontamination” to accompany the next exercise is that we also need to have a good understanding of the actual technical/operational protocols for various decontamination events. It is important for us to know what the current “state-of-the-art” procedures are so that we can “interject” the appropriate psychosocial responses into the protocols where they are best applied.

In order to accomplish this it would seem wise to partner with the other CRTI Communities of Practice, namely the Biological; Chemical; and Radiological-Nuclear Threats groups. I am hoping that that we can leverage the engagement with these groups, in collaboration with Public Safety Canada and the Emergency Management BC (EMBC) CBRNE Task Force to identify what these protocols would look like and how we can bring the operational and psychosocial aspects of decontamination protocols together.

Another benefit was to have an opportunity to meet with Rene Bernklau, the CBRNE Technical Advisor from B.C. Ambulance Service and his colleagues who had a poster session on their research which is focused on identifying the correct and best equipment available for Haz Mat responders. One of the stressors for Haz Mat

responders is for them to feel assured that they have the best equipment to deal with the hazardous materials they have been exposed to. As we move into the development of our protocols and training information for our decontamination exercise, this too will be an important component of this work.

I also had the opportunity to touch base with our Project Champions from Health Canada: François Legault, Louis MacDonald and Shirley Dufour and bring them up to speed. It was gratifying to step back and realize just how much we have accomplished in one year!

Hazards Research & Application Workshop and International Research Committee on Disasters (IRCD) Meeting in Broomfield Colorado

I was asked to make a presentation at the IRCD in Broomfield Colorado, which is held in conjunction with the Hazards Workshop. For those that don't know, the Hazards Workshop is one of North America's premier research/practitioner events in disaster management (the other is Canada's Canadian Risk and Hazards Network Symposium (CRHNet) which will be held in Vancouver in October 2012). Not only did I have the chance to talk to other researchers from around the world but I also got the chance to make some connections from other researchers from Canada!

Suzanne King, from McGill University, reported on her research regarding the impact of various disasters (e.g., the 1989 Ice Storm) on children whose mothers were pregnant at the time of the event. There were significant developmental impacts both short-term and long-term. This research will certainly influence our current decontamination project and support the need to reduce the stress of pregnant mothers (and everyone else too).

There were several presentations on the use of Incident Command based systems and some of the issues which arise from their use in various types of events which also proved enlightening and provided for some additional considerations of how systemic issues could increase EOC stress.

Next Steps

Our work on the Winter Blues exercise analysis is complete. (Please see the next section for a summary of some of our findings regarding the use of our two methodologies for analysis and our key training findings). We are now hard at work with our exercise development team to refine the exercise, to bring into the exercise an increased degree of realism and address the issues that were brought up by the participants (see the previous newsletter for additional detail).

We are also developing and writing the script for the instructional video to precede the next exercise on October 29th. We have sent out for subject matter expert review our suggested informed practices to address issues where our findings indicated the greatest need for intervention.

Meanwhile we are also moving ahead to analyze our decontamination literature review findings and incorporate these findings into our draft protocol and decontamination exercise. We have been searching for information on decontamination protocols and/or operational actions to address special needs populations namely:

- **Women who are pregnant or breast-feeding**
- **Women who are menstruating**
- **Persons with prostheses**
- **Persons with physical disfigurement (e.g., scarring, women who have had a mastectomy)**
- **Children**
- **Persons who are hearing and/or visually impaired**

- **Persons with guide dogs and/or pets**
- **Persons from minority cultural or religious groups**
- **Persons with injuries**
- **The elderly and frail**
- **Persons with developmental delays or cognitive impairment**
- **Persons with autism or mental illnesses**

We are examining physical issues such as the height of shower heads and personal supports in shower stalls; the provision of gowns and towels post-decontamination; and the provision of security services at decontamination sites. We are also looking at issues such as identification bracelets for all persons going through decontamination, but especially for children and those persons with cognitive disabilities.

Another area of focus is around ways to protect privacy and maintaining modesty and to provide psychosocial supports pre-, during and post-decontamination. The need to provide communication tools is also important as persons' mobile phone may be contaminated and thus may not be used and yet it is a time when they may be scared and most in need of support from family and friends.

We have developed a good reference list, but some of the articles that may be helpful to us are not in the commonly listed data bases. Please send us references to anything you think we may find useful.

Don't forget - we welcome contributions to our Newsletter and website. Enjoy the rest of the summer – hopefully you are getting more sun than we are in Vancouver!

Laurie Pearce
SIMTEC Research Chair



Research Findings to Date re: Winter Blues

Our research team completed the analysis of the pilot and test Winter Blues exercise in early June. Our analysis covered a number of topics and this section addresses two methodology areas which may be of interest to our readers:

1. **Was the ethnographic decision tree modeling methodology a useful research approach?**
2. **Was Klein's Recognition-Primed Decision Framework a useful research approach?**

Ethnographic Decision Tree Modeling

The following is a summary of our experience using ethnographic decision tree modeling written by one of our researchers, Ciara Moran.

Our work with the decision trees was beneficial in that it allowed us to look at the transcripts in a very different light. Because I was tracking how and when decisions were made, I was able to focus on different aspects of the transcripts than when I was coding. For example, when examining decisions around Emergency Social Services¹ (ESS), it became clear that each pod understood the role and function of ESS in very different ways and as a result ESS was provided to the community in very different ways. In looking at how ESS was provided I also gained some insight as to how individuals carrying out ESS in the EOC are often unheard or ignored. Based on the model that I developed for ESS, it was clear that only when a situation is well underway does the EOC dispatch ESS, thus resulting in undue delay for citizens needing these services.

¹ The provision of emergency shelter, food, clothing, first aid, pet care, transportation and psychosocial support along with meeting other basic personal needs.

This work also helped me to better understand the actions of the EOC participants. As we coded, it was very easy to focus on all the mistakes the teams made as well as their lack of attention to the psychosocial aspects. However, when examining the decisions they made, I was more aware of how much they accomplished and how stressful the simulation was. When I combined the transcripts and the communication logs, it was quite clear that these groups were well organized and well trained.

On a similar note, looking at the decisions allowed us to make a number of comparisons between pods. For example, some pods engaged with the media extensively while others did not. In the first exercise one team sent out over ten messages via media and social media whereas one pod only sent two messages throughout the simulation.

These kinds of decisions have a direct effect on public knowledge and response so it is interesting to see such stark differences among the pods. Furthermore, this work highlighted how often decisions were made by one or more individuals that never were communicated beyond the walls of the EOC. At times the EOC would proceed as if they had communicated their decision to the outside world when they had not.

The best example of this occurred in one pod when they chose to cancel an event but did not tell anyone. They were later annoyed when the event proceeded.

Finally, work on the decision tree models allowed us to discover where improvements can be made in developing EOC best practices. It was possible to see where communication broke down or why certain decisions were not made. As a result, it gave us a basis for some of the teaching points that will be implemented in the final exercise.

Nevertheless, there are a number of reasons why this model might not be the best model for our future use.

First and foremost, it was often not clear why or how decisions were made. Even during the interviews individuals were unable to explain what prompted certain decisions using the ethnographic model approach. Rather, much of their decision-making was based on past experience and training. As a result, Klein's² model of "if/then" may be more applicable.

Gladwin's³ model seems to work best in novel situations where individuals have little or no prior experience to base their decisions on (e.g., whether to evacuate during a hurricane). It involves making decisions based on information gathering and has very little room for incorporating previous training or knowledge. Even though EOC members are experiencing novel situations, there are clear protocols and training that they must follow which would mitigate entirely "in-the-moment" decisions.

In addition, it is difficult to single out any single individual's decision-making as most decisions in the pods were made as a group. The model does not really accommodate for multiple decision makers or group thought. This is amplified by the fact that most individuals come from similar backgrounds and training. Thus, decisions seem to come more organically without much need to communicate the rationale behind them. Much is left unsaid as it appears to simply be understood among group members that certain decisions are meant to happen.

Finally, the decisions are not simply "yes/no" decisions – they are complex, with multiple possible solutions and they do not lend themselves to simple decision tree modeling.

² Klein, Gary A. (1998). "Sources of Power: How People Make Decisions," MIT Press, Cambridge, Mass, pp. 1-30.

³ Gladwin, C., Gladwin, H., & W. Peacock. (2001). Modeling hurricane evacuation decisions with ethnographic methods. *International Journal of Mass Emergencies & Disasters*, 19(2), 117-143.

Use of Klein's Recognition-Primed Decision Framework

The following is a summary of our experience Klein's Framework written by one of our researchers, Alanna Thompson.

There were many comments from the participants that reflected their perceptions regarding the importance of training and experience in the decision-making process. Experience and training are viewed as necessary for EOC personnel to be able to perceive the potential risks of the incident and of specific decisions.

"...the motor vehicle incident, we had a structure fire, we had a structural collapse, we had a Haz Mat incident, I've been to all types, every one of those types of those incidents multiple times so you feel really confident when that kind of stuff gets thrown at you. And you feel like you can, it's no problem you know making those decisions, ...you can sort of picture what's going on in your head and get a really good picture in your mind even before you get there of what that guy's going through and what he needs or what he may need as far as support goes."

As identified by Gasaway (2010)⁴ in his research with fire ground commanders, the findings indicated that commanders were able to consider future implications of the incident and had expectations of what would occur next – useful skills to assist them in planning and decision-making.

Other participants described the experience and training of pod members as providing them with the knowledge required to make decisions. Several of them explained how they deferred to specific individuals as

subject matter experts within the group, who could make decisions by essentially matching the current incident to their experiences in responding to previous incidents (Gasaway, 2010; Klein, 2008⁵). One participant also highlighted the way in which decisions become “second nature” based on experience, which relates to the concept of intuition in Klein’s (2008) model. Given the participants’ comments on the importance of past training and experience for decision-making in disaster situations, it is interesting to note Bond and Cooper’s (2006)⁶ cautionary message that one’s previous experience and training may be “sub-standard;” thus, it is stressed that confidence, combined with “acknowledged expertise” in decision-making, and awareness of the situational factors influencing the current incident, are crucial in order to achieve the best possible result.

Key Training Issues

There were many issues that emerged from the analysis but five themes were consistent across the pods. First, and foremost, it was important to note that little thought was given to psychosocial considerations (even though all of the responders attending the functional tabletop exercises knew they were there in regards to psychosocial issues!).

The five consistent themes which emerged from the analysis were:

1. Gender Issues

There were numerous instances where females participating in the EOC exercise were visibly ignored. Women participating in the exercise also commonly

⁴ Gasaway, R. B. (2010). Understanding fire ground command: Making decisions under stress. *Fire Engineering*, 163(7), 74-74.

⁵ Klein, G. (2008). Naturalistic decision making. *Human Factors*. 50(3). 456-460.

⁶ Bond, S., & Cooper, S. (2006). Modelling emergency decisions: Recognition-primed decision making. The literature in relation to an ophthalmic critical incident. *Journal of Clinical Nursing*. 15(8). 1023-1032.

took on roles as clerical liaisons and recorders, regardless of their operational roles. This increased the stress levels of women and led to less than optimum decisions.

2. Proactive Deployment of Emergency Social Services (ESS), including disaster mental or behavioural health

In many cases EOC personnel waited until the main emergency was under control before deploying ESS which led to delays in civilian populations receiving the necessary social and psychosocial support services.

3. Supporting EOC personnel following news of the serious injury or death of first responders or civilians

While there was recognition of the need to address the issue that a first responder had died in the exercise, there was uncertainty as to how to do so in midst of a disaster. Later, participants expressed regret that they had not acknowledged the death in some way and had not supported the EOC member who had lost a staff person.

All EOC personnel are not first responders. Civilians (e.g., engineers, public works, and emergency social services) are also in the EOC. For many, this may be the first time they are exposed to situations involving the death of civilians and first responders – perhaps in graphic detail. First responders need to be aware of the effect of their language and handling of the situation may have on others in the EOC and ensure that adequate support is available.

4. EOC providing psychosocial support to first responders on-site

Little consideration was given to providing psychosocial support to first responders on-scene including the need for providing for a respite area (e.g., after several hours working in bitter cold responders needed a warm place

and to be hydrated). As well, when dealing with multiple deaths, peer and clinical supports should be deployed to ensure a timely response to responder needs.

5. Taking breaks in the EOC

Providing the opportunity for workers to take breaks, and encouraging them to take breaks during the response period is listed as a key strategy in coping with psychological stress. And yet in many cases, although, suggested by the EOC Commander, breaks were not taken.

International Expert Profiles

Starting this edition we will start to profile various members of our Expert Working Group. This edition we are starting with one of our international experts.

Bruce T. Blythe



Bruce Blythe is an internationally acclaimed crisis management expert. He is the owner and chairman of three companies that provide employers with a continuum of crisis preparedness, crisis response, and employee return-to-work services. Crisis Management International (Atlanta-based) is the preparedness arm of the three companies. CMI has assisted hundreds of companies worldwide with crisis and business continuity planning, training and exercising. CMI also provides workplace violence preparedness programs and threat of violence consultations through a specialty network of threat management specialists, including former FBI and Secret Service agents. Crisis Care Network (based in Grand Rapids, Michigan) responds to corporate crisis situations 1000 times per month through a North American network of crisis mental health professionals. Behavioral Medical Interventions (Minneapolis based)

accelerates employee return-to-work for workers comp and non-occupational injury cases.

Widely regarded as a thought leader in the crisis management and business continuity industries, he is the author of *Blindsided: A Manager's Guide to Catastrophic Incidents in the Workplace*. He has served in the Military Police for the U.S. Marine Corps. He's a certified clinical psychologist and has been a consultant to the FBI on workplace violence and terrorism.

The SIMTEC Project was of particular interest to Blythe because of the integration of technology and solid crisis and emergency preparedness. He balances the selected team of experts from the public areas by bringing expertise and representation relating to the private and corporate sectors.

Blythe has appeared on NBC's Today Show, CNN, ABC's 20/20, CBS'48 Hours, CNBC, NPR and others. Fast Company Magazine published a cover-story article about Blythe's leadership in responding to 204 companies onsite, all within three weeks following 9/11. He provides commentary in The Wall Street Journal, Newsweek, Business Week, Smart Money, New Yorker, Fortune Magazine and USA Today. He serves as a keynote presenter to fifty national and international conferences per year.

Blythe is a member of:

- ASIS International's Crisis Management and Business Continuity Council
- U.S. Department of State's Overseas Security Advisory Council
- Disaster Recovery Institute's Educational Advisory Council
- The Conference Board, as Chairman of the Corporate Security, Business Continuity and Crisis Management Conference
- Association of Traumatic Stress Specialists, six years on the Board of Directors
- NFPA 1600 Technical Committee's Task Group on Crisis Management

- The International Society for Traumatic Stress Studies
- Association of Threat Assessment Professionals

Blythe's areas of expertise include:

- Strategic Crisis Leadership (for Senior Executives and Crisis Managers)
- Crisis Preparedness and Response
- Workplace Violence Preparedness and Defusing Threatening Individuals
- Human Side of Crisis and Post-Incident Return to Work
- Crisis Decision-Making

Research Team Updates

We are pleased to announce that Andrea Javor has joined our Research Team on May 31st in the position of Researcher III and Christine Yu returned to work June 14th after taking a short leave of absence to complete her Master's degree.

Karen-Marie Perry's last day was June 29th as she is leaving the project to pursue a Ph.D. in Medical Anthropology from the University of Victoria. Karen-Marie has been supporting research activities at the Justice Institute since 2010 and will be missed dearly. We all wish her the very best in her future endeavours. And the news doesn't stop there - Alanna Thompson is expecting and she will be starting maternity leave November 2nd. Congratulations!

Disaster Humour



Researcher Profiles

Andrea Javor – Researcher III



Andrea completed her Bachelor of Science in Psychology at the University of Guelph in 2004 and studied philosophy at the University of British Columbia. She gained research experience while working at the Schizophrenia, Cognition and Imaging lab at UBC. While there, she conducted interviews with schizophrenic patients, coordinated an MRI study on addiction, and co-authored a philosophy of psychiatry paper. Andrea also worked at the Biomotion Lab at Queens University, and at a cognition lab at the University of Guelph. Andrea volunteered with Humanities 101, a program for residents of the Downtown Eastside in Vancouver.

Remember To Book This Date!

Our EWG will reconvene on **October 30th 2012** for its annual meeting to review the project’s progress to date as well as the next steps in the research. By this time we will have run the final Psychosocial Exercise and will be looking for your comments and suggestions to help finalize the training and exercise for posting to our Collaboratory in December 2012. The Project Review Committee (PRC) will convene on October 31st 2012 to review the project’s progress, evaluate the financial status and discuss any recommended changes to the project Charter.

How Can YOU Help?

Please log in to our site – check out the EWG Forum and give us your feedback on our materials. We are keen to use your expertise to ensure we can deliver the very best product.

Funding Partners

The SIMTEC Project acknowledges the contribution and support of its Funding & Project Partners - The Centre for Security Science (CSS), Department of National Defence (DND), Health Canada, and Justice Institute of British Columbia.



Project Partner

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