

ADDRESSING THE CHALLENGES OF CBRNE

Recent and current research in Australia

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Disaster Response and Resilience Research Group

- Director: Professor Beverley Raphael
 - Professor Population Mental Health (UWS)
 - Professor Psychological Medicine (ANU)
- Established in 2005 with funding from NSW Health and the University of Western Sydney
- Multiple roles
 - Policy support
 - Research
 - Education and training development
- Mission

To provide an evidence base and platforms to support prevention, preparedness, response and recovery (PPRR) with respect to the mental health aspects of terrorism, disasters, pandemic influenza, and other major adversities (All Hazards).

DRR Research

■ Population

- threat perception, concern, anticipated response, compliance with protective behaviours, strengths and vulnerabilities

■ Community / Risk Groups

- preparedness, societal resilience, recovery



■ First Responders and Health Care Workers - as organisations and individuals

- preparing for population response and own/colleagues' responses, training needs, risk communication, work attendance

Current and Recent CBRNE-related projects

1. **CBRN Psychosocial Guidelines Project**
 - First responders: guidelines, decision support tool, training
2. **Modelling Hazards and Response**
 - Population surveys: 2007 repeated and extended in 2010
3. **Community Survey on Emergency Events**
 - R/N pilot study with Australian Nuclear Science and Technology Organisation (ANSTO)
4. **Addressing the challenges of CBRNE**
 - Population survey and focus groups

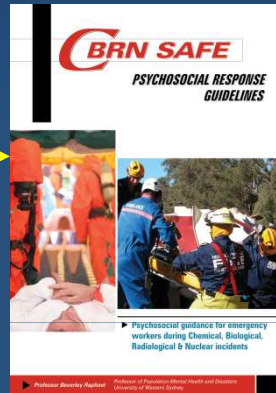
1. CBRN Psychosocial Guidelines Project

CT User Groups, NSST, UWS

Consultation
Literature Review
Surveys

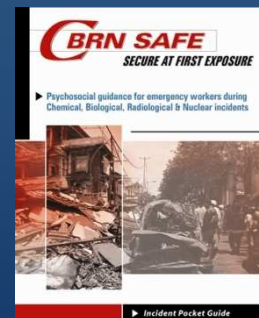
18 Partners:

- Fire
- Police
- Paramedic
- ADF
- Red Cross



Guidelines

Psychosocial Management



Decision-Support Tool

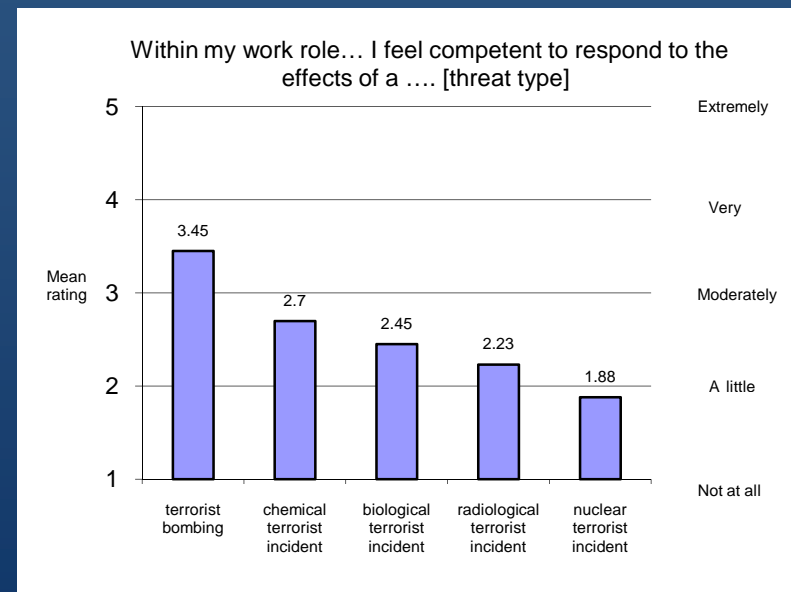
SAFE Pocket Guide

CBRN SAFE
Training

Training Module

Key Processes

- Consultation with Partners & Stakeholders
- Worker Surveys*
 - Perceptions
 - Concerns
 - Needs
- Product Development

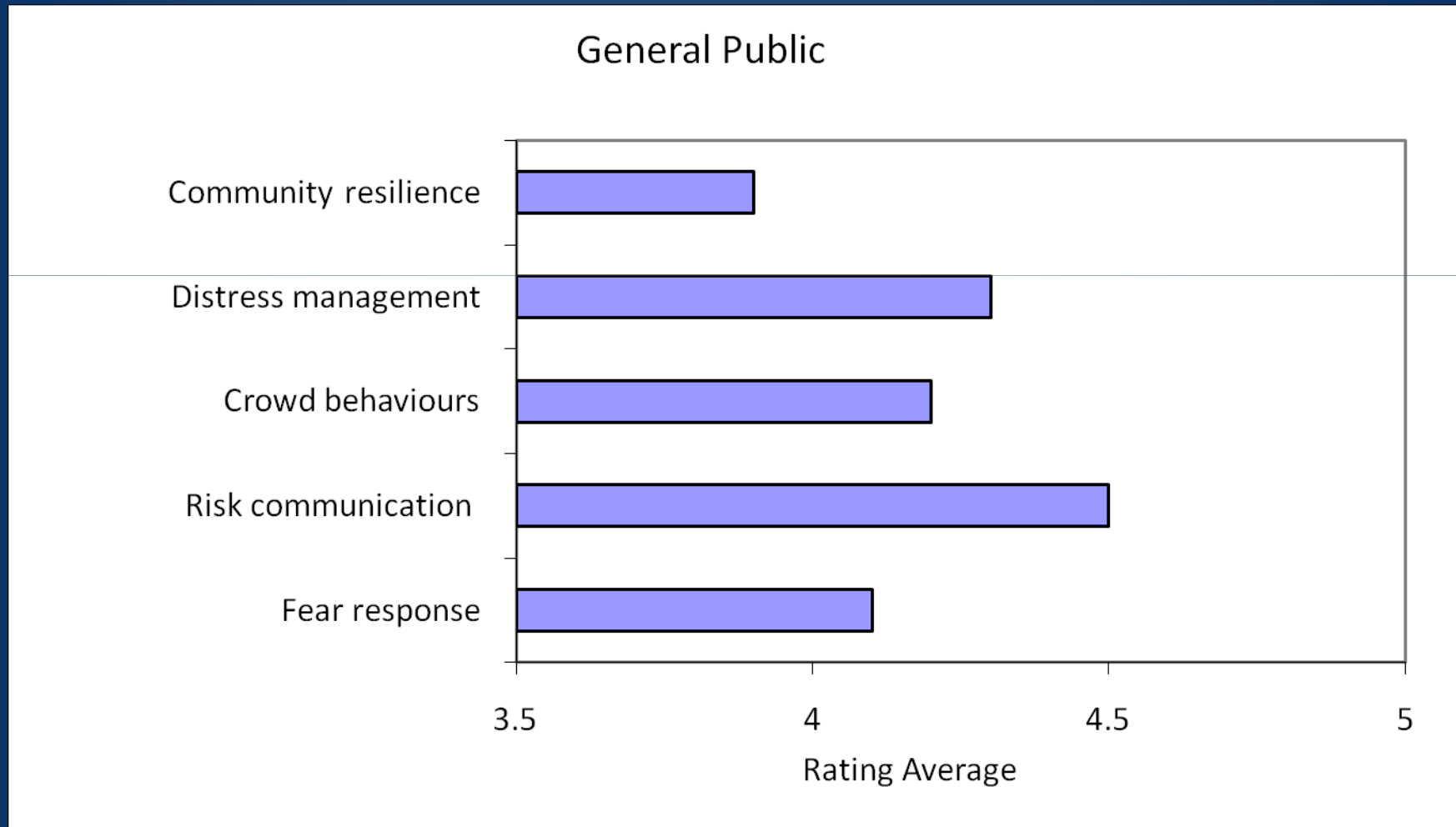


*Stevens et al., 2010 Determinants of paramedic response readiness for CBRNE threats.

Biosecurity and Bioterrorism . 2010 8(2), 193-202

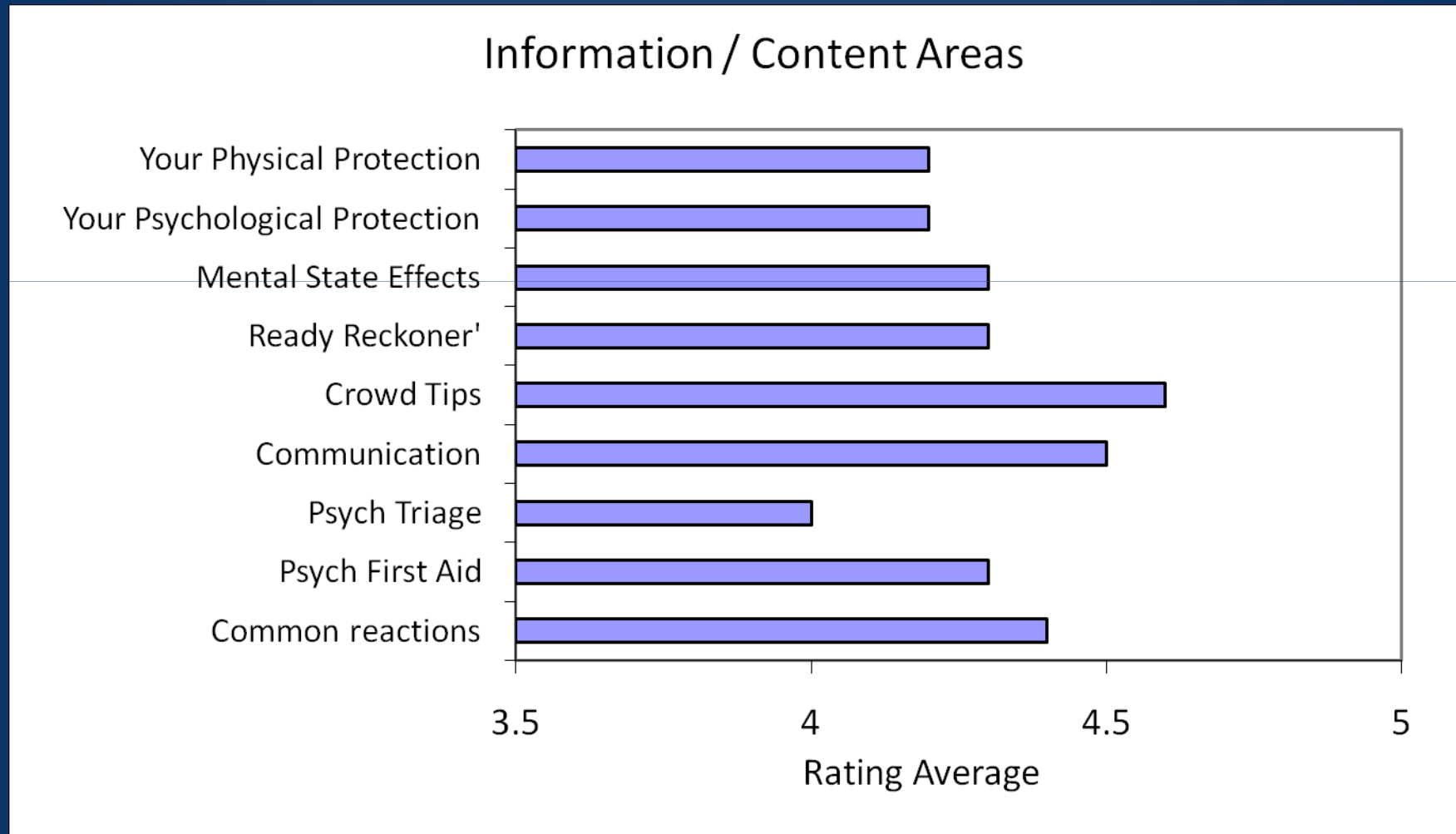
CBRN Information Needs: General Public

Survey 1: Specialist Org. Reps. (N=20) "Priority information needs for your personnel"



'Prototype' Pocket Guide: Priority Content

Survey 2: Specialist Org. Reps. (N=15) "Which proposed content most useful"



Psychological First Aid - Keep S.A.F.E

- ▶ **GOAL:** Minimise harm to workers & the public after CBRN incidents.
-

S **Safety** - *Establish immediate safety*

- Offer practical help & emotional support

A **Arousal** - *Reduce intense arousal*

- If overwhelmed, calm & orientate person
- Demonstrate slow breathing

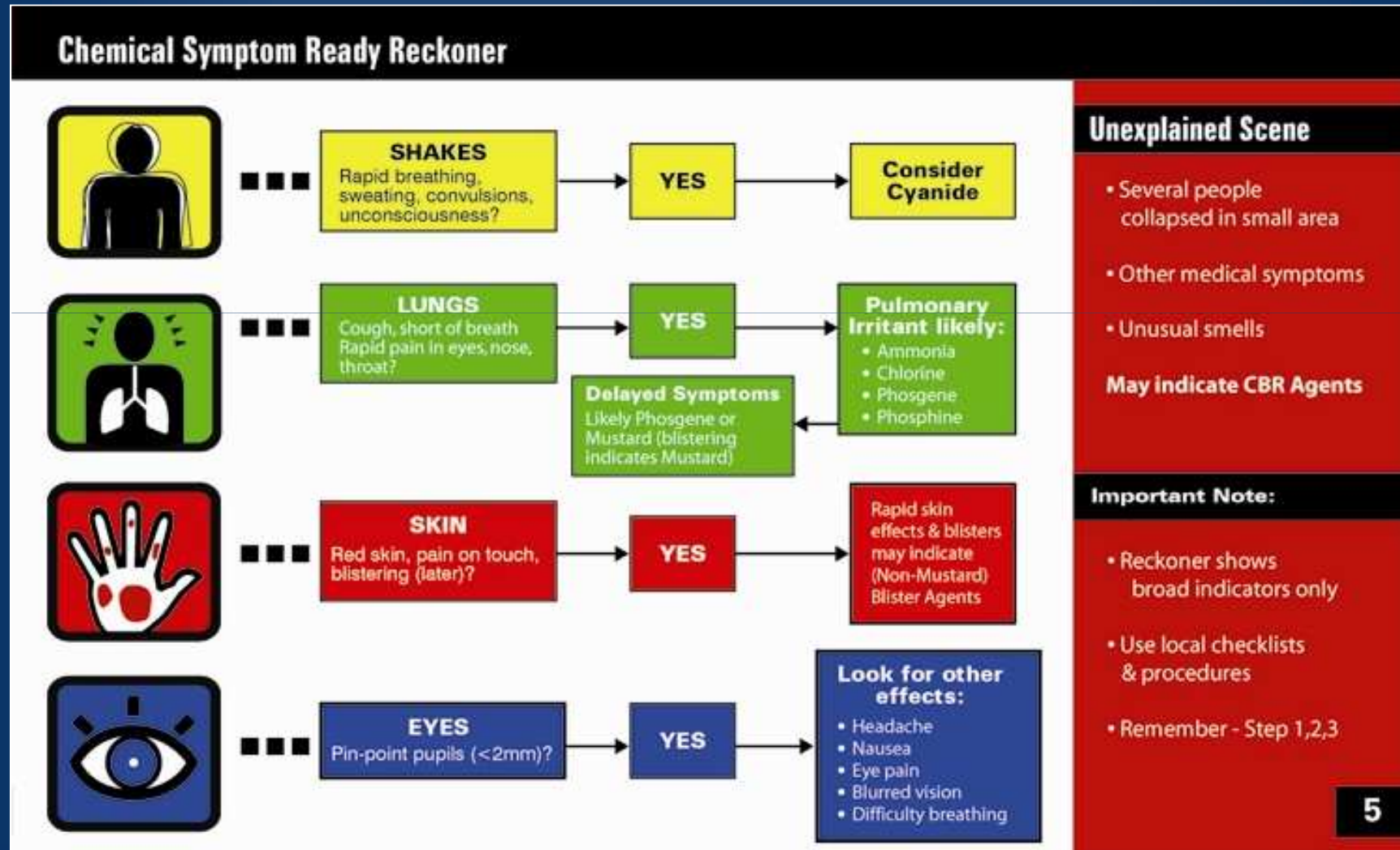
F **Fear** - *Provide info about risks*

- Actions (theirs/others) to keep safe
- Reassure – stress reactions are normal

E **Empower & Exit**

- Let them talk if they want to
- Help them act for themselves, then move on

Chemical Symptom 'Ready Reckoner'



2. Modelling hazard perceptions

- NSST funded (12 months)
- Population baseline measures of threat perception and anticipated compliance with protective/public health behaviors
- Threats
 - terrorism
 - pandemic influenza
 - climate change
 - drought



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If you see something, say something.

If you see an unattended bag, package or are witnessing suspicious activity on a station or train, don't keep it to yourself.

Tell a Transit Officer, a Transit Police Officer or other staff member, or phone the Police on 000.

An initiative of the New South Wales Government

secure.nsw.gov.au

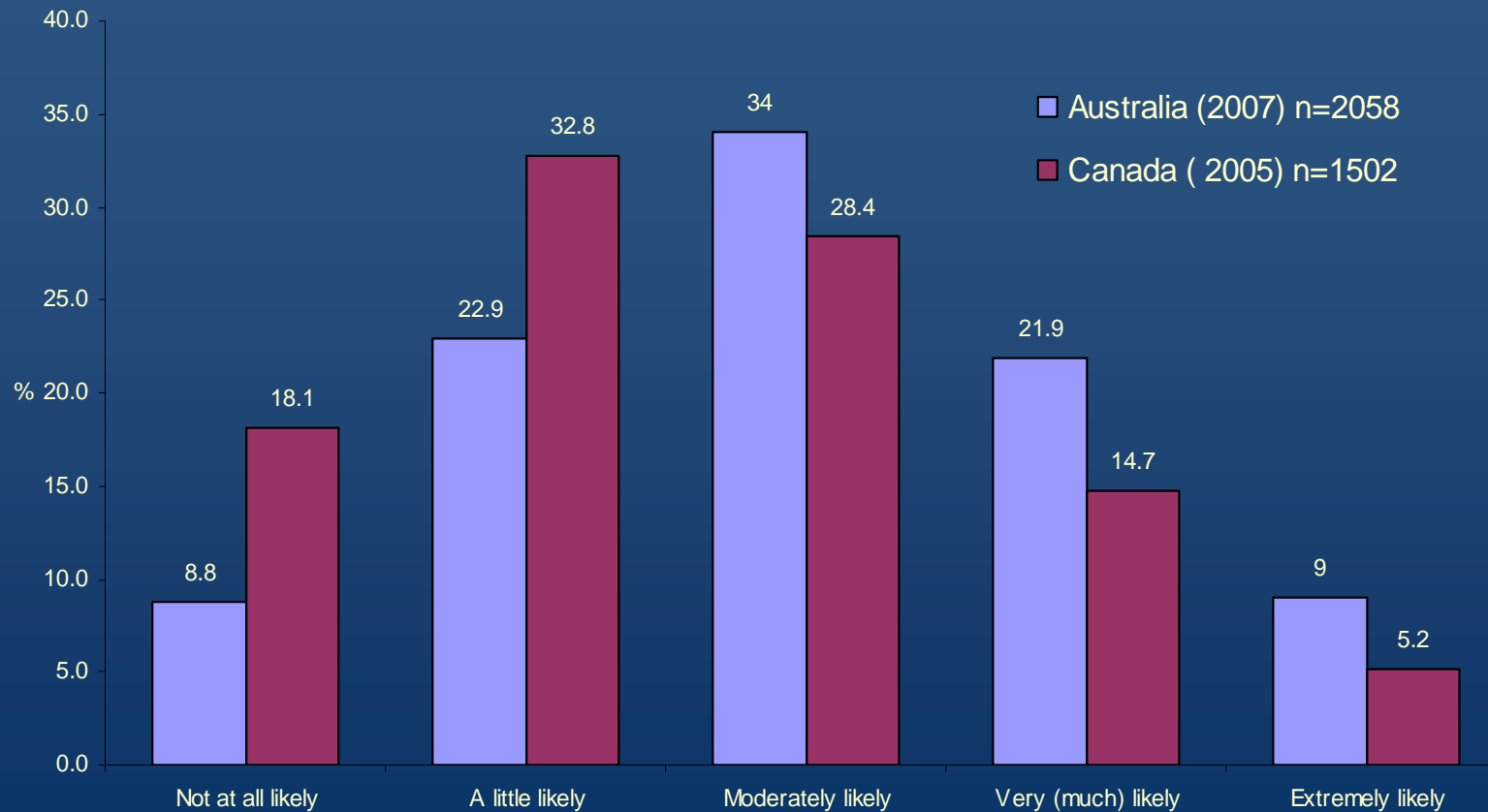
Survey modules

- Baseline measures in 2007 (EMA-funded)
- Repeated and enhanced in 2010
- Identify factors associated with willingness to comply
 - identify groups in the population that may be more resistant to individual measures
 - understand motivation for complying
 - identify ways to target risk communication strategies, health education



2007 data: Comparison with Canadian data

Q: How likely do you think it is that a terrorist attack (bombing) will occur in Australia (Canada)?



* Lemyre, Lee, Krewski Canadian National Public Survey of perceived CBRN terrorism threat and preparedness: A research report for the CBRN Research and Technology Initiative (2005)

Changes in population threat perception (2007 – 2010)

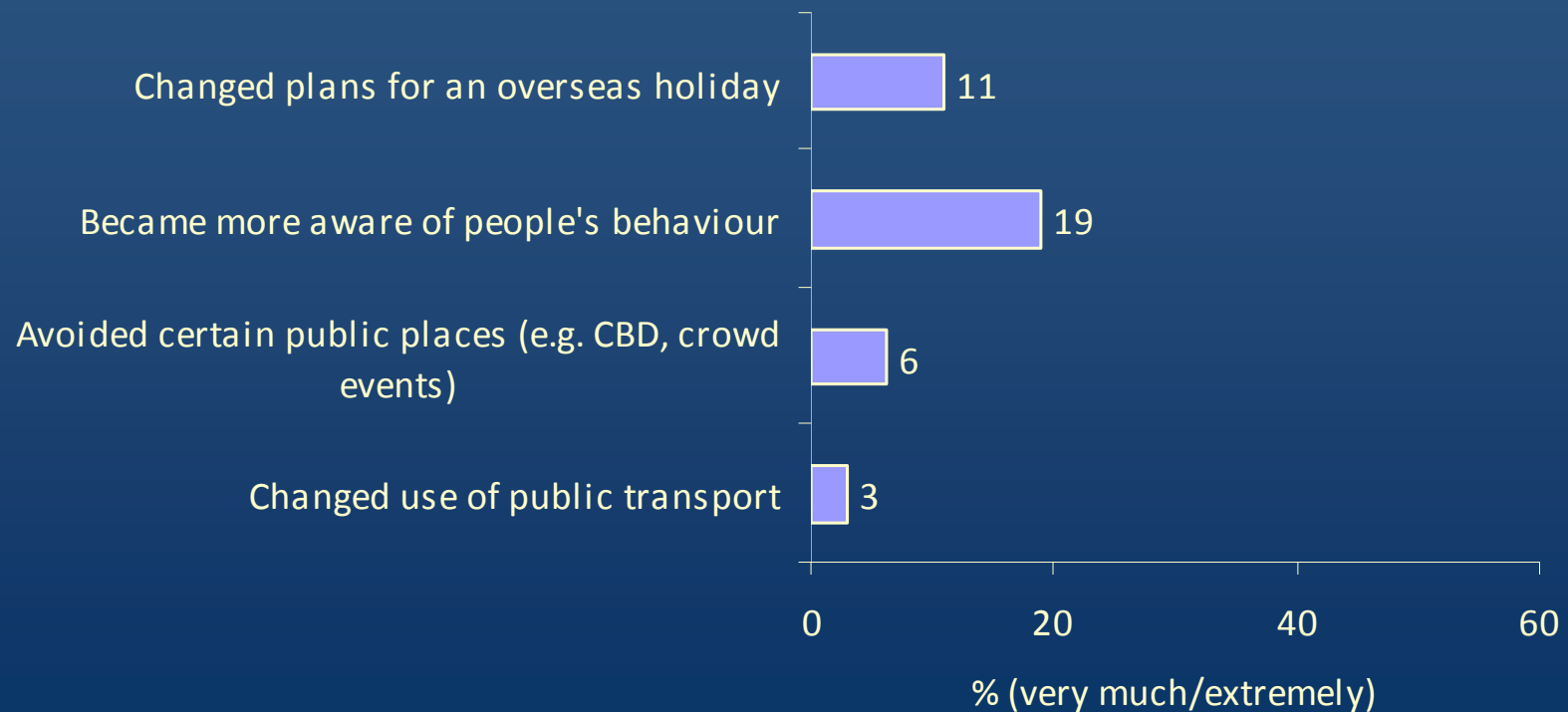
	[Threat] likely		Concern for self/family		Changed life	
	2010 level	Change	2010 level	Change	2010 level	Change
Terrorism	33%	± 1%	38%	↓ 6%	27%	± 1%
Pandemic influenza	43%	↑ 28%	33%	↓ 13%	39%	↑ 15%
Continuing drought	66%	↑ 9%	42%	↓ 18%	73%	↓ 13%
Worsening climate change	50%	↓ 13%	40%	↓ 16%	71%	↓ 6%

■ Terrorism threat perception

- Perceptions of threat likelihood have stayed the same (around 33% very/extremely likely)
- Concern for self/family declined 6%
- No change in degree to which people have changed life due threat

Terrorism threat-related behaviours

Q: Have you done any of the following due to the risk of terrorist attack?



3. Community preparedness for emergency events (R/N pilot study)

- Project conducted with support from ANSTO (2008), team included NSW Fire Brigade
- Focused on R&N incidents or accidents
- Pilot study (n=324) looking at preparedness, knowledge (17 items), threat perception, trusted sources of information, anticipated response



Main findings

- Greater knowledge of R/N issues associated with
 - Lower risk perception
 - Greater perceived ability to cope in event of emergency
 - Greater likelihood of taking effective action / lower likelihood of maladaptive actions
- Generally knowledge poor / misconceptions
- General terrorism threat regarded as low
- Possible vulnerable groups
 - Females
 - Those with dependent children
 - Those with lower levels of education



Anticipated response

	% Not at all/a little	% Moderately	% Very/ extremely
<i>Targeted Actions</i>			
Seek shelter indoors	5.6	14.1	80.4
Call family to check if they are ok	1.3	6.5	92.1
Wash off radioactive material asap	6.8	12.0	81.1
<i>Helping Behaviour</i>			
Call the emergency services	11.4	12.4	76.3
Stop to help others	9.5	40.1	50.4
<i>Fleeing Behaviour</i>			
Try to get back home asap	13.4	21.3	65.2
Go home, pack, get away in car	27.8	28.8	43.4
<i>Pausing</i>			
Spend time gathering information	10.8	23.2	66.0
Remain & await instructions	22.2	28.4	49.4
<i>Long Term Changed Behaviour</i>			
Move away permanently	35.5	27.1	37.4
Have more frequent health checks	12.5	19.3	68.2

4. Addressing the challenges of CBRNE

- NSST funded (24 months)
- Building on pilot study of R/N emergency events with ANSTO
- Project Team – UWS, Newcastle University, ANSTO, NSW Fire Brigade, Queensland Emergency Services



CBRNE project outline

- Two main work areas
- Population survey (Phase 1)
 - communication
 - preparedness
 - trust
 - anticipated response
- Risk communication strategies (Phase 2)
 - Development with stakeholders
 - Scenarios tested with general population
 - Online scenario-based assessments



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“There are no right or wrong answers – only perceived threats to national security.”

Thank you

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