

GAP Santé
 Groupe de Recherche en Psychosociologie d'Ontario

**Comprehensive Approaches:
 In-Vivo Simulation of
 Shared Decision Making**

Louise Lemyre, Ph.D., FRSC
 GAP-Santé Research Unit
 Professor of Psychology, Faculty of Social Sciences,
 McLaughlin Research Chair on Psychosocial Risk,
 Institute for Population Health
 University of Ottawa

IUS, Toronto, October 17, 2010

Risk assessment and management cycle

$Risk = \int Prob(hazard) \times Prob(consequences)$

- “Risk is not solely an individual consideration; emergency events affect families, organisations, communities and sometimes an entire nation” (Lemyre et al., 2009).
- Risk management corresponds to the phase of decision about risk mitigation options in a cycle of risk analysis, after a phase of risk assessment.

© Lemyre et al., 2009

Guiding principles and assumptions

- Characterise events using an extended timeline that incorporates multiple stages prior to, during and after an event.
- Consider decision making as one stage in problem solving.
- Complex situations require multiple perspectives and diverse approaches – there is no one best approach.
- Incorporate and integrate findings from many disciplines and fields of practice.
- Balance theoretical concepts with information from existing cases.
- Broaden the lens by using a risk management framework.

© Lemyre et al., 2009

Risk management by time phase

- Risk management has a wider scope, encompassing all of the time phases, including the pre-event time phase.
- Under a risk management paradigm, the monitoring of interventions is an ongoing process.

© Lemyre et al., 2009

Canadian and international case studies

Eastern Ontario Ice Storm: Ontario and Quebec (1998)		Blackout (2003)	
Red River Floods (1997)		Katrina (2005)	
Kelowna Fires (2003)		London Bombing (2005)	
SARS (2003)		Tsunami (2004)	
Gander, Operation Sleepover (2001)			

Overview of Canadian case studies

- Ice Storm:
 - Lack of planning, anticipation and training contribute significantly to the complexity of a situation.
- Gander, Operation Sleepover:
 - Established inter-organizational networks notably diminish the complexity of the situation during the event phase.
 - Decision making both during the event and post-event can be facilitated by developing flexible preparedness and response plans as well as training programs in the pre-event phase.
- Red River Flood:
 - The absence of coordination and transparency between municipalities can inhibit effective decision making in the impact and rescue phases.
 - Incorporating and integrating lessons learned identified in the post-event can ensure further flexibility in plans and decrease the complexity of the situation.

© Lemyre et al., 2009

Overview of Canadian case studies

- **Kelowna Fires:**
 - Transparent communication with the public can improve public trust, reducing anxiety levels and uncertainty.
 - The inter-organizational adoption of a homogenous emergency preparedness and management plan in the pre-event phase facilitates problem solving.
 - Establishing clear jurisdictional boundaries and corresponding roles and responsibility in the pre-event phase can decrease the level of complexity during the event.
- **Blackout:**
 - The lack of communication increases the complexity of the situation and can hinder decision making during the event, between organizations as well as between the public and officials.
- **SARS:**
 - The lack of inter-organizational communication during the event can increase the level of uncertainty, thus amplifying the complexity of the event.
 - It is essential that emergency plans and emergency infrastructure be in place in the pre-event phase.
- **Across multiple case studies:**
 - Emergency planning can suffer from the recency effect bias, limiting planning to the mitigation of events similar in severity and scope to events that have previously occurred.

© Lemyre et al., 2009

Overview of international case studies

- **Hurricane Katrina**
 - Private sector companies operating independently but working within pre-existing networks contributed significantly to lessening the impacts of Hurricane Katrina.
 - Lack of planning and anticipation can contribute significantly to the complexity of a situation, as demonstrated in the post-event challenges of Hurricane Katrina.
 - Decision making in complex situations may improve if made in a decentralized manner taking into account local knowledge, as illustrated by the Coast Guard during Hurricane Katrina.
- **London Bombing**
 - Joint exercises such as those facilitated by the London Metropolitan Police involving multiple agencies (Hanover Series) and exercises undertaken by National Health Services provided the opportunity for multiple agencies to practice working together, contributing to a more effective, coordinated response to the transit bombings.
 - The provision of accurate, timely information to a wide-range of organizations and individuals contributes to decreasing the overall complexity of an event.
- **Tsunami**
 - Informal networks involving local organizations within villages can provide significant, timely information for the population to prepare for an extreme event.
 - Post-event recovery and reconstruction periods allow opportunities for different types of organizations to cooperate and collaborate, building resilience, as demonstrated in the Indian response to the Tsunami.

© Lemyre et al., 2009

Simple – Complicated - Complex

Simple Situations:

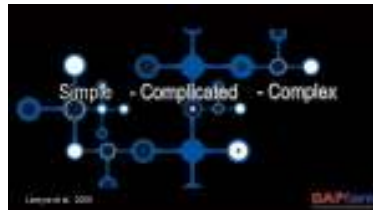
Well understood, minimal number of organizations involved.

Complicated Situations:

Well understood, but many organizations involved.

Complex Situations:

Considerable amount of unknowns



© Lemyre et al., 2010

Impact – Uncertainty - Vulnerability



© Lemyre et al., 2010

Impact

- Actual and perceived Impact
- Scope of Impact
- Severity of Impact
- Timing of Impact
- Media Involvement
- Political Processes



© Lemyre et al., 2010

Uncertainty

- Novelty of Situation
- Previous Planning
- Lack of Information
- New Partners
- Rapidly Changing Context



© Lemyre et al., 2010

Vulnerability

- Economic Development
- Social Capital
- Community Competence
- Information & Communication



© Lemyre et al., 2010

Coordination to Collaboration



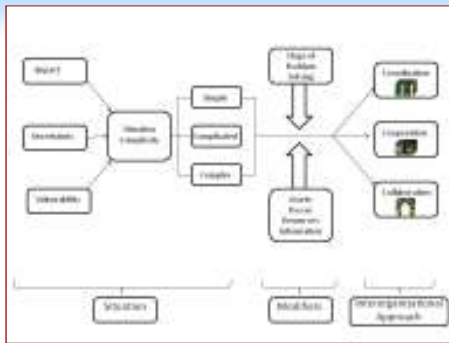
Coordination – Organizations share information only

Cooperation – A sharing of information as well as resources

Collaboration – An overarching sharing of authority and power.

© Lemyre et al., 2010

Model of inter-organizational problem solving



Videos

- [Shared Decision Making Framework](#)
- [In-Vivo Experimental Design](#)

© Lemyre et al., 2010

In-Vivo Simulation of Shared Decision Making

Research Using In Vivo Simulation of Meta-Organizational Shared Decision Making (SDM)

Task 3: Risk management and governance: understanding problem solving and decision making.

GASP Health



© Lemyre et al., 2010

Hydra-like experiment



© Lemyre et al., 2010

2 Independent Variables



The approach to decision making... Coordinated or Collaborative

The composition of participant groups – Homogeneous or Mixed.



© Lemyre et al., 2010

Example of experiment

- Video Conferencing Between pod participants
- Delivery of Vignette
- Delivery of Coordinated or Collaborative tasks
- Collection of Data



© Lemyre et al., 2010

Videos

- [Shared Decision Making Framework](#)
- [In-Vivo Experimental Design](#)

© Lemyre et al., 2010

GAP Santé
Groupe de Recherche Psychosociale, uOttawa



Louise Lemyre, Ph.D, FRSC

School of Psychology, Faculty of Social Sciences,
McLaughlin Research Chair on Psychosocial Risk,
Institute for Population Health GAP-Santé
University of Ottawa

www.gapsante.uottawa.ca

www.gapsante.ca

www.gapsante.ca/selfstudyguide

www.gapsante.ca/dst

www.youtube.com/gapsante

© Lemyre et al., 2010