Department *of* War Studies

KING'S College LONDON

Risk communication in radiological terrorism

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EU Scientific Seminar 2015 on Risk Communication
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Overview

- Radiological vs nuclear terrorism
- Risk perception and why it matters
- Public responses to radiological incidents
- Public responses to a hypothetical radiological attack
- Improving risk communication

Radiological vs nuclear terrorism

Why do public perceptions matter?

- Public reactions can be a major determinant of the overall **economic**, **social**, **physical** and **psychological** impact of a terrorist incident

- By influencing risk perception, effective communication can improve post-terrorism outcomes by:
  - Reducing unnecessary care-seeking by unthreatened populations
  - Enhancing likelihood that at risk populations will take protective actions
  - Reducing rumours and fear
  - Maintaining public trust and confidence / increasing co-operation

Factors that influence risk perception

- Voluntary vs **involuntary**
- Familiar vs **unfamiliar**
- Control vs **lack of control**
- Fair vs **not fair**
- Natural vs **technological**
- Ongoing risk vs **dread risk**

Additional factors

- Lack of information about probability of risks
- Affect heuristics (risk as feelings) v risk analysis (public v expert)
- Extent of expert agreement
- Proximity

How will the public respond?

Discouraging non-optimal responses

The PIRATE project

http://www.pirateproject.eu/

A two year project assessing public intentions and information needs following biological and **radiological terrorism** (smallpox and **RED**) with 3 partners:

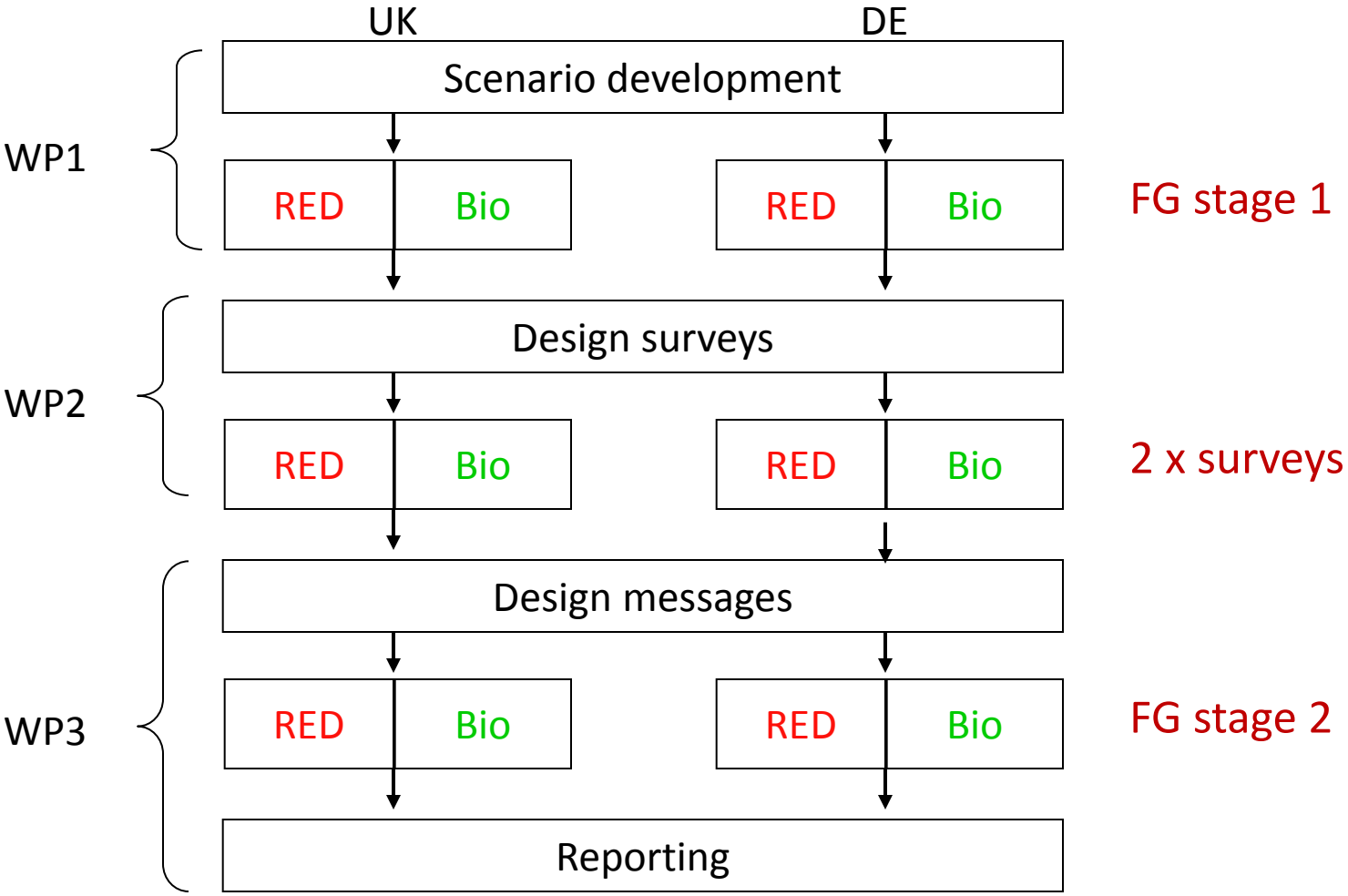
Public Health England (formerly)

King's College London

DIALOGIK (University of Stuttgart)

With financial support from the Prevention of and Fight Against Crime Programme European Commission - Directorate-General Justice, Freedom and Security

PIRATE methodology



PIRATE focus group method

THE INDEPENDENT

EXERCISE

(Ireland €1) 60p
Tuesday 12th May 2009
www.independent.co.uk • Number 6305

UK on High Alert after Possible Radiation Threat

Exclusive by Gemma Hughes

OFFICIALS believe that terrorist cells that are active in Britain may have acquired a radioactive source which they intend to use as a weapon against the public.

Thought to be acting on specific intelligence that a UK terrorist network has acquired a radioactive source, police have launched a series of raids across the country in recent weeks but have remained tight-lipped about exactly what the raids were hoping to uncover.

In recent weeks The Independent has reported growing fears within security services that terrorists were getting nearer to perfecting their abilities of building a radiological weapon and that the raids have apparently revealed that the terrorists may now be able to access all the materials they need to do so.

If correct, it will be the first time terrorists have managed to access such material. The news follows recent arrests at the major UK port of Harwich, Essex, which confirmed terrorist intentions to bring radiological material into the UK.

The radiation monitoring programme (Cyclamen), which was established in 2003 and involves routine screening at ports and airports for the illicit movement of radioactive materials, has until now been seen as key to the success of stopping the terrorists accessing radiological material in the UK to date.

The news that material is now accessible to terror groups will put pressure on authorities to step up the threat alert level, although currently the Government does not believe that the overall level of threat to the UK has increased beyond the heightened levels from that following the events of September 2001.

However it does have plans drawn up to deal with any form of radiological weapon attack.

→

Inject 2:
Immediate

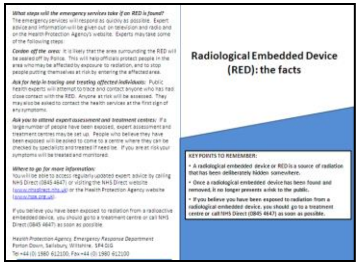
Inject 3:
6pm that evening

Inject 4:
3 weeks later

PHASE 2:

Leaflet inject

Extended health and government official messages



What steps will the emergency services take if an RED is found?
The emergency services will respond as quickly as possible. Expert advice and information will be given out on television and radio and on the Health Protection Agency's website. Experts may take some of the following steps:

Cordon off the area: It is likely that the area surrounding the RED will be sealed off by Police. This will help officials protect people in the area who may be affected by exposure to radiation, and to stop people putting themselves at risk by entering the affected area.

Ask for help in tracing and treating affected individuals: Public health experts will attempt to trace and contact anyone who has had close contact with the RED. Anyone at risk will be assessed. They may also be asked to contact the health services at the first sign of any symptoms.

Ask you to attend expert assessment and treatment centres: If a large number of people have been exposed, expert assessment and treatment centres may be set up. People who believe they have been exposed will be asked to come to a centre where they can be checked by specialists and treated if need be. If you are at risk your symptoms will be treated and monitored.

Where to go for more information:
You will be able to access regularly updated expert advice by calling NHS Direct (0845 4647) or visiting the NHS Direct website (www.nhsdirect.nhs.uk) or the Health Protection Agency website (www.hpa.org.uk).

If you believe you have been exposed to radiation from a radioactive embedded device, you should go to a treatment centre or call NHS Direct (0845 4647) as soon as possible.

Health Protection Agency, Emergency Response Department
Porton Down, Salisbury, Wiltshire. SP4 0JG
Tel +44 (0) 1980 612100; Fax +44 (0) 1980 612100

Radiological Embedded Device (RED): the facts

KEY POINTS TO REMEMBER:

- A radiological embedded device or RED is a source of radiation that has been deliberately hidden somewhere.
- Once a radiological embedded device has been found and removed, it no longer presents a risk to the public.
- If you believe you have been exposed to radiation from a radiological embedded device, you should go to a treatment centre or call NHS Direct (0845 4647) as soon as possible.

PIRATE – Key issues identified in RED FGs

- **Low levels of knowledge about radiation** - radiological terrorism associated with nuclear bombs and disasters (Hiroshima, Chernobyl)
- **No awareness of REDs** - initially assumed incident a hoax as package had not 'gone off'
- **Key concerns** - severity, contagion, pervasiveness
- Majority of participants indicated a **fairly resilient response** / that they would continue with their daily routine, but **a sizeable minority would unnecessarily attend monitoring centres**
- **Info needs -** 'expert' information about health and security
- Positive response to 'independent scientist' where comments resonated with existing concerns

PIRATE – Impact of interventions

- Reduced concern about cordon size, incident severity and no quarantine
  (based on more information about the device)
- Reduced intention to unnecessarily attend monitoring centres
  (based on increased understanding re: likelihood of personal impact)
- Increased scepticism in relation to the 'independent' scientist
  (based on official information received)
- Response to leaflet intervention:
  - Leaflets generally viewed favourably – tangible / credible
  - Some concern that leaflets signal seriousness of issue

Improving communication

- Re-think the 'worried well' ('low risk patients')
- Develop formal partnership with media (ahead of event)
- Use trusted communicators (and validators)
- Provide information that is
  - Targeted at encouraging specific behaviours
  - Consistent and regularly updated
  - Clear and accurate

Conclusions for effective risk communication

- Effective public communication is an essential part of preparing for and responding to a radiological terrorist attack
- Effective communication should be targeted at encouraging specific behaviours
- Change in behaviours to reduce risk should be regarded as rational actions rather than panic
- Behavioural interventions must take into account public perceptions about:
  - The event
  - The efficacy of recommended behaviours
  - The ease of recommended behaviours
  - The cost of recommended behaviours
  - Those who are tasked with communicating the response
- Generic principles of risk communication may need some adaptation for particular contexts

Further project information

http://www.pirateproject.eu/

http://cietoolkit.fs-server.com/

http://r-futures.ecs.soton.ac.uk/overview/

[PRACTICE]

http://www.practice-fp7-security.eu/

NHS
National Institute for Health Research

The Health Protection Research Unit in Emergency Preparedness and Response at King's College London

http://epr.hpru.nihr.ac.uk/

PRIME
Preventing, Interdicting and Mitigating Extremism

http://www.fp7-prime.eu/

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Thank you!

For further information, please contact me at julia.pearce@kcl.ac.uk or @drjuliapearce