GAP Santé
Groupe d'Analyse Psychosociale, uOttawa

Strategic Risk Communication on H1N1 in Canada :
Lessons on Empowerment, Listening and Uncertainty

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

With
J. Lee, M-P. Markon, S. Gibson, M. Turner, W. Corneil & D. Krewski

In collaboration with

PUBLIC HEALTH AGENCY of CANADA
AGENCE DE SANTÉ PUBLIQUE du CANADA

The Public Health Agency of Canada (PHAC)

Elaine Chatigny
Cathy Allison
Kate McCloskey-Binnie
and Team

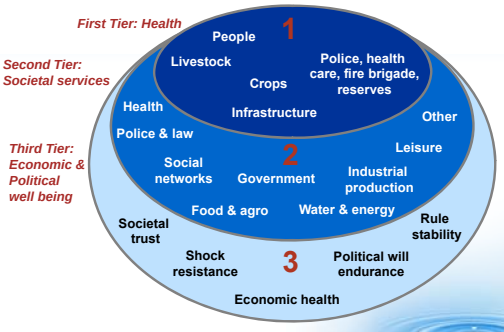
And funding from SSHRC-Canada, DRDC-CSS, and the R.S. McLaughlin Foundation

Defining Risk

Risk = ∫ Prob (Hazard) x Prob (Consequences)

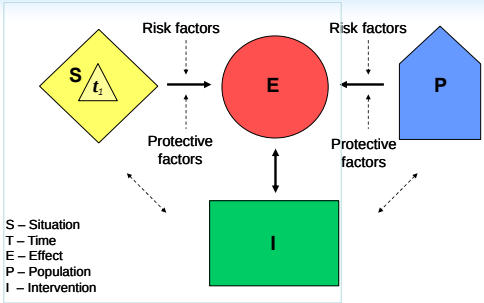
- Traditionally, risk focuses on mortality or morbidity and does not consider the social aspects of risk
- Risk= p(occurrence Hazard)
  x p(mortality+morbidity+psychosocial ripple effects)
  = Meaning, Relevance
- Risk is not solely an individual consideration; it has a collective meaning. It affects families, organizations, communities, and societies. It should be analyzed in a systems approach

Tiered Effects

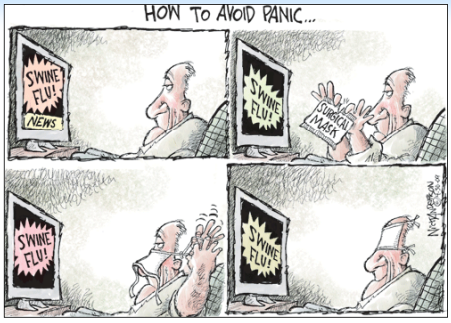


EU-ASSRBCVUL, 2006

Psychosocial Risk Assessment & Management Framework (P-RAM)



Psychosocial Matters!
It relates to how we *think*, *feel* & *behave* (cognitive, affective, behavioral)



Parallel Streams: The Biomedical Reality & 'The Perception' i.e. Psychosocial Reality

Expert: Hazard driven (Probability driven)

Risk Assessment → Risk Guidelines → Risk Mitigation

----------|----------|----------|----------

Public: Consequence driven (Meaning driven)

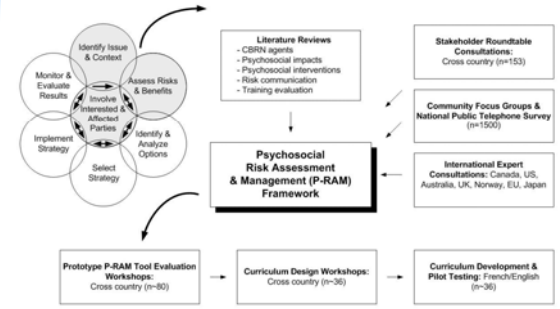
Risk Perception → Risk Acceptability→ Risk Behaviours
(Risk Understanding)

---------- ---------- ----------

Risk Evaluation *Risk Tolerance* *Risk Management*

7

Risk Analysis Cycle, Strategic Risk Communication & Psychosocial-RAM Framework



GAP Santé — Groupe d'Analyse Psychosociale, uOttawa

Joint Venture: Suite of research projects
Applied & Basic
Qualitative & Quantitative

Partners

- Institute of Population Health, University of Ottawa
- Public Health Agency of Canada
- DRDC Centre for Security Science (21 federal departments/agencies)
- With stakeholders: Public, NGOs, Private sector, Health workers, Responders

Understanding the issue(s)…

PHAC: - Drafted a Plan based on their risk assessment & management
- Designed a Strategic Risk Communication
-> Consulted on the plan (Experts, Responders, Unions…)

- focus groups with the public (generic, targeted)
- polls
- tested hypotheses through booklets of 'forced choice'

- Intersectoral & Interdepartmental Working Group
- Private Sector Interdependency Exercice
→ Very revealing : information?
assumptions?
implications?

10

Background knowledge on Perception of Risk

-non-linear
-overestimate small risks
-underestimate high risks
-fear ≠ 1/security
- biotic (biological) ≠ inert (chemical)
- Dread, Familiarity, Beliefs
- Sense of Control
- Novelty

Our qualitative work across hazards:

- Focus groups with citizens across Canada
  - Different views depending if under personal control
  - Expect regulation if uncontrollable
  - People focus more on the consequences than the hazard
  - Would do things to protect dear ones
- Focus groups with health workers and responders across Canada
  - Want their families protected
  - High sense of call of duty

Methods: National Surveys

National Public Survey(s) of 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: Health Hazards
2002: Population Health Risks
2004: Terrorism Risks
2007: Food Risks

PHAC: Shorter forms
2009: Pandemics
2010: H1N1

Factor Analysis of Appraisal

	F1	F2	F3
Perceived risk for Canadians	.97		
Perceived risk for oneself	.89		
Perceived likelihood	.33		
Perceived knowledge		.53	
Perceived control		.42	
Perceived complexity			.51
Perceived uncertainty			.39
	IMPACT	MASTERY	INTRICACY

Perception of Risk

Regression Analysis:

Public Perceived Risk =

Perc. Prob + *Perc.* Severity + *Perc.* Control + *Perc.* Uncertainty

Empowerment

Regression Analysis:

1) Worry = *Perceived* Prob + Lack of control

2) Personal Preparedness= *Perc* coping efficacy + Front-line preparedness

3) Avoidance = Worry + Lack of control + Uncertainty

So, for H1N1… it meant: - increase relevance, not fear
- show solution useful to lower probability,
- empower

TRUST

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

Where get their information? 1st source : Friends & Family
→ Social Norm

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

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

Regression
Trust = *Perc.*Benevolence + *Perc.*Competence – *Perc.* Conflict of interest/logic

Public Survey Data

Regression analyses (p<.01) :

Perceived IMPACT linked to Probabilities predicts Worry

Sense of MASTERY linked to Knowledge predicts Mitigation Action

Perceived INTRICACY linked to Uncertainty/Complexity predicts Avoidance Coping

Implication for communication

To promote protective behaviors

more via Sense of Mastery i.e. messaging knowledge

than via Perceived Impact i.e. messaging probabilities

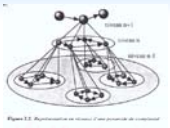
Information that increase Intricacy (Uncertainty, Complexity)

will lead to Avoidance

so, need to address types of Uncertainties

Uncertainty…

INHERENT Uncertainties



EPISTEMIC Uncertainties


The Role of Communicating Uncertainty…

- Focus Groups
- Survey Analysis
- Experimental Work

Communicating Uncertainty has an Impact on Trust

depending if - due to divergence of experts
- due to contradictory results
- due to lack of data/knowledge

Dishonnesty vs. Incompetence vs. Evolution

Listening to the Audience… about H1N1 in Canada

PHAC: - Tested messages in focus groups, ran polls
- tested hypotheses through booklets of 'forced choice'

- Data monitoring from baseline to post-waves of campaign: time series
- Media Content Analysis

- Conference lines with Target Groups: Private Sector, First Nations Health Workers, with Provinces and Territories

to give information
to pick-up information about motivations, uncertainties

22

Outcome

→ adjustment: vaccination for solidarity, business continuity, caring. prevention
different vaccines for pregnant women: lack of data
different protocols across jurisdictions : context specifics
costs of 50M doses: choice & values of Canadians

PHAC: 94% reported knowing the information
73% satisfied with Government's response

64% reported increasing hand washing
61% reported coughing in their sleeves
71% reported influenced positively towards vaccination

45% population got vaccinated (90% in Higher-Risk groups:Reserve)

23

GAPSanté
Groupe d'Analyse Psychosociale, uOttawa

In conclusion:

Risk Management Methodologies:
- Mixed Methods + Mixed Protocols : Quantitative &Qualitative
- Basic & Applied (Baseline, Benchmark)
- Partnerships: Academic, Public Agencies, Private sector, NGOs

Substantive Issues :
- Listening (Understanding, more than false perception)
- Empowerment (Control, Sense of Mastery)
- Uncertainty (Trust, Epistemology, Transparency)

www.gapsante.uOttawa.ca
louise.lemyre@uOttawa.ca