

The PIRATE project (JLS 2007 ISEC 563): Public Information and Responses to Terrorist Events

Short summary

**G. James Rubin, M. Brooke Rogers, Julia Pearce, Rosa Nieto-Hernandez
& Simon Wessely**

King's College London, UK



Piet Sellke & Ortwin Renn

DIALOGIK, University of Stuttgart, Germany



Richard Amlôt, Fiona Mowbray & John Simpson

Emergency Response Department, Health Protection Agency, UK



Prevention of and Fight Against Crime 2007
With financial support from the Prevention of and Fight Against Crime Programme
European Commission - Directorate-General Justice, Freedom and Security



© Health Protection Agency
Emergency Response Department (ERD)
Porton Down, Salisbury, Wiltshire, SP4 0JG

Publication Date: December 2010

This report from HPA ERD, King's College London and DIALOGIK reflects understanding and evaluation of the current scientific evidence as presented and referenced in this document.

SUMMARY

When disasters or acts of terrorism involving a chemical, biological, radiological or nuclear (CBRN) agent occur, they often result in governments or health experts issuing advice about the actions that people can take to reduce any risk to their health. Unfortunately, uptake of these actions is often poor. As such, an important task facing public health bodies is to improve the way in which they communicate with the public about risks and recommendations during a major incident. Waiting until a major incident occurs before considering this problem is ill advised. A better approach is to design the basic elements of any communications strategy in advance. While the complexities of a genuine incident can never be fully predicted, research conducted before an incident takes place can provide important feedback as to how the public might react, what perceptions or concerns they have about a given threat, what information they would like to receive, and identify the communicators/experts from whom they desire information should such an incident involving that threat ever occur. Armed with this knowledge, messages can then be designed and tested well in advance. The PIRATE project applied this approach to two terrorism-related risks: the deliberate release of smallpox and the use of a radiological device hidden on a commuter train by terrorists hoping to irradiate passengers (a 'radiological exposure device'). We used three linked studies to identify likely perceptions of and reactions to these scenarios among the British and German publics, to quantify these perceptions and reactions and explore the association between them, and to devise and test messages intended to inform people about the risks associated with these threats and to encourage them to adopt behaviours that might be recommended by public health officials. For each scenario, our research followed the same design, with two rounds of focus groups separated by a population-based survey.

The first round of focus groups

Our first round of focus groups (7 per scenario in the UK; 5 per scenario in Germany) used a series of realistic mock newspaper reports and television news broadcasts to portray an unfolding incident which would have taken several weeks to develop in real life. In both scenarios, participants were first informed, via a mock newspaper report, that journalists had determined that terrorists were capable of using biological or radiological weapons. A DVD 'breaking news' story then revealed that an attack involving one of these weapons had been carried out in a location near to where the participants lived. Public health officials appeared and provided advice on actions that members of the public should take, before a news item from 'several weeks later' was shown in which the incident was portrayed as having been

largely resolved. When discussing these unfolding stories, our participants often reported concern and fear, although emotional responses were lower than we expected. Participants often mentioned that they had seen many news reports like these before and that this had left them desensitized to coverage of terrorism. Nonetheless, participants reported that if these scenarios occurred in real life, they would be likely to change or restrict many of their daily activities in order to reduce their perceived risk. Likely compliance with the official advice presented in both scenarios tended to be good, though with notable exceptions. These included uncertainty as to whether to accept an offer of vaccination against smallpox and a tendency for some participants in the radiological scenario to seek advice from a medical professional, even if they had not been in an area affected by the radiological device. Information needs in both scenarios centred on a need to understand the basic properties of the agent involved and its medical effects, together with a desire for information from the police or security services regarding efforts to apprehend the terrorists and the likelihood of another attack occurring after the initial health-based information needs were addressed.

The population-based surveys

In order to quantify the relationships between the perceptions and intentions expressed by our focus group participants, four cross-sectional telephone surveys were conducted; one per scenario, per country. These used standard opinion polling methods to reach demographically representative samples of 2002 adult respondents in Britain and 2008 adult respondents in Germany. Participants were read a short summary of our radiological and smallpox scenarios, asked a battery of questions to assess their perceptions about the properties of each agent and asked a series of questions about their likely behavioural responses to the scenario. In both scenarios, participants were more likely to engage in protective behaviours if they: believed that the effects of exposure were severe; believed that they could control the risks associated with the incident; and believed that people were likely to be exposed during the incident through a variety of mechanisms. For the radiological scenario, participants were also more likely to engage in protective behaviours if they: believed that there were no treatments available for affected people; believed that radiation was incomprehensible; or believed that the risk from the incident was pervasive throughout the local area.

The second round of focus groups

Based on the results of the initial focus groups and surveys, we designed new information material that was intended to alter some of the perceptions held by people about radiological

threats or smallpox and to encourage people to engage in recommended behaviours. These materials included leaflets which were specific to either radiological threats or smallpox and which were designed to be applicable to any incident involving these threats, and additional filmed material in which public health spokespeople directly addressed some of the concerns and misperceptions raised by participants in our first round of focus groups. A new round of 40 focus groups was then run: 10 per scenario, per country. These used identical mock news reports to the first round, but also included our new materials. Comparison with the first round of focus groups allowed us to assess the impact of this new material. Overall, the additional material was welcomed by the participants. The leaflet was particularly singled out for praise, not simply for its information but also for the physical and permanent nature of the medium. A leaflet was seen as a format that was easy to use and refer back to, and which could not subsequently be retracted or reworded for political reasons. This permanence, together with the factual tone of the leaflets and the presentation of information about potential side-effects of recommended interventions, was described as lending them an air of credibility. In terms of their impact on participant perceptions, the radiological leaflet had a notable impact on perceptions as to how the radiological exposure device might affect someone. Having read the leaflet, participants appeared less likely to believe that they might be at risk from our radiological device if they were not directly involved in the incident. This altered perception was then cited as a factor reducing their desire to seek medical attention if they had not been on the affected train. The smallpox leaflet had less impact on behavioural intentions, however. Although the leaflet was described by participants as reducing their uncertainty, it did not appear to alter people's pre-existing intentions regarding, for example, whether or not to accept the offer of a smallpox vaccination. In particular, our description of the side-effects of the vaccine, though improving the credibility of the leaflet, also served to entrench any negative views that participants already held.

Conclusions

The methodology of the PIRATE project provides a useful framework for public health communicators who wish to design and pre-test messages for specific risks. Our results also emphasise the need for this work to be done. While our radiological scenario demonstrated that identifying and tackling key misperceptions among the public can be effective in altering behavioural intentions, the failure of our smallpox leaflet to change attitudes towards vaccination illustrates the difficulties involved in designing such messages. To ensure that they are maximally effective, the iterative and time-consuming process of designing, testing and revising communication materials must begin before a major incident occurs.