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# Preparing to respond: Irish nurses' perceptions of preparedness for an influenza pandemic



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#### ABSTRACT

*Introduction:* The aim of this research was to garner opinion on: the concerns of nurses in respect of the key issues that they may face in the event of an influenza pandemic; the perceived impact of an influenza pandemic on these nurses; and the current level of perceived preparedness in their hospital. Of particular significance is the fact that data for this study were gathered from nursing staff during a period when there was a heightened risk of an outbreak.

*Methods:* The data for this study were gathered using a structured, self-administered questionnaire, which was distributed to 127 nurses. A response rate of 72% was achieved. The questionnaire was based on the instrument used by Wong et al. in their 2008 study of preparedness for an avian influenza pandemic in Singapore.

Results: Although the results reveal a number of concerns raised by nurses, it is clear that the majority (90%) view treating and caring for influenza patients as core to their role. While recognising their professional responsibilities, they reveal apprehension about certain aspects of their work, such as an increased likelihood of infection, added workload and pressures, an increased concern for those close to them who could become infected as well as the overall increase in stress levels at work. The extent of professional and personal preparedness, together with the concerns and perceptions of nurses, could affect the hospital's overall capacity to respond and these concerns should be addressed by those responsible for the development of pandemic response plan.

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#### 1. Introduction

The World Health Organisation (1999) describes an influenza pandemic as an event in which the human population has no immunity against the disease, resulting in several simultaneous epidemics worldwide with enormous numbers of deaths and illness. Highly pathogenic influenza pandemics have occurred at unpredictable intervals approximately three to four times per century. These, according to Gust et al. (2001), have caused untold morbidity and mortality, in addition to considerable social disruption and economic impact.

Healthcare continues to face radical challenges and the evolution of emerging and re-emerging diseases heighten the impact of such challenges (Jones et al., 2008). At the outbreak of SARS (2003/2004) there was a paucity of information about the aetiology, mode

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of transmission and physiological impact of the disease. However, its rapid clinical course, its impact on healthcare workers (both personally and professionally) and the fear arising from the risk of occupational exposure have been the focus of subsequent research. The outcomes of these studies, as well as those relating to other infectious diseases, should therefore be incorporated into the planning for future infectious disease outbreaks so that hospitals and healthcare workers are better prepared to deliver an appropriate response.

There is no doubt that acute hospitals will "form the cornerstone" of the response to pandemic influenza in most countries and that hospitals will "face pressures to deal with large numbers of patients with pandemic influenza in addition to "routine" medical emergencies and, where capacity exists, the continuation of nonemergency care" (Pandemic Influenza Expert Group, 2008, p. 12). As is the case across the globe, the Irish healthcare system's ability to cope during an influenza pandemic will depend, to a large extent, on the number of healthcare workers, including nurses who are able and willing to work through such an outbreak. Planning for major emergencies in Ireland assumes that once a pandemic is

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confirmed, the Irish Health Service Executive will care for the large number of patients impacted and will only provide essential care for other patients. Guidance based on modelling data submitted by the UK Scientific Pandemic Influenza Advisory Committee Subgroup on Modelling (2008) estimates staff absenteeism at between 30% and 35% at the peak of a pandemic because of illness and/or caring responsibilities. Ireland estimates similar rates of absenteeism from work. Such estimates take into account the cumulative effect of factors such as staff illness, possible school closures and the resultant need to look after children, caring for elderly relatives, and a possible disruption to public transport.

In planning for a pandemic, emergency and nurse managers, among others, should give consideration not only to the planning of a response and recovery operation but also to the people who will be required to respond. As Reissman et al. (2006) note:

"Without adequate planning and preparations, an influenza pandemic in the 21st century has the potential to cause enough illnesses to overwhelm current public health and medical care capacities at all levels, despite the vast improvements made in medical technology during the 20th century." (p. 1)

The aim of the study was to capture the perspectives of nurses who were involved in planning for an influenza pandemic within an Irish acute general hospital. The research was completed so that their opinions, perspectives, and fears could be captured with a view to enhancing preparedness for infectious disease outbreaks.

#### 2. Methodology

This research uses a case study methodology where quantitative data were collected, using a structured questionnaire, from nurses working in an acute general hospital located in the south of Ireland. Data were collected at a time when there was a heightened risk of an influenza outbreak. This provided an opportune time to conduct the research as the hospital nursing staff were in the process of planning and preparing for an outbreak.

There were 127 nurses working in this acute care setting, and all of these nurses were expected to have exposure to the ongoing preparedness and readiness planning. The data collection focused on the personal and professional concerns of nurses, the perceived impact that a pandemic could have on these nurses, and the overall level of preparedness within the hospital.

Given the research question, and a desire to survey the opinions of all 127 nurses employed at the hospital, it was decided that rather than employing a similar approach to the scholars Ki and Maria (2013), who conducted interviews with ten nurses during the human swine influenza outbreak (SARS) in Hong Kong, gathering data via a questionnaire would best suit the research objectives. The work of Wong et al. (2008) in particular informed the design of the questionnaire as they had researched healthcare workers' concerns, the perceived impact and preparedness levels in relation to the avian influenza pandemic of 2006.

The questionnaire used in this study was derived, with permission, from the Wong et al. study (2008) published in *Annals, Academy of Medicine, Singapore*. While accepting the reliability, validity and overall robustness of the original study, a pilot study was nonetheless completed to ensure the questionnaire suited the slightly different subject matter, pandemic influenza rather than avian influenza, and any cultural differences between Singapore and Ireland. It was felt that this additional pilot study would provide a further check on the clarity and quality of the survey. The results of this pilot, completed with a sample of nurses drawn from a different hospital in the same geographic location, were positive and no methodological issues were identified. The self-administered, paper-based questionnaire was distributed to all 127 nurses working in

an Irish hospital. 91 nurses completed the survey, which amounts to a response rate of 72%.

#### 2.1. Demographics

A brief review of the demographics of the 91 respondents showed that they are broadly in line with the gender breakdown of nurses in Ireland, as 99% of respondents were female and 1% were male. The Irish Nursing Board (2010) report of 2010 stated that 4.7% of general nurses registered in Ireland were male. In this study, 76% of respondents had more than ten years of nursing experience while 24% had nine years or less. All 91 respondents held a recognised nursing qualification.

#### 3. Results

The findings of this study are divided into three core topics: concerns, perceived impact, and the level of preparedness for an influenza pandemic.

#### 3.1. Concerns regarding an influenza pandemic

The majority of nurses (87%) felt that their job would put them at an increased risk of exposure, while just under half of them (48%) were afraid of actually contracting pandemic influenza. Notwithstanding these concerns, 65% considered the risk of contracting influenza to be "part of their job." In spite of the additional risk posed, only 4% suggested that the risk emanating from an influenza outbreak would make them look for other work. However, 24% felt they would understand if their colleagues resigned due to the perceived risk from an influenza outbreak.

There were mixed views among respondents as to whether they felt confident that their employer would look after their needs if they became ill with influenza. 42% felt confident they would be taken care of by their employer.

It is important to recognise that nurses belong to family units and/or communities that will also be at risk during a pandemic. Therefore, it was considered pertinent to review non-work-related concerns regarding an influenza pandemic. The findings show that 67% of respondents were worried that because of their job, people close to them would be at an increased risk of contracting influenza. The nurses voiced concerns for children (77%), spouse/partner (71%), work colleagues (68%), parents (66%), and close friends (66%).

While nurses expressed concern for family, friends and colleagues, this study also found that the nurses believed that people close to them would be worried for the nurses' own health (78%). This highlights the importance of taking into account a wide range of stakeholders when planning for the effects of a pandemic on hospital staff. It is recommended that the hospital communications strategy includes methods to provide relevant information and guidance not only to staff but also their families and other relevant stakeholders. It is particularly important to provide information regarding the resources that will be put in place to support the nurses (and their families) during a pandemic.

#### 3.2. Perceived impact on personal and professional life

A number of questions were asked to gauge the respondents' perceptions surrounding the impact of an influenza outbreak on their personal and professional life (see Table 1 for results). A large proportion of respondents reported no fear of telling either their family or other people about the risks to which they could be exposed (76% and 68% respectively).

With regard to the staffing levels needed to cope with a pandemic, 86% of respondents felt there would be inadequate staff in

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