Nurses’ beliefs about public health emergencies: Fear of abandonment

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Background: Since the events of September 11, 2001, subsequent anthrax mailings, world political events, and natural disasters such as Hurricane Katrina and the recent tsunami, public health emergencies including bioterrorism events are viewed as realistic possibilities. Public health emergencies would stress the current health care system.

Objective: The objective was to identify beliefs and concerns of nurses who work in hospitals designated as receiving sites during public health emergencies.

Methods: A qualitative study using focus groups with a total of 33 hospital nurses in 2003 was used. Audiotapes were analyzed, and codes, categories, and a theme were identified.

Results: Fear of abandonment was the overarching theme. Nurses believed that clinical settings would be chaotic, without a clear chain of command, and with some colleagues refusing to work. Limited access to personal protective equipment, risk of infection, unmanageable numbers of patients, and possibly being assaulted for their personal protective equipment resulted in the sense that they would be in unsafe clinical environments. Loss of freedom to leave the hospital and fears that hospitals would not provide treatment to nurses who become ill as a result of caring for patients contributed to the sense of abandonment.

Conclusion: Although these nurses worked in hospitals with comprehensive public health emergency plans, they believed that they would not have readily accessible material and human resources to cope with a bioterrorism event. Readiness plans should include a systematic assessment of nurses’ concerns. Health care readiness plans should incorporate focused interventions to improve safety, a sense of control, and facilitate coping in public health emergencies. (Am J Infect Control 2006;34:351-7.)

Since the events of September 11, 2001, subsequent anthrax mailings, world political events, and natural disasters such as Hurricane Katrina and the recent tsunami, public health emergencies (PHE) including bioterrorism (BT) events are viewed as realistic possibilities. PHE would stress the current health care system. In the present era of cost containment and nursing shortages, many hospitals are operating with limited staffing and material resources and have a restricted capacity to respond to substantial increases in patients, especially those requiring complex and highly technical care.1

A successful response to PHE will depend on the type and severity of the emergency or disaster;2 the hospital’s level of preparedness; and the integration of the facility with the larger local, regional, and national response. Currently, hospitals are developing and using systems that will facilitate victims being referred to facilities with appropriate services and capacity for patients.3 In a large scale PHE, there will likely be multiple patient admissions to all available health care facilities in a specific geographic region or across the nation. As direct caregivers, nurses will need to manage their own anxieties and cope with fearful patients and their families.4 For nurses, it is likely that responsibilities for maintaining personal health, facilitating the safety of family and loved ones, and fulfilling their professional duties will be in conflict, increasing psychologic distress.

Psychologic reactions and needs of nurses expected to provide care to infected patients during BT events are not well understood. In BT events, nurses may be expected to remain at the work site and provide care while they have little or no information about the location or safety of their families and loved ones.5 An attack from a BT agent will likely produce fear, anxiety, stress, and confusion in the hospital setting, which could be further amplified by chaos in the community. Ursano et al’s conceptual framework of human chaos explains how psychologic distress is influenced by anticipatory stress about the potential trauma and is amplified when there is risk to one’s life, exposure to death, physical injury, and a sense of terror. If a BT attack occurs, health care providers will be among the...
groups within a population at increased risk for stress and anxiety. Work environments in which workers have access to personal protective equipment (PPE), a sense of control, orderly environments, supervisor feedback on safety, opportunities to safely practice skills, and a perception that senior management is committed to worker safety are associated with less stress and fewer occupational accidents. High workloads and increased job demands associated with increased levels of stress in noncrisis work settings would likely be present during a PHE.

Terrorism events are man-made crises and, as such, are more difficult for persons to understand and cope with than crises created by natural disasters and are more likely to elicit feelings of terror and confusion. The sense of vulnerability produced in caring for those infected with a disease agent intentionally transmitted is likely to be amplified by the anxiety and fear within the population.

Nurses have questioned whether their personal safety needs will be met during PHE. Reports of nurses refusing to participate in smallpox vaccination programs during 2002 support the need for studies to explore and describe the concerns of nurses related to PHE (B. Bor, personal communication, February 2, 2003). In a study of 6428 New York City health care workers, willingness to work was lowest for those infected with a disease agent intentionally transmitted is likely to be amplified by the anxiety and fear within the population.

A search of Ovid-Medline and Pubmed electronic databases identified 7 articles addressing stress in nurses during disaster situations. Identifying the extent to which any of the characteristics of safer work environments can be present during PHE, including BT events, could facilitate innovative ways to mitigate negative reactions and support nurses’ ability to function in clinical settings. Identifying the beliefs and attitudes of nurses toward their roles during PHE is essential to design and implement interventions that address their needs and concerns. The purpose of the research was to identify beliefs and concerns of nurses who work in hospitals designated as receiving sites during public health emergencies. As an initial step in the process of identifying nurses’ concerns, focus groups were held with nurses in BT-designated receiving hospitals. The research question was as follows: What are the beliefs, concerns, and feelings of nurses who anticipate that they will be expected to work during a BT event?

METHODS

A qualitative design was used with focus groups of nurses employed in designated PHE receiving hospitals.

Sample

Sampling was purposive. Posters recruiting nurses for the study were placed on emergency and critical care nursing units in hospitals designated as BT/PHE receiving sites. Unit nurse managers and the principal investigator recruited nurses. To meet the criteria for selection, participants were required to be registered nurses who worked at least 8 hours every 2 weeks and had been employed at the hospital for at least 6 months.

Thirty-three nurses from 3 Midwestern metropolitan hospitals participated in the study. All 3 of the hospitals had disaster and BT readiness plans and had provided extensive in-service education to nursing personnel. All participants were provided with consent forms describing the purpose of the research and were informed that focus group sessions would be anonymous. Permission for the study was obtained from the Human Subjects Committee of the University of Minnesota.

Research design

Focus groups were selected as a useful method to generate and explore ideas because attitudes and perceptions are often not developed in isolation but, instead, emerge through interaction with others. This method is socially oriented and often occurs in a more natural environment than that possible through one-to-one interviewing. Focus groups are considered to have high face validity because the method is easily understood.

Focus group size ranged from 2 to 9 participants. It is understood that focus groups usually have between 6 and 12 participants; however, given the unit staffing and workload levels, fewer participants were available. Nurses used their coffee breaks or allocated lunch times to participate. The groups were conducted in conference rooms near the participating critical care unit, emergency departments, or medical-surgical nursing units, using guidelines developed by Krueger and Casey. Groups lasted between 50 and 45 minutes in length, again, to accommodate nursing schedules. No incentives were used. The semistructured interview guide included questions derived from a review of literature on work organization, injury prevention behavior, safety education, human response to chaos, and theory of planned behavior.

Procedure

The researcher moderated the discussion. The questions moved from general beliefs about working during a BT event to more specific concerns. The specific questions included the nurses’ most important concerns.
their appraisal of hospital preparations, and specific interventions they believed would enable them to cope and function during a crisis (Table 1). The investigator clarified responses and verified key statements with participants. The discussions were audiotaped; any information that could be used to identify participants was removed during transcription.

Data analysis

First-level coding was done to summarize segments of the data and elicit common topics. The codes were revisited by 2 members of the research team to check for accuracy and to combine or separate codes as needed. After codes were developed, they were clustered into categories. The categories represented a form of metacode in that they reduced information into more meaningful and compact units of analysis. The categories were clustered into an overall theme.

RESULTS

The codes were clustered into 4 categories: (1) expectation of chaos, (2) loss of a safe clinical environment, (3) loss of freedom, and (4) limited institutional commitment. The overarching theme of the focus group discussions was concern about abandonment. Nurses anticipated that they would be working in a chaotic clinical environment without the presence of hospital administration and a clear chain of command, with insufficient protective equipment, and with little freedom to leave an unsafe environment. In addition, many nurses believed that they would be functioning without a commitment by hospitals to provide care for themselves or their loved ones should they become ill.

Category 1: Expectation of chaos in an environment without adequate information and resources

An emergency such as a BT event was perceived as an event in which resources, both human and material, would be quickly overwhelmed (Table 2). Although nurses in this study worked in hospitals designated as receiving sites for victims of a BT event, many of the participants were not aware of, or familiar with, their hospital’s BT plan. However, they believed that whatever the plan included, it was not “well thought out,” not developed with input from nursing staff, and that there had been inadequate communications with administration resulting in a “disconnect” between resources and nurses. They stated that they were not in the communication loop and had received no real practical “preparations” such as drills, only “information.” Nurses who worked evening and night shifts stated that they were not prepared because educational sessions were scheduled at times that were often impossible for them to attend.

“There really hasn’t been a lot of communication. Okay, if you’ve got a plan in place, you need to share it with the people who are going to have to implement that plan. I personally haven’t seen it.”

In one hospital, some nurses stated that, although their hospital was a leader in BT preparations, there could not ever be “enough preparation.” A few of the participants were aware of BT plans and stated that, although higher management was knowledgeable about procedures and plans, the majority of staff nurses were not informed of the plan.

During each focus group, nurses expressed beliefs that the clinical environment following a BT event would be chaotic and that they would be inundated with patient responsibilities without adequate resources to provide care. Almost every participant expressed a belief that there would be confusion and chaos. The nurses were unclear about who would provide assistance and organize the situation.

“I think there is some concern as to who we would be answering to. Infection control would give us orders … more and more questions about who infection control would take guidance from. Concern as to where we would be taking our directions, and I think it would be very chaotic.”

They did not know whether there would be a credible “voice” that would guide them and “speak to their safety” regarding the agent of disease, transmission routes, and precautions. “We’re gonna have multiple voices, and our job is going to be trying to discern who do I believe and then how do I act accordingly.”

The lack of knowing the command structure was a special concern for nurses on evening, night, and weekend shifts. They feared the situation would be “a big mess.” To explain their concerns about how difficult access would be during a BT event, nurses

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<tr>
<th>Table 1. Questions for focus groups</th>
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<tr>
<td>What is the likelihood that you will be asked or expected to work during a bioterrorism (BT) event?</td>
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<td>What do you think working during a BT event will be like?</td>
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<td>What do you think of the preparations that have been made by the hospital for a BT event?</td>
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<td>If you had to make a list of your concerns about working during a BT event, what would be the top 3 concerns?</td>
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<td>In your opinion, what equipment or procedures planned to be used during a BT event will be effective or helpful?</td>
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<td>Tell me more about why these … are helpful?</td>
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<tr>
<td>In your opinion, what equipment or procedures planned to be used during a BT event will be a problem?</td>
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<tr>
<td>Tell me more about why these … will be a problem?</td>
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<td>If you could make changes to the BT procedures, what would you recommend or suggest?</td>
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identified their current problems with finding content experts during the evening and night shifts. Some stated that they were “taking a chance” when they paged the evening and night coordinator/supervisor for assistance in infection control.

“Because all of us work the off shifts, we have been told if you have an infection control issue there’s not an infection control practitioner on call. You hope that if you call and you want to talk to someone that they have some clue what they are talking about.”

Repeatedly, the nurses who work evening and night shifts stated that they feared they would not be able to obtain supplies because there is “skeleton staff” in materials management during off shifts.

“There is an unwritten belief that things only happen from 8 to 5 PM. The reality of the situation is that a lot of things occur after the hours of 5 o’clock in the evening.”

“Big problem if the event occurs on the off shifts. If it was 3 o’clock in the morning, its like ‘oh my God, where do we start?’ There is nobody here. Yes, we have people on call, but it would be a much slower start up.”

Frequent experiences with staffing shortages, limited supplies, and inaccessible content resources such as infection control professionals (ICPs), during normal work shifts, reinforced beliefs that chaos would result from a substantial surge in patients. Nurses stated their daily workloads were already heavy, and the notion that they would have an increase in the number of patients with potential lethal, transmissible infections felt overwhelming. They did not know how they could provide safe and effective care, obtain adequate supplies, and provide patient rooms in such a “discombobulated” environment.

Category 2: Loss of safe clinical environment for nurses and patients

The clinical site would not be safe during a BT event. When asked what their leading concerns were about working during a BT event, the nurses responded that they feared acquiring a lethal disease from exposure to an infectious agent, such as “something that will kill you, not just make you sick.” They feared that they might unwittingly transmit the infectious agent to other patients or to their families. They anticipated that personal exposures would occur during patient contact because of shortages of PPE, limited numbers of isolation rooms, and need to move infected patients through the hospital. They offered stories of recent patient situations in which nurses lacked sufficient supplies to care safely for possibly infectious patients.

“We had a patient admitted with possible viral hemorrhagic fever. We only had 50 outfits … and it was going to take us a day or 2 to get more. I thought, God, if we had an outbreak like this and suddenly we had 50 patients, we don’t even have all the gear.”

The nurses feared that they lacked sufficient knowledge about disease agents, isolation procedures, and access to content resources in such a crisis. They told stories of patients inappropriately isolated because staff were unable to access resources on isolation protocols.

“We didn’t know what precautions needed to be taken, and there’s no handbook or anything that we can look up, so we were scrambling trying to figure out what we do here. And I think with an event that would be that catastrophic, that the lack of education is very high on the list.”

They saw their own knowledge deficit regarding appropriate isolation precautions as presenting a risk of disease transmission to other patients. During crisis situations, the nurses believed that they often functioned with “tunnel vision” and needed easily accessible resources. They could not be expected to search the Internet or look through a “complicated manual” during a crisis. Nurses feared that the panicking community outside the hospital would overwhelm the usual triage system for patient admission and flow and compromise work environment security.

“How will we stop access to the hospital? Nobody is going to stop a crowd of people coming in. They are all going to come in, I’m not waiting my turn. I’m sicker that that person.” Would need the National Guard.”

In addition to coping with admitting and providing care to large numbers of patients, some nurses were

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<th>Codes</th>
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<td>Overwhelming situation</td>
<td>Chaos</td>
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<td>Lack of leadership</td>
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<td>Unclear chain of command</td>
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<td>Lack of clarity re: role</td>
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<td>Unprepared organization</td>
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<td>Difficult to cope</td>
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<td>Self-protection</td>
<td>Unsafe clinical environment</td>
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<td>Insufficient PPE</td>
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<td>PPE taken, stolen by others</td>
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<td>Inadequate supplies for patients</td>
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<tr>
<td>Fear of transmission</td>
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<tr>
<td>Lack of knowledge of appropriate isolation</td>
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<tr>
<td>Not able to leave hospital, no relief</td>
<td>Loss of freedom</td>
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<td>Inadequate staff</td>
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<tr>
<td>Absence of administrators and some key physicians.</td>
<td>Limited institutional commitment to nurse</td>
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<td>Nurse/patient contract</td>
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<td>Hospital’s obligation to nurse?</td>
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<td>Who will be there for me?</td>
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Table 2. Codes and categories derived from analysis of focus group meetings.
concerned about being assaulted and having their PPE physically taken from them. They wanted someone at the hospital level who would control the environment and “speak to their safety” and ensure that “…the mass crowd will act in an orderly manner and not come running to you and say ‘you got that protective equipment on, I’m out here, I’m the guy that’s getting hurt, let me take that protective equipment off of you.’ People will go nuts. Security will be an issue.”

Category 3: Loss of freedom

Disruption of normal staffing resources was frequently mentioned. Participants expressed a belief that they would not be free to leave the worksite because of patient volume and absence of colleagues.

“How long would I end up having to stay here? Would I get to leave?” They stated that many nurses would leave clinical sites when the BT event occurred, and others would not report for work. “If you are a nurse and you are coming to work, I don’t think you will come.” The belief that some nurses would quit their jobs rather than be present for work was also expressed. Focus group participants stated that they would stay but that some of their colleagues would not.

“I want to know how long I’m going to be here, I mean I’d like to know that I’m not going to be here 3 days, 4 days, a week straight, you know taking a few breaks here and there as I can, not being able to go home … mandatory to stay here. And that’s going to be tough. I’ve talked to people that have said, ‘You know that the minute I hear that overhead page for a disaster, I’m out the door, I’m not going to stick around and be exposed to … whatever is coming in. I’m not going to put my self at risk.’”

Although the nurses were in agreement that “some nurses” would not report for work, they also stated that many nurses would remain at work and respond to the crisis.

“I think when you’ve got a disaster like that, because of virtue of what we do, I don’t think you are going to have any trouble making people stay, because … we’re all going to rally to the situation … Once it starts calming down, then you’re gonna see people going, I’m going. Initially you’re just gonna go … automatic because that’s what you do. And you keep moving until all the sudden it starts slowing down and then you’re going to start thinking.”

The nurses believed that the shortage of staff from those refusing to work would place even greater pressure on the remaining nurses. “I think people will be too scared to come to work. There are not going to be enough people to work. Looking out for themselves and their families first.”

Category 4: Limited institutional commitment

Nurses hoped that their hospitals would commit to provide care to them should they or their families become ill and need medication. They did not know whether the hospital had any plans or policies to support them. “If we are taking care of all these people, there better be people taking care of us.” The nurses described their experience with the recent smallpox immunization program in 2002 to illustrate their concerns that hospitals had a very limited commitment to nurses.

“I think the smallpox vaccine, first phase, was a very good example of people saying ‘no, I am not getting this vaccine because the government will not compensate me, my employer is telling me that I have to take off ‘x’ amount of weeks until the scab falls off. I cannot afford to support my family, so therefore I am not going to get the smallpox vaccine.” And then they wonder why huge amounts of people in the health care field have not gotten the smallpox vaccine.”

Nurses expressed anger that the hospitals would not provide adequate compensation for themselves and their families if they suffered a disability or died as a result of the smallpox immunization. “The compensation that they came up with was not adequate to compensate you for any long-term effects.” The nurses expressed sadness that they would be expected to honor their professional obligation to patients, even in extremely dangerous situations, without a similar commitment to them by the hospital.

“I think there is a sense that you’re going to be hung out to dry. You know, if something happens to you, you couldn’t rest assured that [hospital name] would take care of you, would stand by you if you were forever sick. That they would desert you and not be there, and I don’t know how to change that.”

The perceived lack of commitment by the hospitals to the nurses was seen as a reason nurses would not come to work during a BT event. “They are going to say, is it worth me going in there and exposing myself to this danger and then turning around and exposing my family over a job?”

DISCUSSION

This study addressed the research question, “what are the beliefs, concerns, and feeling of nurses expected to work in clinical settings during a PHE such as a BT event.” The overarching theme, fear of abandonment, was continuously threaded throughout the discussions as nurses expressed fear that they would not be supported in a BT crisis (see Fig 1). They believed that their relatively safe work environment with its known policies, protocols, and clear chains of
command could not withstand the stress of such an enormous event. They believed that ultimately they would be on their own in a potentially lethal situation without sufficient collegial, managerial, or institutional support. Evening, night, and weekend shifts were seen as the greatest risk for chaos and lack of resources. Uncertainty about the command structure during a life-threatening BT crisis is likely to weaken cognitive assumptions that are essential to a sense of security and an ability to psychologically function, such as predictability and orderliness.

Their perceived inability to meet patient needs and honor the contract between caregiver and patient is likely to create frustration and role conflict. In a PHE, social norms that restrain aggressive behavior may be diminished. The greater the fear and panic, and the more limited the medical resources are perceived to be, the more likely it is that social norms will be ignored, and intense and aggressive competition for health care services could occur. Nurses in this study were aware of capacity limitations of the current health care system and were aware of the potential danger to themselves because of their role as providers of scarce resources during a time of societal disruption and panic.

There is a paucity of data on psychologic stressors for nurses in disaster situations in which the risk of harm is not only present for the victim-patient but also for nurses and their families. These participants described their assessment of threats inherent in a BT attack in relation to harm to themselves and their loved ones and to those they are committed to care for and protect, their patients. Despite nurses’ concerns about their safety, many of them also expressed their sense of commitment to care and protect all patients and to “do no harm.” Beliefs that, during a BT event, there would be chaos and abandonment by those in positions of power were sobering and saddening. Unfortunately, their assessment of a potentially chaotic environment was perceived to be realistic by most participants.

Hospitals and public health entities have been developing PHE readiness plans. Few organizations have assessed caregivers’ needs and fears and incorporated the findings into organizational plans. Findings from participants in this study suggest that nurses did not perceive that their needs were being addressed in current PHE/BT plans. The concerns and fears of nurses are complex and reflect the meaning nurses attribute to a PHE, their anticipated interactions with victims, and the perception of institutional and social support.
Implications for practice

Readiness for crisis events involves not only preparations for material resources and attainment of skills, but also involves garnering psychologic resources that facilitate coping in high stress situations and establishing an institutional framework that enhances and supports safe functioning. Further study is needed to expand and validate these findings, identify interventions specifically designed to meet nurses’ needs, and describe mechanisms that will operationalize the identified interventions into PHE plans. Readiness plans should include a systematic assessment of nurses’ concerns, and health care readiness plans should incorporate focused interventions to improve safety and a sense of control and facilitate coping in public health emergencies.

Limitations of the study

Some of the focus groups were composed of 2 or 3 participants. The usual focus group is composed of 6 to 12 members. The small sample of self-selected participants precludes being able to generalize the data.

Note: the findings from this study were used to develop a survey that has been administered to nurses in various regions of the United States.

References