Psychosocial Risk Manager (PRiMer): A Suite of Tools on Psychosocial Considerations in Planning and Mobilisation

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

With

P.Boutette, W. Corneil, J. Lee, M-P. Markon, S. Gibson, C. Johnson, J. Riding & D. Krewski

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University of Ottawa is in the capital, close to the Hill, with 40 000 students, ranked 7th/90 as research intensive oldest and largest bilingual university, French & English

- Program of Research
- Suite of Tools and Training

Under CRTI (CBRN Research & Technology Initiative) 2003 -

Partners

- Funding: Canada Centre for Security Science - DND (Consortium of 21 federal departments/agencies)
- Champion: Public Health Agency of Canada
- Sc. Lead: Dr Louise Lemyre, University of Ottawa
- With stakeholders: Public, NGOs, Private sector, Responders, Planners, Decision-makers

Canadian context

- No history of major terrorist event (except FLQ, Air India)
- Image of benevolence, peace-keeping
- Special relationship with USA

- Major crises: SARS, BSE (mad-cow)
  Flooding, wild fires, snow, ice storm, black-outs
- Convergence of public health & public safety

Hence, in context of pre-event anticipation and preparedness (vs post-event rescue and recovery)

Strategy : A Risk Assessment and Management paradigm

The strategy is to include preparedness, response, mitigation and resilience in a larger Risk paradigm

- as a common language and platform
- within an all-hazard approach, yet customized
- across sectors (public, private, NGOs) and jurisdictions
- interdisciplinary
- across time spectrum (-3 to +3)

Steps:
- Define a psychosocial risk and resilience framework inclusive of public perception, public communication and public engagement
- Document an evidence-based case
- Derive implications for risk management and risk communication
- Develop tools to train and implement

Revisiting Risk Definition for better mobilization

Risk = f (Prob (Hazard), Prob (Consequences))

- Traditionally, risk focuses on mortality and does not consider the social aspects of risk
- Risk= p(occurrence Hazard)
  x p(mortality+morbidity+psychosocial ripple effects)
  = Meaning and Relevance
- Risk consequences are also about behaviors and emotions.
- It affects families, business, communities, and societies.
- It should be analyzed in a systems approach (ecological model)

What does 'psychosocial' mean?

- Descriptive term for all human processes involving both psychological and social components.
- Relates to the way we think, feel and behave. (cognitive, affective,behavioral)
- It includes risk perception and preparedness
- *Psychosocial* applies to both individual and collective processes.

Recognize parallel streams: The Bio-Environmental Reality & the Psycho-Social Reality

Risk analysis according to experts and the public

	Expert (Hazard driven)	Public (Consequence driven)
Risk Evaluation	Risk Assessment	Risk Perception
Risk Tolerance	Risk Threshold	Risk Acceptability
Risk Management	Risk Mitigation	Risk Behaviour
	(Probability based)	(Meaning based)

I- Research : Understanding the issue(s)…

Building on cognitive processing of Perception of Risk:
(Slovic, Fischhoff, Khaneman, Tversky, etc …)

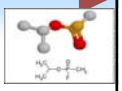
- Perceived probability are non-linear
- People overestimate small risks, underestimate high risks
- Dread and Novelty increase perceived risk
- People think of themselves as invincible (positive illusion)

And based on behavior, fear and compliance, social psychology research

- Fear alone does not induce sustained behavior uptake
- Experiencing self-efficacy improves performance
- Rehearsed behavior, even mentally, improves performance
- Mental models (beliefs,understanding, norms) predict behavior

A) Building evidence from Case studies

Sarin inTokyo (1995)



- 12 deaths, 17 severely injured
- 9000 "psychological casualties" at hospital
- Bystanders helped

Giona , Brazil (Radioactive garbage)

- 8 death
- 250 Exposed
- 200,000 tested for certification of non-contamination

Mad Cow (2003)

- 1 cow affected
- 0 death of Canadian origin
- Border closure
- 1 Billion dollars, bankruptcy, divorce, distress in farmers

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)			

B) Research through qualitative work

20 Focus groups with citizens across Canada on CBRN hazards

Consultations in all provinces, by gender, age groups (also with First responder groups)

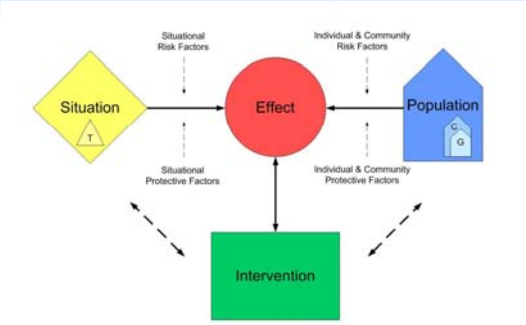
Key findings should be drivers of communication & interventions (motivation)

- Canada context: little history, percvd very low probability, 'aura'
- People focus more on the consequences than the hazard
- People would do things to protect dear ones
- Different views depending if under personal control (sense of mastery)
- People trust benevolence
- People do not differentiate between 'agents': Biological vs Chemical nor radioactive vs irradiated

Key Findings:

- Focus groups with First Responders and Health Workers across Canada
  - Want their families protected
  - Know their SOPs but heir own organizational emergency plans
  - Communication issues are their main concern
  - Do not know their counterparts in other organizations

The Psychosocial Risk Assessment & Management (P-RAM) Framework



C) Research with series of National Surveys

Series of National Public Surveys
on Risk Perception & Preparedness

N=1500 Canadian, representative by province, gender, age
Phone interview of 30-45 minutes
Template from Slovic et al. & Krewski et al.
- List of Hazards x List of Appraisals

(1992: Environmental Hazards)
2002: Population Health Risks
2004: CBRN Terrorism Risks
2007: Food Risks
(2011 : Radiological & Emergent Risks)

Key Findings: Factor Analysis of Risk Appraisal

Across CBRNE Hazards: 3 Dimensions are robust

	F1 IMPACT	F2 MASTERY	F3 INTRICACY
Perceived severity for others	.97		
Perceived severity for oneself	.89		
Perceived likelihood (prob.)	.33		
Perceived knowledge		.53	
Perceived control		.42	
Perceived complexity			.51
Perceived uncertainty			.39

→Public communication to better address Mastery and Uncertainty

Key Findings:

Where get their information?
1st source : Friends & Family
→ social norms, public education, social media

Mass media more than government websites

Trust :

Government < Media < Friends < Experts (p < .01)

Discriminant function of Trust between spokepersons (Loadings,p<.01)

Integrity	.64*
Discourse Plausibility	.56*
Working towards Public's Good	.55*
Competence	.34

Key Findings:

* Manova analysis on differences for perceived risk
  Social Environment > Physical Environment

* Significative interactions with Gender, Education, Region

* Main correlates: Severity , Uncertainty , Sense of Control

Public Perceived Risk =

P. Prob + *P.* Conseq + *P.* Uncertainty + *P.* Control

Key Findings: Empowerment

Using Regression Analysis (p<.01)

- Personal Preparedness

  = *P.* coping efficacy + Front-line preparedness

  is predicted by Behavioral efficacy and Perceived Front-line Preparedness

  (Knowledge, Skills, Feasibility: Sense of Mastery) (Neighborhood)

- Avoidance Behavior

  = Worry + Lack of control + Uncertainty

  is predicted by degree of Worry (severity), Lack of perceived control, and Uncertainty / complexity

So, … it means: - increase relevance of preparedness, not fear
- show achievable solution
- empower through knowledge and network

→ public education (e.g. on radioactivity)

Uncertainty

- Focus Groups
- Survey Analysis
- Experimental Work
  - Manipulating types of uncertainty in messages

    Divergence of sources / Contradiction of data / Lack of data


ontological


Stochastic


semantic


epistemic

Challenges in Managing Public Responses to Extreme Events

From the Needs Assessment Consultations derived 4 objectives

1. Planning for public involvement, community capacity and resilience
2. Providing psychosocial training for responders and decision-makers
3. Maintaining public trust and confidence
4. Establishing inter-organizational decision-making

II- CBRN Training Program and Tools (PRiMer)

To reframe within a Population Health framework

From just about…		To include…
Hazard	→	Consequences
Mortality / adversity	→	Resiliency
Reactive	→	Proactive
Individual vulnerability	→	Collective capacity
Expert Control	→	Engagement &Collaboration

PRiMer Psychosocial Risk Manager

Program & Tools

5 Tools

- Web-based Self Study Guide
- One-Day Workshop
- Interactive Decision Support Tool
- Psychosocial Checklist
- GIS Capability Tool

5 Principles

- Anticipate
- Communicate
- Listen
- Empower
- Coordinate

5 Psychosocial Considerations

- Perceptions Matter
- Routines Predict Behaviour
- People Act in Purposeful and Adaptive Ways
- People Are Differentially Affected
- People Want to Connect and Help

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Web-based Guide

(synthesis of evidence-based psychosocial considerations)

One-Day Training Workshop

GAPVILLE

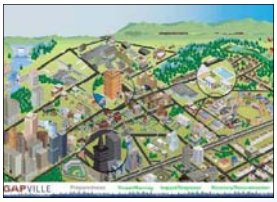
A focus on:

- Case studies
- Simulation & Role-play
- Group activities
- Hands-on exercises
- Intro to *Psychosocial Decision Support Tools*

PRiMer Psychosocial Risk Manager — Gapville Interactive

Educate & Inform:

- Used to put psychosocial needs of at-risk populations in a community context
- Provides resources for further consultation



PRiMer Psychosocial Risk Manager — Sharing our Strengths

The PRiMer Decision Support Tool

Sharing our knowledge base of psychosocial responses to extreme events, and tools to prepare your community, pre-event.

- Psychosocial Checklist
- Gapville Interactive
- Social Media Based Capability Tool; Community Mapping using Google Maps

GIS CapabilityTool

- Geographic Information Software (GIS) allows planners to access a map of their community through Google Maps
- Legend provides planners with various symbols that can be used to plot resources, organizations, communication points

PRiMer Psychosocial Risk Manager — Psychosocial Checklist

Assessing Needs:

- Used to 'map' psychosocial issues
- Focuses users on gaps in their planning
- May be completed online or on paper

PRiMer Psychosocial Risk Manager — Capability Tool

Community Mapping Pre-event:

- Community mapping using Google Maps; shared or private
- Asset categories: people, service, space and equipment
- Allows people to make connections and determine needs, *pre-event*

PRiMer Psychosocial Risk Manager

Community Mapping

The power of *pre-event* asset mapping...
From reactive to proactive,
individual vulnerability* to *community resiliency

GAPSanté
Groupe d'Analyse Psychosociale, uOttawa

Substantive Issues :

- Understanding the public - more than false perception
  - other valued dimensions/stakes
  - listening, polling, engaging
- Empowerment - conveying Sense of Mastery, Efficacy
  - educating, training (info, skills, rehearsal)
  - sharing responsability and governance
- Uncertainty - maintaining Trust,
  - explaining unknowns
  - transparency

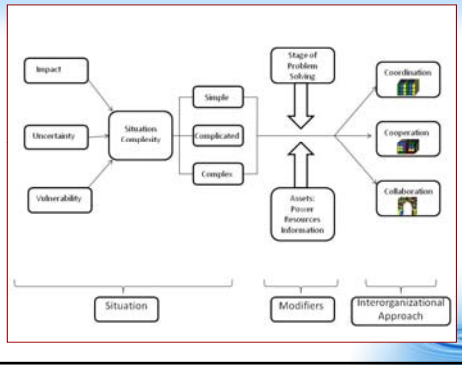
Next steps

- Inter-organization communication ...
- Risk Governance
- Social media as a means and a challenge

Currently:
In-Vivo Simulation of Shared Decision Making

Task 1: Framework Development

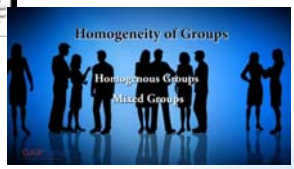
Model of inter-organizational problem solving



Task 2: Hydra–like experiment

Independent Variables

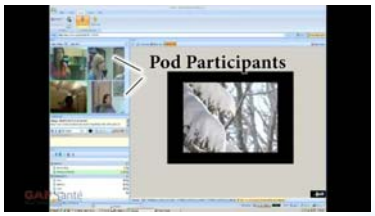
The approach to decision making... Coordinated or Collaborative



The composition of participant groups – Homogeneous or Mixed.

Example of experiment

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



Videos YouTube

- Gap-Santé Video
- PRiMer Overview Video
- PRiMer DST Video
- Social Media Video
- C4 SDM Framework Video
- In-Vivo Tool Video

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Thank you / Merci

louise.lemyre@uOttawa.ca

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