TECHNICAL REPORT

A literature review of trust and reputation management in communicable disease public health

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Insights into health communication

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The literature review was produced by Georgina Cairns, Laura MacDonald, Marisa de Andrade and Kathryn Angus, the Institute for Social Marketing, University of Stirling and the Open University, UK.

The project was overseen by Ülla-Karin Nurm, Piotr Wysocki and Andrea Würz from the ECDC Communication Knowledge Group in the Public Health Capacity and Communication Unit.

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Executive summary

A literature review of trust and reputation management by and for public health organisations involved in communicable disease control was conducted by the Institute for Social Marketing. The Institute is a joint research initiative of the University of Stirling and the Open University in the UK.

The review examined the international English-language literature published during the period 2005-2010, drawn from a range of communication sub-disciplines. A glossary of the sub-disciplines is provided in the appendix.

The evidence base was found to be in an emergent phase and is therefore somewhat limited, although largely consistent. Elements of good practice identified included the need for long-term and proactive planning of trust and reputation management; strong media relations skills; proactive relationship building with key stakeholders; integration with technical disease prevention and control functions; and enhanced commitment to transparency and two-way dialogues.

A focus on crisis communication, mass (undifferentiated) communication and communication to support technical functions was apparent in the literature. A limited understanding of the role and nature of risk communication; the benefits of adopting a strategic, rather than reactive approach to trust and reputation management and the potential benefits of full integration with immediate and long-term public health goals was also apparent.

Recommendations for future research and development of good practice are evaluations specifically focused on the impact of public health activities on trust and reputation; adopting a strategic approach to trust and reputation planning which coordinates the full range of communication functions and objectives; plus organisational capacity building in communication functions such as risk communication, environmental scanning and mass media relations.

Introduction

Rationale for the review

Public health organisations responsible for communicable disease have a mandate to promote health protective behaviour even when risk levels are low. They must also provide clear direction and leadership in times of crisis. Successful implementation of preventive and emergency response strategies requires a positive public perception of a health organisation's trustworthiness and legitimacy to lead in times of crisis. Perceptions of reputation and trustworthiness have an impact on public support for and compliance with behavioural advice. The reputational capital and associated stakeholder trust in an organisational entity responsible for the control of communicable disease is therefore critical to its effectiveness.

Communications functions, such as public relations and reputation management are increasingly recognised as critical in public health (1-4). These strategic competences must work alongside and complement more traditional biomedical public health tasks, such as disease surveillance and the management of structurally embedded risk factors.

Objectives of the review

To build public health capacity in trust and reputation management, practitioners, managers, policy makers and researchers need the opportunity to develop expertise and skills and evidence of the benefits and costs. This review is intended to support such needs by providing a summary of existing knowledge drawn from research, practice and reflective critique.

Structure of the review

Managing the reputation and perceptions of trustworthiness of a given organisation draws on many disciplines. This review summarises the research literature for some of the main disciplines contributing to current understanding and practice of organisational trust and reputation management:

- message source and credibility
- issues management
- public relations
- science communication
- risk communication
- crisis communication
- media relations
- branding
- organisational performance and competence
- stakeholder relationship management
- social marketing.

Although communications practice is to some degree culture-specific, global news media means that case studies and evaluations from all over the world are likely to influence European policy, practice and paradigms. The international evidence base can also help to provide an overview of the 'state of the art'. This review therefore includes literature from outside Europe that offers transferable learning based on universal communication principles. Examples of practice in Europe are also highlighted.

Communication technologies are continuously and rapidly evolving. The review therefore aims to highlight very recent literature (published 2005-2010) in peer review and non-academic information sources, without excluding older evidence that is not time sensitive.

The review methodology (scale, scope, focus and limitations) is described in the Methodology section.

The results of the literature search and review are summarised by discipline heading in the Results section.

The findings of the literature reviews are synthesised in the Summary of findings section. Supplementary discussion and commentary aims to highlight the most salient constructs emerging from and gaps in the evidence base. Recommendations for future practice and research priorities in effective trust and reputation management are also suggested.

Methodology

Search strategy

The following databases were searched for relevant English-language academic literature published between January 2005 and August 2010: CINAHL, Medline, PsycINFO, Web of Science, Business Source Premier, HealthComm Key (http://cfusion.sph.emory.edu/PHCI/Users/LogIn.cfm?CFID=353691&CFTOKEN=29307165) and Johns Hopkins Institutions database of health communications titles in non-communication journals (http://www.refworks.com/refshare/?site=024261133424000000/315134/ICA%202000-2006). Two journals from different publishers were also hand searched for relevant articles: *Journal of Communication in Healthcare* and *Health, Risk & Society*.

Searches for relevant English-language grey literature published between 2005 and 2010 were conducted using Google. In addition, the websites of relevant organisations were searched: World Health Organization (WHO), European Centre for Disease Prevention and Control (ECDC), the UK's Health Protection Agency (HPA), Health Protection Scotland (HPS), US Centers for Disease Prevention and Control (CDC) and Health Canada.

Search terms

Terms used in the literature searches included, but were not restricted to: trust, belief, assurance, faith, confidence, reputation, image, credibility, public opinion, public relations, advertising, mass media, lobbying, trust management, reputation management, branding, campaign, risk communication, crisis communication, crisis management, public communication, health promotion, public health, communicable disease, disease outbreaks, Trust [MeSH[1]], Public Relations [MeSH], Public Opinion [MeSH] and Social Marketing [MeSH].

Exclusion/inclusion criteria

Screening criteria used to identify relevant literature for inclusion in the review were:

- that the main subject area was relevant to organisational trust and reputation management in public health for communicable disease organisations and/or one of the sub-disciplines outlined above

PLUS at least one of the following three criteria:

- peer-reviewed primary research, secondary analysis or discussion article; or
- primary or secondary analysis research results published in non peer-reviewed sources (grey literature); or
- descriptive reporting of policy and data on recommended practice or commentary and analysis of policy.

[1] MeSH – Medical Subject Headings. US National Library of Medicine's controlled vocabulary thesaurus consisting of sets of terms naming descriptors in a hierarchical structure to enable searches at various levels of specificity.

Results

Introduction

The review identified a disproportionately high number of editorials and opinion pieces compared to original research. In addition, a significant amount of the literature consists of case studies. Only 30% of the literature identified reported empirically tested evidence.

Message source and its credibility

The practice of 'speaking with one voice' and using a credible source to communicate messages can calm public fears and prevent panic (5). This strategy helped Singapore receive 'glowing praise from international health experts and agencies' for its handling of the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003 (5). Health officials and organisations realised that the building of trust is a lengthy and complex process that can be destroyed in an instant and therefore sought the appropriate sources to disseminate messages to a concerned public.

Chong (5) investigates the relevance of trust in the context of a specific communicable disease outbreak through a quantitative content analysis of the statements used by Singaporean health officials during the SARS epidemic. By tracking the occurrence of the 'trust-relevant aspects' of the messages – 'competence', 'care', fairness', 'openness', 'participation' and 'scepticism' – he offers recommendations for organisations aiming to manage their reputation and perceptions of their trustworthiness in anticipation of disease outbreaks. The author maintains that it is necessary to distribute data honestly while acknowledging 'ignorance of health critical information' (5). Furthermore, he suggests that organisations should engage the public and ensure there are opportunities for feedback. Messages should be consistent, timely and disseminated with care, and the authority of government health organisations should be leveraged (5).

Wu's (6) analysis of Taiwan's management of the SARS epidemic expands on the latter recommendation by noting how organisations leveraged the government's credibility. Authoritative organisations were the source of positive messages to locals directly affected by the outbreak and to tourists. The messages themselves were tailored according to the demand at the time. At first, they served to make the public aware of seasonal influenza and then gradually included more detailed information related to SARS. Subsequent messages were more urgent (6), with the high ranking Government Information Office responsible for issuing press releases to the media.

The importance of using health bodies and professionals as credible sources of information is noted in an exploration of the Norwegian public's reflections on the possible consequences of an influenza pandemic by Kristiansen et al. (7). The authors found that the majority of people trusted information from health authorities even though they received much of it through the mass media rather than seeking it directly from official organisations (7).

However, Hackett's (8) study of the media's role in the measles, mumps and rubella (MMR) vaccine controversy found that transmission of information through media undermined public confidence. In an opinion poll, 92% of respondents said they trusted doctors to be honest in communicating risks; 23% trusted government sources; while 20% expressed confidence in the media as a source of accurate information (8). Messages communicated by the media related to MMR 'invoked fear, anxiety and confusion in many parents' and resulted in a reduction in the number of children being immunised (8). Parents wanted 'face-to-face information from healthcare professionals' and stated that they would consider doctors to be more trustworthy if they disclosed whether their own children had been vaccinated (8). Doctors emerged as the most credible sources of information, ahead of the media or the government (8).

The source of information is also central to the evaluation by Blanchard et al. (9) of worker and government employee perceptions regarding public health responses to the anthrax mail attacks in the USA in 2001. They 'expressed negative opinions, and particularly mistrust, of many of the sources of information' from official health and government organisations such as the Centers for Disease Control and Prevention and the District of Columbia Department of Health (9). Before the anthrax attacks their opinions of these organisations had 'been either neutral or favorable', but had 'changed during the crisis.' Furthermore, when guidance was sought from local hospitals and doctors, the perception was that these medical professionals were not in a position to offer 'informed advice' and had essentially been 'gagged' (9). Study participants conveyed frustration at the lack of information on anthrax, stating that messages were 'unclear, inconsistent, and in many cases, inaccurate' (9). To advance effective communication strategies in similar situations, Blanchard et al. (9) suggest that organisations should ensure that messages to the distressed public are consistent and distributed from an organised front.

While it is essential to prepare precise messages in advance, the ability to adapt or amend them as circumstances change is also noted as being crucial. For example, messages about available treatments 'may need multiple corrections, repetitions, and modifications' (10). As the public receive messages from diverse sources (including

unauthorised internet sites), the challenge for organisations is to cultivate compliance and trust in official sources. Limiting contradictory statements from experts or inconsistencies in sequenced public statements is helpful (10). It has also been recommended that messages should 'be compatible with the cultural orientations, information priorities and reasoning strategies of affected populations' (10). Following an analysis of effective health risk communication concerning pandemic influenza for vulnerable populations, Vaughan and Tinker (10) suggest an 'integrated' communication strategy, free of 'misconceptions' and applied from the 'perspective of the targeted population', according to which all messages should be 'sensitive and relevant for the audience'.

Alaszewski (11) suggests it is important to recognise that individuals are not passive participants in communication processes and that they may search for information on risks from a variety of sources, particularly when making an important decision affecting their well-being. When the threat of a crisis arises, the public tend to give unique credibility to sources that they are familiar with, including friends and family or medical professionals who they have learnt to trust (3,12). They will be less trusting of a source that has a particular commercial interest in the subject and more accepting of perceived neutral sources of information such as expert advisory boards (13). According to Alaszewski (11), choice of message source is therefore paramount to an organisation's credibility, as individuals may 'make conscious decisions to avoid certain information sources'.

Issues management

The formulation and implementation of strategic plans based on the prediction of future trends, or issues management, is believed to be a vital part of an organisation's effective reputation management. It allows organisations to proactively evaluate matters that could have an effect on their productivity. It also facilitates the anticipation and avoidance of behaviour that audiences could perceive to be adverse. By advancing positions on particular issues; ascertaining who the main audiences will be; and establishing their 'desired behaviours', it is believed organisations can exemplify trustworthiness (2,14).

Springston and Weaver Lariscy (2) assessed how the US government could improve issues management to better prepare for a possible bio-terrorist smallpox attack. In 2002, the US government began to produce smallpox vaccines for the whole nation. Officials determined that 'first-line responders such as health and emergency services personnel' would be vaccinated first. However, the concerns of medical professionals about potential side effects and their subsequent hesitance to be vaccinated was a challenge. Without these key stakeholders on side, it was difficult to convince the rest of the public to cooperate (2).

Communication strategies employed by official organisations were also criticised for being 'very bureaucratic and full of jargon' (2). Using language that is accessible to reporters who will pass on messages to target audiences can support issues management, whereas the use of technical language can impede mutual understanding.

Public relations

According to Springston and Weaver Lariscy (2), 'the need for, and use of strategic public relations has never been higher' in the public health sector. Communicable disease outbreaks such as SARS have generated a media frenzy and public scrutiny. This scrutiny is increasingly driven by an audience with a strong awareness of its consumer rights. Health organisations have responded by implementing strategic public relations policies to develop and maintain positive reputations (2). Many researchers have recognised that the public relations discipline is central to trust and reputation management (2,15-17). On the other hand, 'money from the public health department budget that is spent on public relations is money that is not spent on health initiatives' (2). Thus, health organisations have had to justify the need for such investment to taxpayers and policy-makers (2).

Reputation management and stakeholder relations are considered to be key elements in public relations (2,18). For effective reputation management, it is recommended that organisations are 'committed to high standards of ethics in all practices, including communication' to help secure cooperation from the public (2). When negative events such as outbreaks occur, however, a crisis management plan can relieve foreseeable problems that may otherwise 'hinder effective communication to an organization's key publics' (2).

A message action plan (MAP), identifying the regular receivers of carefully constructed and timed messages and the duties of communicators in delivering the information, is noted as being advantageous for an organisation's crisis team (2). A predetermined MAP helps protect an organisation's integrity and minimise negative public perception. According to Springston and Weaver Lariscy (2), this is important as individuals may judge organisations on 'how the crisis is handled'. It has been asserted that public opinion is formed in the first 24 hours after a crisis (19). Druckenmiller (20) advises health organisations to provide vital information to the general public as soon as they can and ensure that accurate messages are rapidly communicated through the appropriate channels. A 'model of two-way symmetrical public relations' should then allow for 'bargaining, negotiating, and strategies of conflict resolution to bring about symbiotic changes in the ideas, attitudes, and behaviour of both the organisation and its publics [or stakeholders]' (5).

Stakeholder relationships are thus integral to trust and reputation management. Positive collaborations and interactions between various stakeholders (such as local authorities, health regulators and hospitals) help manage

an organisation's reputation (2). Positive relations between stakeholders facilitate 'action-oriented communication with the affected population in the face of considerable uncertainty' and are considered to be crucial to a successful emergency response strategy (21).

The process of successfully gathering information from and providing information to external stakeholders is, of course, dependent on effective communication with them. The nature of these dynamic relationships can be advanced by encouraging external stakeholders to identify with and believe in an organisation's mission and aims; gathering support and input from them; and balancing their needs against those of the organisation. According to Longest and Rohrer (21), data from external stakeholders can be methodically collected by 'scanning' (obtaining and classifying information, sometimes via the intermediary of committees or consultants); tracking stakeholders' outlooks; assessing and comparing external preferences to those of an organisation and diffusing the information to targeted audiences.

The final step is arguably the most important, despite being occasionally neglected. It relies on external stakeholders (and individuals working for them) filtering, screening and interpreting information (21). Since they do so according to their 'own values, views, preferences, and biases', messages may become distorted (21). Anticipating and overcoming these potential barriers has therefore been recognised as an essential part of any communication strategy. Interpersonal and personality barriers, for example, can be minimised by senders or receivers purposely trying 'to understand each other's frame of reference' by 'effective[ly] listening' to other stakeholders (21).

Message development and dissemination can be used before as well as during a crisis to build positive public relations. Glik (3) argues that the message source and credibility will have an impact on the likelihood of successfully persuading message recipients.

Initiatives such as the maintenance of updated, educational websites; newsletters and pamphlets; lectures on public health subjects; the provision of annual reports and the issuing of press releases to the media can be highly effective in strengthening the credibility of message sources (21). These types of pre-crisis communication can prime public acceptance of future emergency communication and action plans and their organisational sources.

Science communication

The trust and reputation management literature reviewed did not explicitly identify science communication as a central subject for consideration, but implicitly referred to the communicative act of discussing scientific issues with non-scientific audiences (22).

Science communication aims to promote awareness (of a communicable disease in this instance) and generate positive opinions towards the related science. Public relations, media relations and message source and credibility are therefore integral to the construct (see (2); (6) for examples). Science communication has been described as 'an exercise of trust' (5). Chong (5) suggests that the public should not have to make 'complex judgements' and should be able to rely on 'select experts and information sources' during outbreaks. Clearly, perceptions of agents' expertise and legitimacy to communicate science information on behalf of others are at least partially dependent on pre-established reputation and trust status.

Risk communication

It is important to make the distinction between risk communication and crisis communication. However, the distinction is often absent in the communicable disease risk and crisis communication literature. Crisis communication is used in crisis or emergency situations that have just arisen or are ongoing, whereas risk communication is used to address potential risks (23). Crisis communication focuses on responding to immediate public needs for information and is more likely to be non-participatory because there is little time for dialogue or feedback. However, when addressing a risk that has not yet evolved or indeed may not evolve into a crisis, risk communication strategies should be developed using a participatory approach (1,24). Veil et al. (24) highlight that risk and crisis communications are highly interrelated, and that risk communication before a crisis will influence the public's perceptions, expectations and behaviour when the crisis occurs.

Risk communication can be defined as the exchange of information and opinions about risk between risk communicators (usually organisations) and those who could be at risk (the public/stakeholders). It is recognised that the aim of risk communication is not for stakeholders to accept the communicator's argument, but to increase awareness of risks and provide sufficient, meaningful and relevant information about those risks to empower stakeholders to make well informed choices and give them a sense of control over their own health and safety (23,25-29). Adil (27) notes that risk communication, risk assessment and risk management are interdependent: risk communication is recognised as an essential part of risk analysis (26).

Holmes (1) describes how much of the academic literature and many government and organisational documents addressing infectious disease risk communication focus on one-way transmission of information to the public by experts. She also notes that the focus is often on the transmission of facts through the 'proper channels' in the

belief that this will result in the public following experts' advice (1). This type of risk communication is criticised for its assumption that the target audience will make the 'correct' decision when provided with the facts (1,3,30).

It is acknowledged that perception of risk is determined by many factors including beliefs, understandings and previous experience and knowledge about the risk (27). Public responses to risk information are not always as experts would like or expect, because individuals evaluate risk in the context of their own lives (1). Hampel (31) states that risk communication is more likely to achieve its goal when it takes account of the public's understanding of risk rather than simply providing information based on the scientific concept of risk.

There is an increasing awareness of the importance of responding to public perceptions of risk and of actively engaging the public in the risk communication process (11,23,29). It is acknowledged that risk communication should be a participatory dialogue with the public to build a shared understanding of risk, rather than a one-way communication process from experts to the public (1,11,23,25,27,29). The public is not a homogenous group, and authors have highlighted the importance of engaging different groups with different needs and interests in the risk communication process (24,26). There are many ways of involving the public in communicable disease risk communication. For example, Jones et al. (32) describe their use of focus groups, and Rogers et al. (2009) describe their use of a deliberative forum as methods of seeking community views on pandemic influenza risk communication.

It is acknowledged that the effectiveness of risk communication is dependent on the trust the public has in the communicating organisation (17,27). Lack of trust in sources of risk information can act to increase perception of risk (3). Paek et al. (33) therefore recommend that risk communicators actively work to build public trust. One of the factors recognised as being most important in building and maintaining public trust is transparency and openness (26,29). Organisations are advised to be open about the existence of risks. Denial can result in the loss of public trust when knowledge of the risk becomes public (34). In circumstances where information cannot be made public due to confidentiality issues for example, it is recommended that this should be acknowledged openly and explained (26).

Openly acknowledging and communicating uncertainty around risk is also recognised as vital for building and maintaining public trust (26,29). As Abraham (25) states, risk communication is essentially the communication of uncertainty, since risks are events that may occur in the future, but are not certain to do so. It is judged important not to downplay uncertainties in an attempt to build public confidence in the communicating organisations (25). Rogers et al. (15) reported that members of their deliberative forum understood and accepted that there were uncertainties surrounding pandemic influenza predictions. This did not lead to a loss of confidence in experts or the information they provided when these uncertainties were clearly communicated (15).

Public trust in organisations communicating risk can also be influenced by the spokesperson(s) chosen to communicate with the public. Health Protection Network guidance states that spokespersons must be chosen carefully and messages should be consistent (26). Vaughan and Tinker (10) note that for vulnerable populations, having trusted members of the community or respected outsiders as spokespersons can help to build trust in organisations communicating risk. Finally, it is apparent that risk communicators with an identifiable commercial interest are trusted less by the public than those without such interests (11).

It has been noted that most health risk communication theories are related to technological and environmental health risks, and infectious disease risk communication has been somewhat neglected to date (1). Holmes (1) highlights the importance of drawing on these theories to inform infectious disease risk communication. She also highlights the need for more research into the ethics of risk communication for infectious disease, in particular, research into how the increasing focus on empowerment and individual choice may conflict with the goal of behavioural compliance to reduce the risk of infectious disease (1).

Crisis communication

Crisis communication focuses on responding to immediate public needs for information (24). In the field of communicable disease, potential or actual disease outbreaks may be judged to be crisis situations (3).

It has been observed that much of the crisis communication research has been in the field of disasters (3). This research may be of limited applicability to communicable disease crisis communication. Holmes (1) notes that infectious disease crisis often differs from highly visible disaster response. Communicable disease threats may not be immediately obvious to the public, but disaster-based threat is usually characterised by a shared understanding of the need for action.

A large proportion of the literature addressing crisis communications for communicable disease consists of papers that critically analyse the management of the 2003 SARS crisis, mostly at individual country level (5,6,30,35-40). Although SARS was largely confined to Asia, and thus occurred in cultural and political contexts that are not directly comparable to Europe, there is learning from these experiences that has international relevance.

Smith (30) notes that one of the most important lessons learned from the SARS crisis is the value of effective communication with the public in a crisis. Singapore's management of SARS is generally regarded as an example of

good practice, with the authorities' communication activities attracting particular praise (5,30,36,37). China's management of the crisis has been unfavourably compared with that of Singapore. The Singaporean authorities began communicating with the public at an early stage of the evolving crisis, took an open and transparent approach to communication, effectively communicated uncertainties, and listened to and involved the public. Chinese authorities denied the existence of the emerging outbreak and, when forced to acknowledge the crisis, gave false reassurances to the public (5,30,36,37). A 2005 study revealed that there was a high level of confidence among Singaporeans in the authorities' handling of the SARS crisis (41). Although the authors acknowledge that this was in part due to the already high level of trust Singaporeans traditionally have in the authorities, there is no doubt that strategic and professional communication during the crisis also made a significant contribution (41).

Drawing on the lessons of the SARS crisis, in 2005 the World Health Organization issued guidance entitled 'WHO Outbreak Communication Guidelines' (29), setting out five principles to guide communication during outbreaks and other emergencies: building trust; announcing early; being transparent; respecting public concerns and planning in advance (29).

Public trust is essential in crisis situations such as communicable disease outbreaks (5,42). A UK study by Rubin et al. (43) examining public perceptions, anxiety and behaviour change in relation to the 2009 swine flu pandemic provides evidence of this. The research found that the higher the level of public trust in organisations responsible for managing crises, the more likely it is that their recommended measures will be followed in a crisis. Conversely, where trust in the organisation(s) responsible for managing the crisis is low, the public tend to question the reliability of information and recommendations and the competence of the organisation to manage the crisis and protect public health (3,29).

Although public trust in organisations responsible for managing crises is best built in advance of crises (42), well conducted crisis communication is also recognised as crucial in maintaining or even restoring public trust in the event of a crisis (29,36). Conversely, poor crisis communication can erode public trust and the reputation of the communicating organisation which can, in turn, exacerbate the negative impact of the crisis (24).

It is recognised that early announcement of an outbreak is the best strategy, even where there is limited information and uncertainty (5,29,37). This approach to a crisis gives the public confidence that the authorities are openly reporting what they know as soon as they know it, setting the expectation that information will not be concealed as the crisis evolves (29). The Chinese authorities' experience during the SARS crisis is an illustrative example of the importance of announcing early. Attempts were made to cover up the emerging outbreak, but they were unsuccessful and rumours of the outbreak spread rapidly via the internet and by SMS, undermining public confidence and trust in the authorities (37).

As in risk communication, transparency is important in crisis communication. It is noted in the WHO Outbreak Communication Guidelines that 'countries with a democratic tradition, in which politicians are elected and held accountable for their actions and the press enjoys full freedom, will be expected to issue reliable information about an outbreak and keep no secrets – or pay dearly if they do' (29). Stronach (44) states that the decision to communicate transparently is 'not just a noble end in itself; it can also mitigate some of the serious reputational risks being faced'. Guidance issued by the Health Protection Network states issues of confidentiality need to be balanced carefully with the need for transparency in a crisis (26). For example, the authorities in Singapore decided not to release the names of SARS cases during the SARS crisis for reasons of confidentiality (36). The HPN guidance also states that in circumstances where information cannot be made public to protect confidentiality, this should be openly acknowledged and explained to the public (26).

There are often many unknown factors surrounding an outbreak, particularly in the early stages. It is acknowledged that organisations may be reluctant to communicate uncertainty, fearing that it could undermine public confidence. However, evidence suggests that such fears appear to be unfounded (5,29,34,37,45). Holmes et al (45) note that it is important for organisations to communicate uncertainty, as the public 'wants, deserves and indeed can well handle such information'. Similarly, Pitrelli and Sturloni (34) report that a transparent approach to crisis communication strengthens trust in organisations responsible for managing the crisis even when uncertainties are openly acknowledged.

An important recommendation drawn from the SARS crisis is that organisations should move away from a reactive and towards a more pro-active approach to crisis situations (29,30). Holmes (1) notes that in a crisis situation there are 'difficult questions that need to be considered...that should not be asked at a time when people are falling sick and dying'. As previously discussed, there is increasing recognition of the importance of engaging the public in the risk communication process. However, in the event of a crisis there is often no time to take a participatory approach to communication (1). It is therefore considered important that crisis communication planning adopts a consultative and participatory approach, as part of preparedness strategies (1,29).

Despite the importance of pre-planning for crisis communication, it appears that it is often overlooked (29). The WHO Outbreak Communication Guidelines highlight some of the important issues to be considered such as the timing of the first announcement, the limits of transparency and the selection of spokesperson or spokespersons (29). Although the SARS experience demonstrated that 'communication that is not planned in advance is not

necessarily doomed to failure', advance planning can help to avoid mistakes that could damage public trust and ensure that communication in a crisis is as effective as possible (29).

In crisis communication, even more than for risk communication, the importance of a carefully chosen spokesperson is recognised (6). It has been recommended that a spokesperson should be trustworthy and credible and that he/she should be a trained communicator (6,26,46). Wu (6) advises against appointing a spokesperson with strong political opinions, based on the experiences of Taiwan during the SARS crisis, and suggests that scholars or experts with experience in acting as a spokesperson may be more appropriate. In Singapore, health experts such as doctors were identified as primary media spokespersons during the SARS crisis, facilitating a 'high level of social trust' (5).

During the SARS crisis, the Hong Kong government appointed Dr Margaret Chan, then Director of Health for Hong Kong, now Director General of WHO, as spokesperson. Her open and transparent communications strategy contrasted with earlier communications during the crisis under a different spokesperson, which were criticised for concealing government fears and attempting to hide the gravity of the situation (37). More recently, Richard Besser, acting Director of the US CDC at the beginning of the 2009 H1N1 pandemic, was commended for his communication during the crisis. A feature in the journal 'Nature' highlights Besser's strong leadership, acknowledgement of uncertainty, honesty, transparency, professional media relations and an avoidance of over-reassurance of the public (47).

Holmes (1) comments that the question of when an outbreak becomes a crisis and what interests may be served by declaring an emerging crisis is not yet fully explored. Better understanding of this could help to resolve tension between the dual goals of empowering individuals to make informed decisions and encouraging compliance with recommended actions/behaviours (1).

Media relations

According to Holmes (1), academic literature and government and organisational documents relating to infectious disease communication focus on the 'one-way transmission of information to the public by experts, often via the mass media'. The author suggests that the tendency to concentrate on distributing the facts to allay public fears and persuade individuals to follow advice assumes that during a potential disease outbreak the 'media will shift from "societal watchdogs" to public health educators and protectors' and that media reports will be trusted and accepted by the public (1).

Holmes (1) recommends that organisations should also be aware that alarming media stories about health threats may leave individuals feeling helpless by presenting situations that they can seemingly do nothing about. Ungar (48) suggests that strategies for communicating information about infectious disease outbreaks should consider the media's role in societal notions of health and illness, and of the varying expectations of and assumptions about their role during a health crisis. Glik (3) concludes that the public's perceptions of risk are linked to media representations of risk, and in order to be effective, messages need to be framed and communicated in ways that can overcome this.

Following an investigation of risk communication during the SARS outbreak in Taiwan, Wu (6) noted that the government's provision of adequate information had a positive influence on the media by enabling it to act quickly and establish 'horizontal and vertical communication networks' to inform the public. Presenting a sentimental portrayal of the country's struggle with the epidemic was meant to allay public fears, but over-reporting of information also had a negative impact. In addition, the government failed to establish an efficient system for dealing with the media and tackled the situation from its own perspective rather than taking the media's needs into consideration (6).

When faced with a crisis, Wu (6) suggests that a government organisation should collaborate with the foreign press and WHO; assert itself as 'more powerful information authority'; ensure that there is evidence of robust management at the core of its emergency centre and minimise discrepancies between central and local government reports (6). To improve media relations, Wu (6) also proposes that the media be treated as a partner rather than an enemy; negative comments to the press should be kept to a minimum; the media should be made aware that its efforts are appreciated and inaccurate media reports should be promptly clarified.

The need to be prepared for media criticism of a government organisation's handling of a threat or crisis which could consequently damage its reputation and evoke mistrust, is also addressed in the literature. For example, Lee (38) reported that the Hong Kong Government was accused of being 'impotent' when dealing with a SARS outbreak in 2003. It failed to provide a designated media spokesperson from the Government Information Service (GIS); accused the media of exaggerating and scaring the public; and failed to account for its lack of transparency.

In contrast, Menon's (36) analysis of Singapore's management of the SARS epidemic highlights how the government's media relations strengthened perceptions of trustworthiness and transparency. Government agencies established 'exacting processes' for the clearing of press releases, ensured messages were circulated, and held daily press conferences in the presence of the Minister of Health who stressed 'the authority and credibility of information issued' and answered every question (36). When it became apparent that there was a crisis, the Prime

Minister spoke at press conferences, urging individuals to 'exercise social discipline' and sent an open letter to the public asking them to cooperate. Furthermore, negative developments were openly conveyed in the spirit of transparency and rebuttals of negative reports by the foreign press were issued as part of the authority's crisis management strategy (36).

Longest and Rohrer (21) also describe how public health agencies can use the media to their advantage. They explain how reputation and trustworthiness can be positively promoted by distributing press kits with information about the agency's achievements and awards and writing articles, editorials and letters in newspapers demonstrating the organisation's proficiencies (21).

During potential health threats or crises, organisations have been advised to partner and 'meaningfully engage' with the media (26) since it will inevitably act as an informant, with or without the help of official bodies. As the mass media 'exercises editorial control' of content, it has been noted that using the medium to disseminate messages to the public does not guarantee that target audiences will be reached within designated periods of time. Identifying credible sources, however, is a key determinant of a successful media relations campaign as journalists rely on these experts to enhance their news reports (26). HPN (26) also recommend that members of health organisations receive media training so that they are honest, open and tolerant of media questioning and avoid being critical of other agencies during a crisis.

It is helpful to be aware of media expectations during times of risk. Organisations are advised to provide journalists with equal and timely access to information through regular updates and schedules; to deal with rumours and state when it is likely that information will change; and to offer access to experts in the area (26). As the focus of the media will largely centre on the initial message received from an organisation, it is important to demonstrate in-depth knowledge and understanding from the start (26).

Although the media has been accused of 'publishing inaccurate, sensationalized, or misleading stories' that are not grounded in scientific findings, studies show that the deployment of media sources increases exponentially during public health crises (3). Public health risks that are not communicated accurately are likely to become 'media triggers' if a situation is perceived to be covert; if there are 'questions of blame' and images of suffering; or if the risk is likely to affect many people (26). Media relations therefore should be a part of crisis risk communication (3). Activities need to be initiated before potential risks become crises, for example in the form of pre-event media monitoring and audience survey research. Media relations should be based on the assumption that people do not act on what 'is truly taking place but on what they think is taking place' (3).

Branding

Brand identity has received limited recognition in communicable disease public health literature. Longest and Rohrer (21) describe how 'the general public may have an image of an agency as a potential source of particular services should they ever need them, or of information about particular public health issues' and that 'external stakeholders may have ambiguous, conflicting, or unclear perceptions about the agency'. The authors note that public health organisations typically try to establish a familiar and trustworthy brand identity and may do this through promotional activities (21).

A UK Health Protection Agency (HPA) report of the findings of a survey investigating general public attitudes to the Agency, and its work specifically addresses brand value (49). The survey found that recognition of the organisation was limited. Only two percent of survey respondents spontaneously mentioned the HPA when they were asked which organisation, if any, they would contact if they wished to get information about an infectious disease. In addition, when prompted, only three percent of respondents said they had heard of the organisation (49).

In her independent review of the UK response to the 2009 H1N1 pandemic, Dame Deirdre Hine commended the NHS for its consistent use of the 'sneezing man' image and the 'catch it, bin it, kill it' slogan, as this created a clear brand that was recognisable throughout the pandemic (50).

Organisational performance and competence

Organisational technical performance is always crucial to trust and reputation management. Menon and Goh (36) note that during the SARS crisis, the Singaporean authorities' crisis communications activities alone were not sufficient to earn and maintain public trust; the authorities were also seen to be doing everything possible to mitigate the crisis.

Chong (5) states that 'if an organisation has a track record of, or reputation for, competence, it can draw on the reserve of trust and goodwill that has been developed by earlier efforts'. Moreover, organisations that practice good communications during a crisis but do not express evidence of competence are likely to struggle to build or maintain public confidence in their ability to deal with the situation (5).

Stakeholder relationship management

Hastings (18) argued that public health has important lessons to learn from business about the importance of building relationships with stakeholders. He illustrates his point by making reference to the results of a UK survey which showed that the public trusted banks more than the UK National Health Service. Hastings attributes this, in part, to the value banks place on developing relationships with customers to build trust and loyalty (18).

Longest and Rohrer (21) noted that public health organisations 'improve the likelihood of communicating effectively with external stakeholders by maintaining positive relationships with them'. The authors offer a number of recommendations to organisations for improving relationships with the public:

- Foster a widespread understanding and acceptance of the mission and objectives of the agency among external stakeholders.
- Garner support for and secure contributions toward achievement of the agency's mission and objectives from its external stakeholders.
- Achieve and maintain a workable balance between the agency's mission and objectives and the needs and preferences of its external stakeholders (21).

Wise (4) states that 'in order to effectively manage relationships, practitioners working in public health must realise that communication is a tool for managing relationships with stakeholders'.

Social marketing

Hastings (18) notes that reputation management is about 'the core social marketing concept of understanding people': a concept, he argues, that is better understood in the commercial world than in public health.

References to social marketing in the literature identified for the review are limited. It appears that social marketing is not currently used as a tool to directly enhance trust and organisational reputations in the field of communicable disease prevention and control. There is, however, recognition in the literature of the potential for social marketing to be used as a planning tool for crisis and risk communication strategies (3,32). Longest and Roher (21) suggest that 'social marketing can be useful to a public health agency in its efforts to fulfil its mission of protecting and enhancing the public's health'.

Discussion in the literature on the role of social marketing in crisis and risk communication mainly focuses on the need for audience research, segmentation and a client-centred approach. For example, Glik (3) notes that for effective risk communication it is necessary to have an understanding of lay beliefs about risk in order to tailor risk messages to make them relevant to the target audience. The application of audience segmentation techniques, that is creating specific approaches and messages for audiences with different social, cultural or demographic characteristics, has also been advocated (3,10,21,32). In keeping with the principles of a social marketing approach to crisis and risk communication authors have emphasised the importance of adopting a client-centred approach, as opposed to simply conveying a message (21,32).

There is also some recognition of the social marketing principle of mutually beneficial exchange in the literature (21,32). Longest and Rohrer (21) discuss the 'social exchange' model in the context of communication between public health organisations and the public. The model predicts that the relationship between public health organisations and the public will be more successful if both sides receive benefits and the perceived rewards exceed the perceived costs.

In developing an H5N1 (avian influenza) risk communication campaign, Jones et al. (32) used some of the key principles of social marketing. This approach was felt to be appropriate because the aim of the campaign was to encourage individuals to make voluntary behaviour changes (increase frequency of hand washing, use disposable tissues rather than handkerchiefs, etc.) (32). Exchange was recognised as an important principle in the development of the campaign. It was considered important to persuade the target audience that the benefits of making the appropriate behaviour changes exceed the perceived costs (32). However, although the researchers recognised the importance of a client-centred approach, it was only after prototype campaign materials had been developed by an advertising agency that they sought insight into the knowledge, beliefs, attitudes and current behaviours of different target audiences and their opinions on the materials through focus group discussions to develop the campaign further (32).

Summary of findings

Implications for public health and communicable disease control

Overall, trust and reputation management for communicable disease health communication has been subject to rather limited research and analysis to date.

The literature indicated some recognition that trust and reputation management is a strategic function requiring long term planning and evaluation. The literature revealed a growing awareness that failure to protect and promote reputational capital and public trust and to integrate these intangible assets alongside more visible and traditional risk reduction measures can undermine organisational reputation. The review also found that there is a growing evidence base and consensus regarding the critical impact of reputation and perceived trustworthiness of organisational capacity to protect and promote public health.

Recent experiences of reputation damage to public health agencies have sharpened the focus of the communications research community. Reviews of recent events have highlighted how such damage undermines the legitimacy of an organisation's leadership and priority setting; the credibility and persuasiveness of its messaging and the strength of key relationships (5,9,30,34,36,37,43). Evidence of effective prevention or cure strategies however, is only just beginning to emerge in the literature (2,5,21,32,40,44).

Insights for health communication policy and practice in Europe

The most common elements of good practice identified in the review were long-term planning for crisis events; assuring and monitoring consistency of messaging; credible, highly competent spokespersons willing to frequently engage with media and stakeholders; and a visible demonstration of the technical competence, integrity and transparency of the organisations responsible for communicable disease control. Literature focusing on public relations and media relations recognised that the coordination of these two functions reduced the risk of inconsistent messaging and synergistically enhanced their respective objectives and impacts.

Much of the primary research and commentary reported in the literature addresses the impact of discreet, event-specific communications, particularly crisis communications. A lack of understanding about important and unique differences in the communications needs of crisis situations and situations of uncertain but significant risk of crisis was noted in the literature. Indeed, in some instances, the literature itself demonstrated a lack of clarity on these important distinctions. Few papers considered how an organisation could or should explicitly make the decision to adopt a risk or crisis communication strategy or how to monitor and transition between the different approaches in response to epidemiological developments.

The literature repeatedly indicated the failure of organisations to acknowledge uncertainty and demonstrate transparency regarding lack of knowledge and potential conflicts of interest or purpose. Although there were some examples of good practice and recommendations for future communications planning and execution, detailed evidence was largely absent. For example, general advice on establishing mechanisms to limit negative public perception was not developed into detailed guidance on the implementation of good practice.

The potential tension generated by the dual goals and responsibilities of public health organisations to engage in open dialogue respecting individual choice whilst attempting to persuade the public to change its behaviour is recognised in the literature. Acknowledgment of the importance of a participatory approach to communication that includes two-way communication with stakeholders and building stakeholder relationships, as well as acknowledgement of the logistical challenges of a fast, flexible response as a crisis unfolds, were recurring themes. However, empirical evidence and/or conceptual models to address these tensions were found to be very limited in the literature.

Many of the papers reviewed recognised that during times of acute stress, such as perceived, emerging and/or actual crises, the intensity of scrutiny and public commentary rises sharply and rapidly. The literature commonly reported high levels of scrutiny by the public and stakeholders of the competence, fairness, credibility, reliability and legitimacy of organisations during high stress periods, and that judgements formed during these periods endured long after the crisis had passed.

There was little evidence or commentary on the cost-effectiveness of investment in retrospective analysis, routine monitoring, and longer-term trend forecasting in building trust and reputation. There was also little attention given in the literature reviewed to strong stakeholder relations and their potential to enhance organisational capacity to influence (pre-emptively and post-hoc) the expectations of its public and stakeholders.

The literature suggests there is sometimes limited recognition in the communicable disease control community of the role of the media, the benefits of strong positive media relationships, or how to manage media relations. The harmful impact of media reporting that heightens panic and fear, and its detrimental effects on trust and reputational status, were noted as inherent risks in poorly understood and executed media relations. On the other hand, a number of papers reported examples of highly effective media relations deployed for communicable disease control and the dissemination of science communication. The literature, however, demonstrated limited recognition amongst public health organisations of the potential role of media relations in strengthening and supporting organisational trust and reputation management per se.

The literature review did not examine how public health communication supports organisational tasks such as risk assessment and crisis management. However, it is apparent from the narratives that the function of communications is more readily understood in this capacity than as a determinant of trust and reputational capital.

The review structured findings into a number of separate disciplinary sub-headings. Many overlaps of interrelated and interdependent themes are apparent. The recurrence of themes suggests that the evidence base is consistent. This is helpful for interpreting and extrapolating lessons from the evidence base because, although incomplete, it does provide some additional strength and confidence to the tentative conclusions that may be drawn from the review of the literature to date. It may also indicate that an integrated approach to communications activities is a viable and effective strategy for building organisational trust and reputation capital.

The global movement of goods and people has increased the potential for rapid transmission of communicable diseases as well as more efficient dissemination of essential public health resources, such as medicine, vaccines and surveillance information. Digital information technologies also accelerate the speed at which news, information and misinformation are shared and facilitates faster development and dissemination of emerging trends in public opinion. The review did not find literature able to systematically distinguish between universal and culturally-specific influences. However, it captured evidence and recommendations that the scope of proactive communications should be international to counter the negative impact of international media content.

Identification of gaps in the research and focus for further research

The influence of sustained and longer term communication strategies for trust and reputation management is under-researched and under-explored. For example, the opportunity and benefits of proactively building trust and reputational capital during non-crisis periods times of low stress were emphasised in literature commentary, although insight on how to achieve this was found to be largely absent. The literature review also revealed that very little attention has been paid by the academic and professional practice communities to some of the specific communication activities that may be useful for long-term trust and reputation management. There is a paucity of literature on activities that can support this – such as issues management, science communications, branding, social marketing and stakeholder relations.

Recommendations for future research and development of good practice are: investment in primary research to identify effective media relations; risk communication; stakeholder relations; environmental scanning and media relations that monitor and promote the trust and reputational capital of public health organisations responsible for communicable disease control. Cost-effectiveness evaluation of these activities is also recommended.

The public health community should be encouraged to recognise how positive organisational trust and reputation can enhance the effectiveness of its behaviour change communications. In the first stages of building a more substantial evidence base, highlighting case studies of good practice; capacity building and skills training in trust and reputation management as a strategic function and published evaluation of the impact of these activities could support this aim.

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Appendix: Glossary

Issues management: an organisation's formulation of strategic plans and actions based on predictions of future trends.

Mass communication: the dissemination of specified information to large sectors of the public through the mass media.

Media relations: an organisation's efforts to work with the media to inform the public of its policies and messages, with the aim of fostering credibility.

Message source and credibility: the plausibility and reliability of communicators and the ideas they propagate through various channels, as observed and interpreted by receivers. Source trustworthiness and expertise have an impact on the receivers' likelihood of persuasion

Organisational performance: a measure of an organisation's actual results compared to its goals or objectives.

Public relations (PR): the management of communication between an organisation and the public. PR is an essential business strategy used to generate favourable public opinion and the maintenance of a positive public image.

Risk analysis: the process of identifying, defining and analysing potential threats and uncertainties that may adversely affect the public. Risk management, risk assessment and risk communication are key components. Strategic plans of action are often implemented to minimise or avoid risks.

Risk communication: the interactive, communicative acts involved in exchanging information and opinions related to risk among risk assessors (organisations) and those who could be negatively affected.

Science communication: the communicative act of discussing scientific issues with a non-scientific audience to promote public awareness and generate positive opinions towards science.

Segmentation: the communicative process of targeting specific messages to a particular group of individuals rather than the public at large.

Stakeholder management: the process of identifying and engaging with stakeholders (individuals or organisations who are affected by an outcome) to help an organisation to achieve its strategic goals.