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N.B.: When citing this work, cite the original article.

Original Publication:

Joakim Ekberg, Toomas Timpka and Elin A. Gursky, Elicitation of Pandemic Coping Strategies among Health Care Workers: Contextual Adaptation of a Mental Models Method, 2009, Journal of Homeland Security and Emergency Management, (6), 1, 78.

<http://www.bepress.com/jhsem/vol6/iss1/78/>

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Postprint available at: Linköping University Electronic Press

<http://urn.kb.se/resolve?urn=urn:nbn:se:liu:diva-52212>

Journal of Homeland Security and Emergency Management

Volume 6, Issue 1

2009

Article 78

Elicitation of Pandemic Coping Strategies among Health Care Workers: Contextual Adaptation of a Mental Models Method

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Elicitation of Pandemic Coping Strategies among Health Care Workers: Contextual Adaptation of a Mental Models Method*

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Abstract

The aim of this study is to develop and formatively evaluate a method of eliciting health care workers' understanding of pandemics and their forecasted behaviors during an outbreak. Qualitative methods were used for the evaluation. The results demonstrate that it was possible to identify specific points during the subject interviews when the health care worker seemed to turn from provision of frank data on self-efficacy to that of speculation. Considering this observation, the re-designed method allowed collection and analysis of data critical for pandemic planning. The results imply that more reliable predictions of health care workers' behavior during a pandemic are possible, albeit sensitive to elicit. Use of realistic mental exercises can provide important insights into the level of pandemic preparedness, but these methods will require additional research to reliably differentiate between prediction and speculation.

KEYWORDS: mental models, health care, protocol analysis, risk communication, decision making

*Discussions in the CriSim Group (including also Henrik Eriksson, Johan Jenvald, Magnus Morin, James Nyce, Einar Holm, and Magnus Strömberg) have contributed considerable input to the analysis presented in this paper. This work was supported in part by the Swedish Emergency Management Agency (SEMA-KBM) under contract 0700/2004 and in part by the Swedish Research Council under contract 2006-4433.

Introduction

Any pandemic response plan must address the distribution of updated and pertinent information to key stakeholders. In conventional disease prevention, risks can be described with relative precision, and evidence on effective preventive actions is generally available. Designing risk information strategies that compel attention and motivate adherence is in the conventional context rather straightforward. The strategies can be supported by empirically validated theories of the behavioral response to health information campaigns targeting, e.g. smoking cessation (Ranney et al. 2006) or physical activity (Jeon et al. 2007). Nevertheless, in the case of a pandemic threat, there is no pre-outbreak knowledge about the specific infectious agent or about the effectiveness of specific information policies (Oshitani 2006). Pandemic information policies should therefore be dynamic and highly flexible. Flexibility is also important because of difficulty in predicting the behavioral response of lay populations and professionals when they are provided with information on a threatening situation.

Therefore, a structured health informatics approach designed to help shape behavioral response is a critical component of pandemic information policies. On the basic level, such efforts will sustain social structures in order to maintain the capacity to produce and rapidly execute response plans. Professionals in emergency management, healthcare and law enforcement are central actors in these structures. It is of concern that only about 50% of hospital physicians acknowledge their obligation to care for patients during an epidemic even when doing so endangers their own health (Alexander et al. 2003). Moreover, only 40% are willing to expose themselves to the risk of infection to save the lives of others. To understand how key healthcare workers comprehend and act on risk information, it is necessary to assess not only the communication of information from source to stakeholders, but also to assess the resulting decision-making. It has been noted that the present empirical research program on decision-making during disasters threatening a population's health is too narrowly defined (Patel et al. 2002). Keselman et al. (2005) argue that in order to be useful, theories on the comprehension of medical and health information must also consider emotional factors. They note the absence of a theory that integrates processing general cognitive elements with cognitive processing specific to disasters. This distinction is particularly relevant because existing theories relating risk perception and risk communication are primarily based on studies conducted in artificial, experimental settings. However, there are exceptions. One method for representing prevailing insight into community settings is to compare the comprehension of serious issues by lay subjects with that of experts. This knowledge can then inform risk communication activities underpinning, e.g. pandemic planning and response (Morgan et al. 2002). Underlying this approach

is the assumption, that since behavior is based on judgments, and judgments in turn are based on comprehension, behavior can, and should, be modifiable by the provision of appropriate information. Related research in medical decision-making has stressed that comprehension is an important component governing behavior, even in emotionally laden emergencies, as was seen during the SARS outbreak of 2003 (Slaughter et al. 2005).

The aim of this study is to contextually adapt and formatively evaluate a method for eliciting healthcare workers' (HCW) understanding of pandemics and for predicting their own behavior. Formative evaluation means adjustment of the method according to the results of assessments during a preliminary implementation. The method proposed by Morgan et al. (2002) for discovering mismatches between laypersons' comprehension of a given phenomenon compared to an expert reference group, was used as the basis for the method adaptation. Reliable accounts of the willingness to sustain healthcare service provision despite personal risk are important not only for planning interventions, but also as a means for identifying ways to support the coping strategies of HCWs during a destructive outbreak.

Theoretical background

According to Keselman et al. (2005), studies in risk communication have so far provided valuable insights into the biases of laypersons in dealing with probabilistic information, but they do not address the role of conceptual and contextual factors in evaluating risk information. Traditional risk communication studies also provide no insight into how decision-makers arrive at their decisions. Even if this approach identifies misconceptions and gaps in lay understanding of risk, it does not explore why people may have particular misconceptions. Patel et al. (2002) conclude that the empirical research program in health decision-making has been too narrowly conceived. As currently constituted, the traditional program in decision research cannot adequately inform the development and implementation of evidence-based practice.

Mental models research is based on the assumption that people's views of the world, of themselves, of their own capabilities, and of tasks that they are asked to perform, depend heavily on the conceptualizations that they bring to the task (Norman 1983). Mental models are naturally evolving models, i.e. people construct mental models of a system or process through interaction with these. These models do not need to be technically accurate, and usually are not. Instead, they are functional with regard to practical problem-solving. Representations of informal conceptual models are often used as a means for teaching complex processes to novices. An important issue analyzed in mental models research is the question of what makes some models superior to others. The difference between novices and experts has been found to depend on variances in the

organization of knowledge, and to a lesser extent on the character or content of the knowledge. Specifically, experts have a deeper and more complex priority system (DiSessa 1983). To determine what models individuals actually maintain requires performing psychological experiments, observations, and interviews. However, when asking individuals how they have solved a problem, they are apt to feel compelled to give a reason, even if they did not have one prior to the question being asked. They are likely to tell the investigator what they believe he or she wants to hear. Having then generated a reason, it is difficult to distinguish between artificially created reasons and genuine ones, even for the respondents (Norman 1983).

As a basis for correcting misunderstandings in their context, the mental models approach seeks to identify both accurate and inaccurate beliefs (Morgan et al. 2002). A population-diagnostic approach is used to develop risk messages, focusing on identifying what ordinary people, versus subject matter experts, know about risks. The purpose of this is to bridge the gap between lay and expert models of the risk by adding missing concepts, correcting mistakes, and strengthening correct beliefs (Breakwell, 2000). The underpinning of the approach is that people have an intuitive understanding of risks in their surroundings. They can be helped to a better understanding and thereby more accurate decision-making if presented with new information that is consistent with their initial belief system (Breakwell 2000; Morgan et al., 2002).

The source method

Morgan et al. (2002) use a five-step method for creating and refining risk messages. As a first step, an expert model is created by reviewing current scientific knowledge about the processes that determine the nature and magnitude of the risk. At this stage, references are made to experts without implying that their beliefs are perfect or even superior to lay beliefs. An influence diagram is used to represent the beliefs associated with the expert model (Figure 1). Once created, the expert model is reviewed by technical experts from different perspectives in order to ensure balance and authoritativeness.

The second step is to conduct open-ended interviews with laypersons, eliciting beliefs regarding risk expressed in their own terms. The interviews are formalized as influence diagrams, and analyzed in terms of how precisely these elicited mental models correspond to the expert model captured in the expert influence diagram. Four categories are used to sort non-expert concepts; i) misconceptions; ii) peripheral beliefs (correct but not particularly relevant to the risk); iii) indiscriminate beliefs (correct but not specific enough to be useful); and iv) background beliefs (so basic that they are omitted in the expert model, even though they represent important facts).

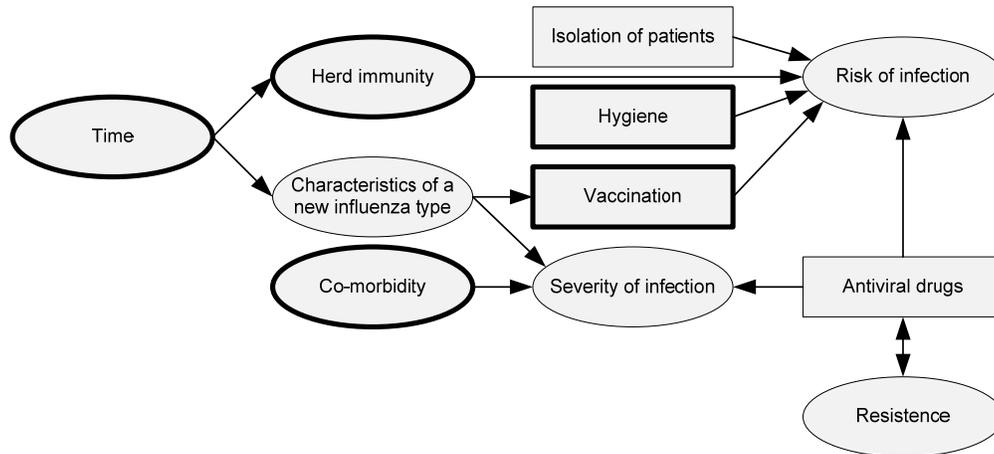


Figure 1. An influence diagram is a graphical representation of causal relations accepted as true by different categories of stakeholders in risk management. A thickness of the outline can denote relative importance and boxes are used to denote factors that can be influenced. An example influence diagram created from interviews with HCWs is displayed.

The third step is to create a confirmatory questionnaire, where the items address the beliefs identified in the open-ended interview data and the expert model to achieve a quantitative estimate of the prevalence of the beliefs in the population. The results from the interviews and questionnaires are thereafter analyzed to determine which incorrect beliefs need to be addressed. Finally, the prototype risk communication strategies are iteratively evaluated and refined, designed to fill the gap between lay and expert knowledge. This process is repeated until the risk information is understood as intended.

Methods and materials

A procedure in two phases was used to address the research aim. We first adapted the source mental model elicitation method to a baseline method for use in the pandemic setting, and then used qualitative research methods to perform a formative evaluation of the critical components of the baseline method. The results of the evaluation were summarized as methodological implications.

Baseline method design

The adaptation of the source method was performed in three steps. We first formulated requirements on a mental model method in the pandemic setting and evaluated how these requirements fitted with the source method. We thereafter designed change proposals for each mismatch and implemented those proposals into a re-designed method. For the formulation of requirements, policy documents

for national preparedness and literature on pandemics and healthcare were used as reference points. The Internet-based Entrez PubMed database was searched in March 2007 using the terms 'pandemic health care.' The search-phrase 'pandemic health care' was chosen to include studies of healthcare workers in pandemic settings, including preparedness for pandemic influenza and experiences from the SARS outbreak of 2003. Among the 95 articles generated through the search, a number of related articles (n=37) concerning the effects and preparedness of HCWs were included in the material, for a total of 132 articles. Excluded were 45 articles covering epidemiological aspects of epidemics with no relevance to health professional settings. The remaining articles (n=87) were reviewed to elicit factors regarding practices believed important for managing a pandemic scenario. The factors were categorized from the material, resulting in four requirement areas. Critical aspects of current practices found to be important were then compared to the source method to identify aspects that were inconsistent. From this, a change measure was formulated to incorporate each issue found, thus proposing a baseline method suitable for issues warranting attention in practical regional preparedness plans.

Formative evaluation

Qualitative data for evaluation of the revised method was collected through interviews (mean duration 50 minutes) with pandemic experts (n=4) and practitioners from primary healthcare (n=6). The experts were responsible for appreciating various aspects of national strategies in the primary care organization of the county where the study was performed. Local primary care centers were contacted with a request for volunteers to interview, generating 6 HCWs who agreed to an interview. Primary healthcare is particularly interesting in the context of pandemic response for several reasons. In preparedness plans, HCWs are supposed to carry out house calls, prescribe medication, and shelter the majority of cases in need of care. Additionally, they are on the front line of defense, with extensive experience communicating with the general public, and constitute a crucial level of visibility and trust with the general public during health crises.

The interviews were conducted at each interview subject's workplace and audio recorded. Impressions and reports of causal connections were probed through questions regarding their origin and how they were validated. The interviews were transcribed verbatim and subsequently analyzed. Following the revised method, HCW impressions were then compared to a corresponding expert account, and represented as influence diagrams.

In the final step of the formative evaluation, the first author formulated methodological implications by comparing the results of the method application to the objectives with regard to predictions of HCW behavior during pandemics.

The implications were iteratively discussed with the two other authors until agreement was reached.

Results

Four requirement areas were identified from the literature concerning the management of HCWs during an emerging pandemic outbreak. The areas were i) maintenance of general social order (cf. Arras 2005), ii) the baseline knowledge of pandemics among HCWs, iii) existing communication routines (cf. Siström et al. 2006; Hawryluck et al. 2005; Tai 2007) and, iv) ethical problems and emotional issues (cf. Arras 2005, Gardner 2006; Sweet 2006; Chan et al. 2005; Maunder et al. 2006; Clarke et al. 2007). Maintenance of general social order is essential for the pandemic response, even though methods for achieving this goal have largely been ignored in national preparedness plans (Uscher-Pines et al. 2006). However, for the purpose of this study, issues in this area were considered beyond the scope of the method being adapted. Similarly, knowledge about pandemics among HCWs emerged as an important aspect. However, since the source method was largely designed to elicit models of knowledge from populations it did not warrant any re-design effort. Details on HCW knowledge about pandemic influenza did not contribute to method adaptation and are omitted here. Consequently, method adaptation focused on the remaining requirement areas, i.e. communication routines and ethical and emotional issues.

Communication routines

Sustaining efficient communication routines between HCWs during outbreaks of infectious diseases is important not only for the provision of timely and accurate information, but also for continuous feedback about the experiences of those HCWs treating seriously ill patients or dealing with anxious citizens (Siström et al. 2006; Hawryluck et al. 2005; Tai 2007). Inadequate communication routines between HCWs and health department officials may, consequently, prevent the knowledge and competences of different healthcare worker groups from being optimally utilized (Siström et al. 2006). Moreover, experiences from the SARS outbreak illuminate the importance of these information routines being not only efficient but, also, dynamic. (Tai 2007). For instance, the groups at highest risk when new viral strains are introduced in a community may not be predetermined, and the need for rationing and other response efforts may shift dynamically during a pandemic outbreak (Arras 2005). Additionally, the task of maintaining transparency in policy-making in order to demonstrate fairness in the allocation of medical intervention falls heavily on the HCWs. Therefore, effective and flexible communication routines are vital to uphold both within healthcare service

organizations and between health service organizations and the lay public (Arras 2005; Clarke 2007).

Change needs: The adjusted method has to allow the investigation of alternative information sources used by HCWs and the characteristics of these sources, and how information is evaluated for credibility.

Changes to source method: To adequately reveal and characterize how communication routines are used and trusted among HCWs, two changes to the source method were made. First, follow-up questions were introduced pertaining to the sources of pandemic-related information reported in the interviews.. To elicit a sufficiently rich account of the implicit knowledge of each HCW, otherwise easily taken for granted and omitted, the HCWs were asked to teach the interviewer about how knowledge and information is managed in their healthcare practice. They were reminded that the interviewer lacked medical training. The purpose of this was so the HCW would not feel that he/she was being tested in an examination context. Thereafter, more specific questions were posed regarding how HCWs usually receive or search for information when needed. The reason for this was to collect data on information sources used and information gathering habits, including practices ranging from informal hallway discussions to formal meetings, use of the Internet, newspapers and email.

The second change in the source method was that follow-up questions were asked about source credibility. This allowed for the collection of data on how information is evaluated for credibility. This data was analyzed and attached to the influence diagrams. For instance, if an HCW reported that misleading information was provided in the news, questions were to be asked on what basis the information was interpreted as misleading.

Formative evaluation: When asked to teach the interviewer to elicit a rich account regarding the implicit knowledge of each HCW, several HCWs reported that young and mainly healthy individuals were expected to be especially vulnerable to a new pandemic strain. They understood this vulnerability to be caused by the amount of time that had passed since the last pandemic and the assumption that this population was immunologically naive.

“I had the Hong Kong flu myself so I know exactly how it felt (laugh), but I know about it, I don’t have any numbers, not that I know of, but I know that they were the two largest influenza pandemics in modern times so to speak, and it is known that those who’ve had them have a certain immunity, older people anyway have a certain immunity still, but the younger generation which didn’t live back

*then will be more severely affected when the next one arrives, that's what I understand anyway."*¹

The experts instead assumed total susceptibility to a novel viral strain. When representing this model as an influence diagram, it was found that this view did not entirely correspond to the leading expert account at the time of the study (Figure 2).

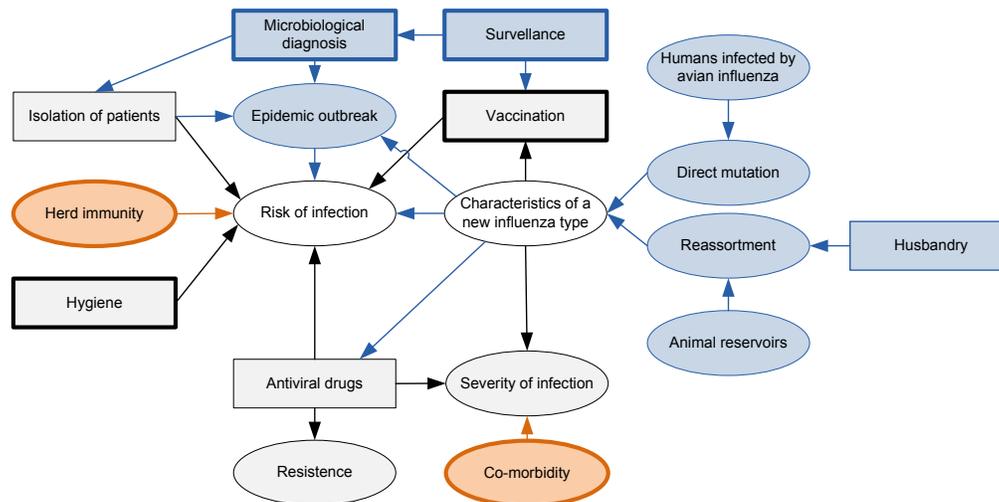


Figure 2. Influence diagrams of experts (blue), HCWs (red) and common to both (white).

The concept of herd immunity was the only item categorized as a misconception. The HCWs who reported on their sources for this concept referred to their education and experience. Co-morbidity was categorized as an indiscriminate belief. None of the experts mentioned co-morbidity explicitly as a factor. With the exception of herd immunity, the beliefs of experts and HCWs were non-conflicting as shown in the combined influence diagram in Figure 2.

The reasons that the knowledge of HCWs differed from that of the experts included that the former used personal experience from influenza epidemics, personal mail correspondence with local physicians responsible for infectious disease control programs, and differences in the use of media. Some HCWs used the healthcare intranet and/or searched the internet using general-purpose search engines, while others preferred to read reports. In addition, conferences with invited experts were referred to as useful, in particular for familiarizing persons

¹ The excerpts are translated from Swedish

with experts in specific areas who could be contacted personally for consultations at a later date.

“ We got information from NN, very early, before, before any media mentioned it, like, now this is going to be an issue in the news and so on, and this is what we know and what can be expected and so on. But there haven't been any meetings or anything like that. If we need any information, it's provided to us.”

Methodological implications: Use of a teaching the interviewer approach allowed for the collection of detailed data on communication routines, and a specific analysis of alternative information sources and their subjective credibility. The comparative graphical representation of the mental models of the HCWs and experts and their use of information sources in a common influence diagram was useful to identify measures to be taken to correct information policies during a pandemic.

Ethical and emotional issues

In addition to posing scientific, technical, and logistical problems, the threat of an influenza pandemic poses equally important ethical problems and emotional challenges (Arras 2005, Gardner 2006; Sweet 2006; Chan et al. 2005; Maunder et al. 2006). The analyses of ethical issues in the context of a pandemic threat have often concerned the distribution of available pharmaceuticals or vaccines (Uscher-Pines et al. 2006), but this issue cannot be expected to be the most prominent problem for HCWs. For HCWs, the most pressing ethical issues instead concern task assignment and situations (e.g. pandemics) where work-schedules and access to anti-viral protection cannot be regulated. In a pandemic setting, it is not clear what should be expected of peers and what healthcare managers can demand of personnel. Although guidelines for difficult ethical decisions have seldom been in place, insufficiencies in post-disaster damage control are often blamed on individual public service professionals, including HCWs (Clarke et al. 2007). HCWs will, thus, face thankless tasks during a pandemic, not only because they have to risk their own lives, but also because of a lack of understanding and support from the general public.

Change needs: The method has to allow for the identification of situations where HCWS face ethical and emotional challenges during a pandemic outbreak.

Changes to source method: To identify these situations, scenarios were formulated where ethical and emotional issues were cognitively assessed by the HCW in association with day-to-day practice. This was to prevent the HCW from jumping from a mundane realistic context to hypothetical reasoning (Norman 1983). The

intent was to present the ethical and emotional components in the scenario and to elicit the personal feelings and experiences of the HCW. To this end, the interviews were carefully devised based on close-to-the-current-state mundane situations, e.g. how increased sick leave during seasonal influenza outbreaks is managed, and choice rationale of personnel for specific, sometimes hazardous, assignments. In the adapted method, it was thus considered imperative that the HCWs were kept from speculative and intellectual reasoning. Such responses would reduce the accounts to mere opinions and pose a serious threat to the validity of the method. If the ethical issues of a pandemic setting do not arise naturally from the scenario, but instead become an intellectual speculation, the validity of the data is threatened, and in such a case, the data should not be solicited.

Formative evaluation: The close-to-the-current-state scenarios yielded sensitive data on how senior clinical managers envisioned selecting staff for particular assignments during pandemics. All interviewed HCWs reported themselves as being unprepared to make such decisions, even though current preparedness plans designated them for this task.

“I order things long in advance, but I can’t order things just in case. I have to have a reason for stockpiling something, and now I don’t see the need for it. But when these things happen, it becomes very problematic, since you have to deal properly with them. Sometimes you can do without something, but it can get difficult. But if there isn’t anything, I’ll learn in advance how to deal with it, if there is anything else we can do, or sometimes if there isn’t any pill, so to speak, to give, you don’t always have drugs for everything.”

Nevertheless, despite the precautions taken in the changes in the source method, a distinct shift in the way in which the reports were provided was consistently noted during the interviews. This was reflected when HCWs turned to more intellectual speculation and argumentative reasoning. For instance, a senior clinical manager first earnestly described her views on the current preparedness for a pandemic event using concrete terms, self-references, and descriptions of specific organizational details.

“...and, from my viewpoint, I think there is a lack of preparedness, because we have no time available. As I just told you, I’m really stressed out. When someone gets sick or goes away on training, we are short on staff. We also have responsibility for homecare and have many elderly [in our area] to care for.”

However, when the interview turned to reviewing a situation where anti-viral medication is scarce, the clinical manager shifted to more general reasoning, using terms such as “*modern man*” without referring to personal emotions or self-efficacy.

“... no, but you have to accept that [anti-viral supplies will be insufficient]. I think modern man has difficulties accepting [this fact]. And you notice that a cure is expected [at hand], and this stuff about self-care and all the talk about hygiene. If there’s a pandemic, you’re supposed to avoid crowds and so on. Of course it’s dissatisfying that you don’t have any medication to provide. But they had to, had to, deal with the Spanish flu, they just had to. This stuff about hygiene and isolation and so on is what we can offer. And there is [this mess] with resistance and everything. The reports keep coming and this stuff about hand hygiene and that you can isolate [infected individuals]. General hygiene is the bottom line, that’s what we have to expect I believe.....”

This shift was interpreted as indicating that the HCW had quit reflecting over a vivid mental image and instead jumped to intellectual speculation. Several similar shifts in the transcriptions reinforced this hypothesis, thereby providing a sublime cue for a recurring pattern for when the thin line demarcating valid data was crossed.

Methodological implications: Use of *close-to-the-current-state scenarios* can facilitate collection of behavioral data on ethically and emotionally challenging decision circumstances likely to occur during a pandemic outbreak. Further methodological development is needed to identify and act on situations when the HCW no longer reflects over a vivid mental image but instead jumps to intellectual speculation.

Discussion

The aim of this study was to advance the understanding of methods for eliciting the predicted behavior of HCWs during pandemics. Traditional methods for studying risk communication provide insight into the biases of laypersons in dealing with probabilistic information, but they do not address the role of contextual factors in evaluating risk information, and neither do they provide insight into how decisions are made. These shortcomings have led to the development of alternative research approaches, such as the mental model approach used as the source method in the present study, and naturalistic decision-making (Klein et al. 1997). Our findings suggest that this refinement of methods for the study of communication about health hazards needs to be expanded. The formative evaluation revealed a large number of difficulties associated with

obtaining and analyzing data on predicted behavior during a future pandemic. However, even in its baseline form, the adapted method still produced data about critical aspects of the reasoning and self-predicted behavior of local HCWs that are not addressed in current preparedness plans. Specifically, we found that to comprehend how HCWs actually grasp and act on pandemic risk information, it is necessary to both consider the routes by which the information reaches them, and how decisions thereafter are made in an emotionally and ethically restrained context.

When addressing decision-making during a future pandemic, we found it necessary to be extremely careful about how the HCW is asked to forecast behavior. The difference between speculative reasoning and reflection when presented with a vivid mental image is very small and the processes can easily be confused. There is no clear-cut method for distinguishing the quality of models elicited from self-reported data, i.e. whether they represent speculation or earnestly predicted behavior. Some cues for such differentiation were discovered in the present study, but no attempt was made to formalize the differentiation process. However, recent research based on Construal Level Theory (Trope and Liberman 2003) has demonstrated the influence of temporal distance on the level of mental construal. Nussbaum et al. (2003) and Pronin and Ross (2006) have shown that when people reason about temporally distant actions, they tend to ignore situational, specific influences on their behavior. Concepts and methods from this strand of research may provide important contributions also to the development of means for eliciting and analyzing data from HCWs on their behavior during pandemics.

A concept that has been fairly neglected in mental models research is self-efficacy, i.e. a subject's judgment of how well he or she in practice will be able to execute the courses of action that are required to achieve a goal. This judgment is related to previous personal experience of the situation, an estimate of one's own ability, and general knowledge of the context (Bandura 1992). It is largely the third component of self-efficacy that is subject to modification through the provision of information during a disaster. Therefore, differences in the perception of self-efficacy may cause variations in reports of future actions from HCWs, even though the subjects have the same general knowledge about the action context. It can be assumed that a random report approximates average self-efficacy, but such assumptions are unfounded without analyses of empirical data. One possibility for refining the method further is to include data on self-efficacy. Reports of predicted future action can, furthermore, be influenced by issues ranging from ideas of ideal workplace behavior in a fearful crisis. It is therefore necessary to recognize in all analyses that data from such interviews cannot be accepted on face value. Mental model research can be combined with methods such as protocol analysis (Ericsson 1993) and research on decision-making in

action (Klein 1997) in order to elicit robust measurements of differentiation between candid projection and speculation.

In summary, utilizing close-to-the-current-state scenarios to analyze future behavior among HCWs during pandemics was found to be promising, but also associated with theoretical and practical pitfalls. Pandemic preparedness planning requires that the ‘best possible’ policy decisions are made in a situation when knowledge is incomplete. An important part of this process is to identify the moments in policy-making that are the most undefined and to share information about this uncertainty with those involved. In such situations, less than optimal methods can provide important insight into the planning process, given that their limitations are known and taken into account. Based on this line of reasoning, the present results regarding emotional and ethical issues in practical pandemic preparedness challenge the notion that predicted behavior should be regarded as uncertain. Even though the adapted mental model method was found to elicit data not previously reported as issues to be addressed in pandemic response programs, more research is warranted to assess the validity and the general applicability of the modified method. We conclude that the introduction of this method in pandemic preparedness planning has the potential to provide a cost-effective complement to present strategies. Moreover, this effort will require additional research to reliably allow differentiation between candid projection and speculation.

Appendix: Condensed protocol

Information:

I’m going to ask about influenza and pandemics and try to understand how you perceive such a situation. It’s perfectly fine if you think aloud about what comes to mind concerning these questions.

1. What’s the truth behind this avian flu and the threat of pandemic influenza?
How did you learn this? (where/from whom)
How do you judge the reliability of this?
2. Where do you expect new information will come from, if someone needs to inform you?
3. Do you feel confident with the knowledge you have at this moment in time?
4. Will the avian flu turn into a pandemic influenza?
5. How severe would a pandemic influenza be?

6. Would it affect your working situation?
What do you base this on?
7. How's the preparedness for pandemic influenza?
What has been done?
What precautions will be taken for the protection of healthcare workers?
What would you like to see done?
8. What are your thoughts about caring for patients during a pandemic?
How to you perceive the risk for you own safety?
9. What treatments will be used?

Part 2: Scenarios.

Information:

I will now talk about possible scenarios and want you to imagine and think aloud about how you'd react to them. These may be reflections or opinions and don't need to be 'answers.'

1. Some who have studied the threat of an avian flu pandemic say that it may be similar to the Spanish flu. During the Spanish flu, healthy persons aged 18-40 were those who were most severely affected. What do you think it would be like working under such conditions?
2. Some say that during a pandemic influenza available vaccines will not be shared as agreed on. For example, when an outbreak of Swine flu was expected in 1976, the US refused to share vaccine. How do you react to such speculations?
3. Surveys have shown that some physicians hesitate to care for patients during the outbreak of an unknown, potentially lethal disease, and during the SARS outbreak sick leave doubled. What would you expect the consequences to be here if we have a pandemic influenza?
4. In the regional preparedness plan for pandemic influenza in [this county] homecare is obviously an important tool for diagnosing and providing self-care advice and support. In practice, this means house calls. How would house calls be organized at this facility?
5. A pandemic influenza traditionally arrives in waves and the need for personnel in such a case will vary from one area to another. This means that you may need

to serve at other facilities. How do you imagine this working out, and who at this facility will be available for such service?

6. On what grounds do you think decisions on who is to form a care team should rest? How would you decide this? How would you handle an increase in sick leave and what would be needed to support your working situation under such conditions?

7. Do you have any thoughts, questions, or reflections that come to mind that you would like to share before we finish?

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