GAP Santé
Groupe d'Analyse Psychosociale, uOttawa

Developing collaboration in complex events: A model for civil-military inter-organizational problem-solving and decision-making

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Approaches and Organizations

Louise Lemyre, PhD, FRSC, & Celine Pinsent, PhD
GAP-Santé Research Unit, Institute for Population Health
University of Ottawa

Contributors and Acknowledgements

Contributors:

- Lemyre, L., PhD; Pinsent, C., PhD; Johnson, C., B.A.H.; Boutette, P., M.A, B.Ed., M.B.A.; Corneil, W., ScD; Riding, J., B.A.A.; Lemus, C., Eng., M.Sc.; Blust, S., B.A.; Riding, D., B.A.

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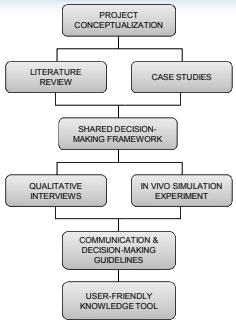
In vivo project overview



- Literature review included a survey of decision making practice across numerous types of organizations
- Case studies included both Canadian and international extreme events with multi-level, multi-jurisdictional interaction
- Qualitative analysis of the interviews as well as the qualitative and quantitative analysis of the *in vivo* simulation experiment currently underway

In vivo project goals

- Develop a meta-organizational shared decision making framework
- Test the framework through *in vivo* simulation
- Develop psychosocial conceptual models on interagency collaboration and decision-making
- Explore mechanisms for overcoming social and cognitive barriers to interagency collaboration

Literature review

- Literature review aimed at a broad understanding of:
  - Various types of organizational structures involved with problem-solving during complex events
  - Decision-making strategies used by different organizational structures
  - Key organizational characteristics such as types of authority, interaction and roles

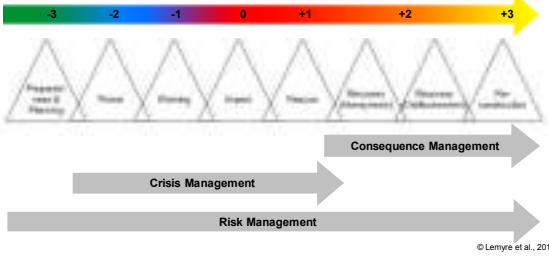
Case studies

Eastern Ontario & Quebec Ice Storm (1998) | Red River Floods (1997) | Kelowna Fires (2003) | SARS (2003) | Gander, Operation Sleepover (2001)

Blackout (2003) | Katrina (2005) | London Bombing (2005) | Tsunami (2004)

Considerations in model development

- Model conceptualized within an extended timeline from pre-event to reconstruction



Considerations in model development

- No one approach is “best”
  - Complex situations require diverse approaches
  - These approaches may combine, unroll in parallel, and interact in a recursive fashion.
- Decision-making is only one stage in the problem-solving process
  - Other stages include identifying the problem, defining the problem, generating solutions, decision-making, implementing solutions, and monitoring implementation
- Multi-disciplinary approach is appropriate
  - Integrates findings from diverse disciplines and fields of practice
  - Will lead to a more robust and relevant model

Video: Shared Decision Making (SDM) Model

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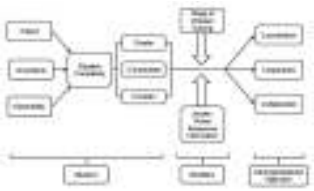
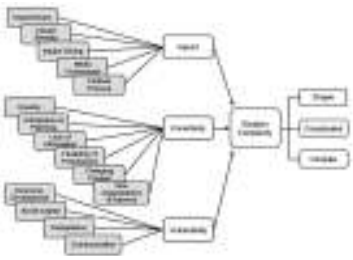
Model of inter-organizational problem-solving

- Two main components:
  - Situational complexity; and
  - Inter-organizational approach to problem-solving
- Components are modified by problem-solving stage, and by available assets (power, resources, and information)

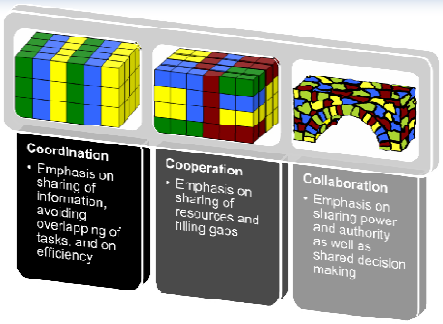


Three factors contributing to situation complexity



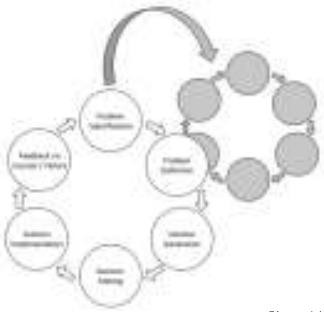
- Three main factors of situational complexity:
  - The impact of the event, including actual, perceived and potential impacts;
  - The uncertainty of the situation; and
  - The vulnerability, or conversely, the resiliency of those who may be impacted

Model component – approach to problem solving



Modifier - stages of problem-solving

- Problem solving is an iterative process
- The stages modify the problem solving approach according to level of situation complexity

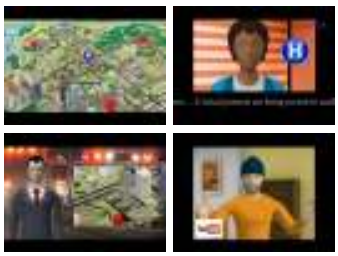


Inter-GAP *in vivo* system

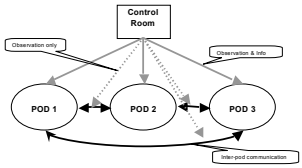
- "Hydra" style pods and simulations
- Examines interaction both within groups and between the groups

Inter-GAP *in vivo* system

- Situated in a fictional mid-sized Canadian border town called "Gapville"
- Rad/nuc "dirty bomb" scenario
- Utilizes avatars created using Xtranormal



Overall session composition for *in vivo* experiment



- Sessions typically holds nine participants grouped three to a pod
- Participants drawn from three types of organizations
  - Military
  - ICS non-military
  - Non-ICS
- Homogeneous and heterogeneous session configurations

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Groupe d'Analyse Psychosociale, uOttawa

Questions? Comments?

GAP Santé
Groupe d'Analyse Psychosociale, uOttawa

GAP Santé

Louise Lemyre, Ph.D., FRSC
School of Psychology, Faculty of Social Sciences
Director of 'Groupe d'Analyse Psychosociale de la santé', GAP-Santé
McLaughlin Research Chair on Psychosocial Aspects of Risk and Health
Institute of Population Health
University of Ottawa
louise.lemyre@uOttawa.ca
www.gapsante.uottawa.ca