



Risk communication in chemical terrorism - what do we know and what are the challenges ?

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Terrorism ...low absolute risk but high impact





Preparedness

- After New York, London, Madrid and Bali it is clear that large scale acts of terror are possible in seemingly the safest of places
- Historical reassurances of safety, Australia's geographic isolation for example provide little or no protection against this transnational threat
- Preparedness always needs a team approach





Public preparedness – communicating risks effectively

- Good risk communication helps create that trust necessary for successful response operations and societal resilience – the key elements for an effective risk management strategy

Ross R, Risk and decision-making in homeland security. Risk Sciences Branch, Office of Special Programs, DHS, Science and Technology Directorate.



Public preparedness – communicating risks effectively

“Risk communication should be effective, pervasive and integrated”

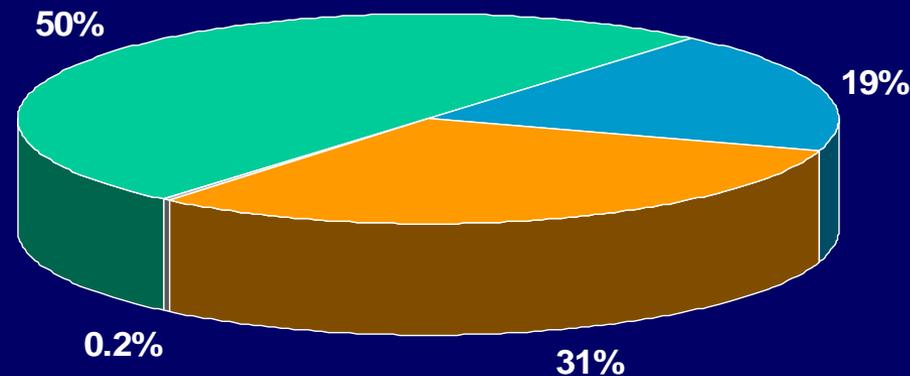
Effective- means crafted with specific intent (e.g. to inform or influence behaviour) and tailored to various audiences (e.g. accounting for language and cultural difficulties)

Pervasive – means analyst to analyst, decision-maker to decision-maker, government to public AND public to government

Integrated – means across decision-making processes at strategic, operational and tactical levels, across emergency response planning and readiness/ capability building efforts, across response communities (police, fire, medical) and across all aspects or phases of response operations



1995 Sarin attack on Tokyo's train system by Aum Shinrikyo



- 2,749 'Poisoned' according to police records, but did not require hospitalisation
- 1,046 Hospitalised
- 1,705 Sought medical care but required no treatment
- 12 Deaths



1995 Sarin attack on Tokyo's train system by Aum Shinrikyo

- Provides evidence on the adverse behavioural reactions putting pressure on public health facilities where a large number of individuals needlessly sought medical care
- These responses may have been exacerbated by the Tokyo authorities failing to advise the public on what to do in the following hours after the attack. Tokyo had no effective risk communication or public affairs strategy in place to cope and co-ordinate a response to a mass casualty attack

Pangi R, "Consequence management in the 1995 Sarin attacks on the Japanese subway system". *Studies in Conflict and Terrorism*, 2002; 433-440.



1995 Sarin attack on Tokyo's train system by Aum Shinrikyo

"President Clinton stood beside the victims and gave a clear and quick message that he would never forgive the terrorists. This seemed to help the American people recover their trust in their society and leaders, and order and justice was reasserted.

But in Tokyo, on the contrary, our leaders and the police kept silent during the initial hours when the whole public was in shock. Ironically the spokesman for the cult seemed to be on television constantly, lying to the public through the media. This fact only made victims feel deserted, but also pushed the general public into further anxiety."

Kanzo Nakano, Chief and Director of the Department of Psychiatry at St Luke International Hospital

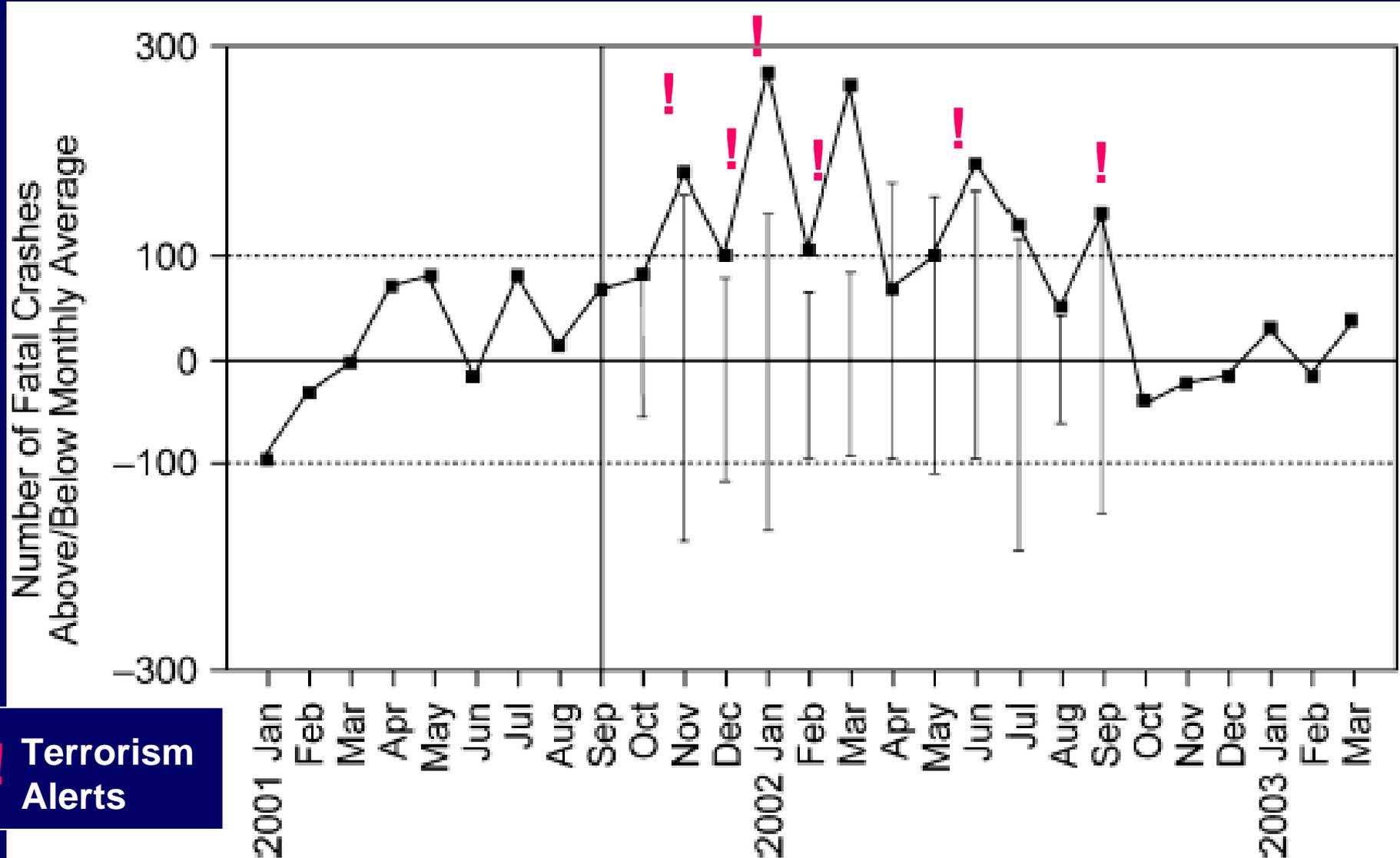


Inappropriate risk perception

- In the months after 9/11, a large number of Americans chose to drive long distances rather than fly in the US, believing the risk was lower than of terrorist attack in taking a flight
- However the actual risk of driving is greater than travelling by plane

9/11

Road fatalities increased by 1,595 over the seasonal average



! Terrorism Alerts



Anthrax Attacks

- During the anthrax attacks, a number of Americans unnecessarily sought a prescription of ciprofloxacin or doxycycline used to treat anthrax
- The risk communication strategies employed did not successfully convey the message that individuals should not take ciprofloxacin unless they were a member of a specifically defined high risk group (e.g. postal workers or those with potential exposures on Capitol Hill)

Kenneth Shine "For a hearing on risk communication: National Security and Public Health". Testimony 29th November 2001



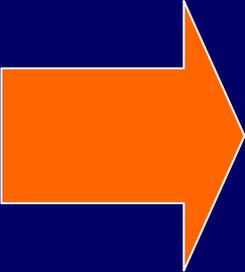
Anthrax Attacks

Late October 2001

- 3% tried to get hold of antibiotics
- 6% were seriously considering it

After death of two postal workers - early November 2001:

- 5% obtained the drug
- 1 % took the medication

- 
- Some ciprofloxacin stores exhausted
 - Many unnecessarily experienced the drug's adverse effects
 - Risked antibiotic resistance



Risk communication as a defence against chemical terrorism

- Governments and public health authorities face significant challenges in preparedness for events from emerging threats such as chemical and biological terrorism
- Excellence in risk communication underpins this effective response
- It is an essential tool to reduce the adverse changes in behaviours and attitudes by individuals following a terrorist attack



Risk communication – best practice

- Research on the affect component in risk perception has identified the importance of maintaining the credibility of communications and ensuring the public has trust in those delivering the messages

Renn O, Levine D. Credibility and trust in risk communication. In Kasperson and Stallen, Communicating Risks to the public 1991



GAP analysis for future risk communications

- Whilst there has been extensive work on risk perception and communication regarding natural disasters, there is much less research relevant to terrorism, particularly chemical terrorism



GAP analysis for future risk communications

- Factors such as scientific complexity of chemical agents is likely to require risk communications that differ significantly from methods historically applied



GAP analysis for future risk communications

- The risk analysis literature and studies have tended not to look at subsections of the population who may well respond differently to messages

Fischhoff B et al, Evaluating the success of terror risk communication. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice and Science* 2003; 1: 255-258



Spiral dynamics

- By applying the concept of the evolutionary spiral in the three areas of risk analysis: risk perception, risk communication and the social amplification of risk we can form a comprehensive theoretical framework for developing and testing risk messages



Summary

- There remain a number of gaps in knowledge and skills required to risk communicate in a chemical terrorist incident
- Because risk communication determines the public's response, and hence both use of public resources and societal resilience these gaps should be filled

