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Collegian (2017) 24, 93—100

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Call for national dialogue: Adapting standards of care in extreme events. We are not ready

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Received 3 February 2015; received in revised form 7 September 2015; accepted 8 September 2015

KEYWORDS
Adapting standards of care;
Extreme events;
Nursing;
Policy

Summary Clinical practices are based on a common understanding of nursing's professional standards in all aspects of patient care, no matter what the circumstances are. Circumstances can however, change dramatically due to emergencies, disasters, or pandemics and may make it difficult to meet the standard of care in the way nurses are accustomed. The Australian nursing profession has not yet facilitated a broad discussion and debate at the professional and institutional level about adapting standards of care under extreme conditions, a dialogue which goes beyond the content of basic emergency and disaster preparedness. The purpose of this paper is to encourage discussion within the nursing profession on this important ethical and legal issue. A comprehensive review of the literature was undertaken to determine the state of the evidence in relation to adapting standards of care under extreme conditions. Content analysis of the literature identified categories related to adapting standards of care that have been considered by individuals or groups that should be considered in Australia, should a dialogue be undertaken.

The categories include ethical expectations of professional practice; legal interpretation of care requirements, resource priority between hospital and public health and informing communities.

Literature reviews and commentary may provide the background for a national dialogue on the nursing response in an extreme event. However, it is only with the engagement of a broadly representative segment of the professional nursing community that appropriate guidance on adapting standards of care under extreme conditions can be developed and then integrated into the professional worldview of nursing in Australia.

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http://dx.doi.org/10.1016/j.colegn.2015.09.003
1322-7696/

1. Introduction

The experience of physicians, nurses and other clinicians has been that usual clinical practices change due to emergencies, disasters, or pandemics (Arbon et al., 2013). These changes occur because the usual resources become unavailable, or the clinicians find themselves practicing in an unfamiliar setting with unfamiliar patient care needs (Gebbie, Petersen, Subbarao, & White, 2009). The current expectations by the community and health professionals of a high level of technically supported health care may not be achievable for a number of reasons. If there is no electric power or running water or if buildings are blown away or are underwater, or a limited number of personnel are able or willing to work (Gebbie et al., 2009). One definition of 'standard of nursing practice', articulated by the American Nurses' Association (ANA) states that ''they are the rules or definition of what it means to provide competent care. The registered professional nurse is required by law to carry out care in accordance with what other reasonably prudent nurses would do in the same or similar circumstances'' (American Nurses Association, n.d.).

The key to applying the ANA definition is not that resource gaps negate standards of care, but the precise manner in which the accepted standards of nursing practice are adapted to the changed circumstances.

Koenig, Lim, and Tsai (2011) prefer the term 'crisis standard of care' to indicate the degree of change in practice that may be needed under extreme conditions. Other discussions have used 'altered standards of care' (Agency for Healthcare Research and Quality, 2005) or 'adapted standards of care' (Gebbie et al., 2009).

How best to respond to adapting standards of care in a disaster is a challenge for all health professionals. The debate on this issue has been ongoing for some time in health and disaster response communities, stimulated in part by the severe acute respiratory syndrome (SARS) pandemic (Chen, Chang, Lin, & Chen, 2008) and the flow on effect of an unprecedented impact on health facilities. These discussions have included both nurses and physicians in other countries such as Canada (University of Toronto Joint Centre for Bioethics Pandemic Influenza Working Group, 2005), the United Kingdom (Eastman, Phillips, & Rhodes, 2010) and United States of America (American Nurses and Association, 2008).

There is no evidence however, that the Australian nursing profession has gone beyond considering disaster preparedness generally (Usher, 2010) to a broad discussion on how and when it is right to adapt, alter or change professional standards of care under extreme conditions. In 2009, Johnstone writing in the Australian Nursing Journal called the nursing profession to action to explore the ethical issues related to pandemic influenza, which was of great concern at that time, but there is no evidence that much action has happened since then.

The purpose of this paper is to highlight the lack of a national debate on adapted standards of care in extreme conditions as an issue and to encourage discussion within the nursing profession (all registered professional nurses in Australia) on this important ethical, legal and clinical topic. The authors do not presume that such a dialogue will result in unanimity but that a wide-spread discussion will enable individual institutions and nurses to arrive at a higher level of understanding and readiness for the challenge of providing care during extreme events.

2. Background

The United Nations International Strategy for Disaster Reduction (UNISDR) defines a disaster as:

> A serious disruption of the functioning of a community or a society involving wide spread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources (United Nations International Strategy for Disaster Reduction, 2009 p9).

In Australia hazard events and major weather-related and human-caused incidents occur regularly in communities across the country. They cause ''more than $1.14 billion damage each year to homes, businesses and the nation's infrastructure'' (Commonwealth of Australia, 2002, p3), along with serious consequences for the affected communities. The Commonwealth report (2002, p3), states that ''Scientific research indicates that more extreme weather events, and large-scale single events with more severe cyclones, storms and floods, are expected in the future''.

The Commonwealth report (2002) does not however discuss in any detail the potential for an *overwhelming* disruption to the community, including the capacity of the health resources to deliver expected or needed care.

In Australia much of the work that has been undertaken at national, state and territory and at a local level is focused on how to prepare and respond to specific disasters such as floods, heatwaves, bushfires and pandemic influenza (Commonwealth of Australia, 2002; Templeman & Bergin, 2008), through the sequence of immediate and long-term response and recovery. Disaster preparedness is carried out under the auspices of the Australian Government Attorney-General's Department and includes mitigation, response and recovery strategies as well as a framework for building community resilience to respond to disasters (Attorney-General's Department, n.d.).

Given a disruption in the health system or an event which results in an overwhelming number of individuals seeking care, the involved health staff may find themselves pushed to the limits of their individual competency. These types of situations raise questions of appropriate standards of practice, whether such standards are altered or transformed in a crisis as well as ethical issues (Hunt, Schwartz, & Fraser 2013; Johnstone, 2009; Johnston & Turale 2014). Examples include the potential for more patients presenting in severe respiratory distress than there are available respirators, as might happen with a virulent influenza pandemic (Patrone & Resnik, 2011); or the complete collapse of hospital services as happened in New Orleans following the combination of Hurricane Katrina and the subsequent breach of the Mississippi river levees (Lowes, 2011; Taylor, 2007). The most recent event has been the Ebola crisis, where United States nurses went on strike over concerns related to the lack of appropriate equipment. However, the issues associated with

these challenges in meeting expected standards of care, have remained undebated within the Australian nursing profession.

3. Method

A comprehensive search of nursing literature included both peer reviewed published research and web-available documents for the last 10 years. Databases Journals@OVID, ProQuest, Google Scholar, Scopus, and Pandora were searched. The search included the following combination of keywords: ''nurses'' ''nursing'', ''standards'' ''adapted'' ''altered'' ''disaster(s)'' and ''policy/response''. While a total of 228 items were identified, 31 of these were considered for more thorough analysis. For inclusion, scholarly articles were required (either based on research or considered analysis by one or more professionals) to relate directly to the provision of clinical care. Only two articles related to the Australian context (Johnstone, 2009; Usher, 2010) were located. The 31 documents identified for further consideration were a mix of reports on expert panel reviews, observations and discussion papers from a professional perspective, one computer simulation, one qualitative study and one survey. There was one editorial and a letter to the editor. The included items are briefly reviewed in Table 1.

Of the four free-standing reports identified, one was dropped because it was also discussed in some detail in a peer-reviewed journal; the three others (one report from the United States Institute of Medicine, one from a US government agency and one from a policy analysis resource centre) were included. News reports about individual cases or professional discussions were excluded. Given the small number of articles exclusively about or by nurses, articles also were included primarily about or by physicians or legal scholars but clearly relevant to nursing or institutions in which nurses practise. Several documents were specific to one type of disaster, primarily pandemic influenza surge demand on acute care services. Two of the documents were specifically by and about nursing; the majority were either generic to health professions or with a focus on institutions in which nurses provide a substantial part of professional care.

A directed content analysis (Hsieh & Shannon, 2005) approach was used to develop the initial coding scheme from the literature reviewed, and from these, common categories were identified.

To increase the objectivity and validity of the analysis, each of the authors separately reviewed the literature identified and jointly agreed on those categories for which there was substantial agreement and thus were included in the findings.

4. Findings

The analysis of the content yielded the following categories: (1) *debate about standards of care*. This highlighted the importance of a discussion on the expectation on whether standards of care should remain constant, are able to be adapted or need to be changed in the face of major disasters; (2) *the relationships between legal requirements and the provision of care during disastrous events*. This involves having clear documented expectations for practitioners so that they feel confident in making the decision to adopt standards of care or not without fear of legal reprisal; (3) *the exploration of the potential differing ethical perspectives of resource rationalisation and allocation between hospital and public health priorities*. The perspectives raised in relation to this category explored the importance of understanding which one of these health service areas may need to draw on more than normal resources to meet the surge capacity in an immediate or evolving disaster situation, especially when there is a shortage of human and material resources. It may be that public health becomes the main focus of a response and draws upon resources from the hospital sector, particularly when pandemics are experienced; and (4) *the degree to which dialogue is a necessary foundation for making care decisions in situations of a large-scale emergency or resource shortage within and among health practitioners*. The dialogue should include legal practitioners, health service leadership personnel, policy makers (within and outside of government), and the public at large. This category reflects the importance of involving the community in understanding that access to and the type of care may change if there is a major disaster and resources are short. It is best for the community to understand this before an event, rather than seek to complain during or after a disaster when the focus needs to be on the rapidly changing environment.

5. Discussion

While recent literature from several countries discussed altered standards of care, professional experience and ethical dilemmas during extreme events or humanitarian aid (Hunt, 2008; Johnston & Turale 2014; Kirsch & Moon, 2010; Sinding et al., 2010) no articles could be found that specifically identified a discussion about standards of care during disasters or large scale emergencies from the Australian perspective. This gap in the literature suggests that there may be the need to have some dialogue on the challenges to professional practice during an extreme event that limits resources or pushes care into unfamiliar environments. This is to enable nurses to be well-prepared to make appropriate changes such as frequency of vital signs observations, assisted ambulation, oral intake or medication intervals, or the use of family and volunteers for supportive tasks. Nurses in Australia who are familiar only with practice in a modern, technologically sophisticated environment, or in community settings well-connected by computer and telephone to tertiary consultation resources, may not have considered what it would be like to provide care in a situation without electrical power, with no incoming supplies, or with limited external communication.

The literature reviewed suggests that becoming clear on standards of care under stressful conditions, is one of the key requirements for an institution, a profession and a community to enable them to arrive at a decision about care during catastrophic events (American Nurses and Association, 2008; Annas, 2010; Chang, Backer, Bey, & Koenig, 2008; Kuschner, Pollard, & Ezeji-Okaye 2007). While rationing of resources, both human and material, is not unique to disasters (consider the management of

Table 1 Summary of reviewed literature.

Authors (see references for full citations)	Method and focus	Conclusions or recommendations
Agency for Healthcare Quality and Research (AHRQ) (2005)	Policy analysis/US health system focus	Multiple recommendations to prepare system and individuals for alterations in standards of care in the face of overwhelming demand in large-scale disasters.
Annas (2010)	Legal analysis/US medical focus	'Standard of care' is always modified by available resources, and the occurrence of an emergency does not change that legal requirement.
Caro, Coleman, Knebel, and DeRenzo (2011)	Medical guidance/nuclear event with drastically reduced resources.	Ethical allocation of resources during total system failure should follow the principles of justice, defined as fairness, established for normal clinical practice, with patients having highest need receiving care first.
Chang et al. (2008)	Literature review leading to proposed approach to crisis standard of care	Key principles for Crisis Standard of Care: (1) prioritise population health rather than individual outcomes; (2) respect ethical principles of beneficence, stewardship, equity, and trust; (3) modify regulatory requirements to provide liability protection for healthcare providers making resource allocation decisions; and (4) designate a crisis triage officer (with palliative care included in model for allocation of scarce resources such as ventilators).
Courtney (2010)	Research-based analysis of US legal and policy issues	Given the debate on terminology (e.g., 'crisis standards' vs. 'adapting standards') there is a need for continued dialogue and attention to policy.
Eastman et al. (2010)	Legal and medical analysis/UK focus	There is a miss-match between triage based on public health principles and legal requirements focused on individual patients which should be resolved apart from a crisis.
Gebbie et al. (2009)	Peer-reviewed summary of working group reported in ANA (2008); multi-disiciplinary focus on professionals & institutions	Ethical principles require attention to adapting standards of care (which do not change) based on conditions and resources. Actions should be taken by both institutions and individual professionals in order to be prepared for such events.
Gostin and Hanfling (2009)	Legal analysis/US health care focus	Defines crisis standards of care as: the optimal level of health care that can be delivered during a catastrophic event, requiring a substantial change in usual health care operations; urges states to assure a legal framework to support this.
Gravely and Whaley (2006)	Legal analysis/US health professional focus	State-level guidance on altered standards of care should be used by individual professionals to become better prepared in advance of emergency situations
Hanfling, Hick, and Cantril (2012)	Physician response to Schultz & Annas (2011)/Crisis standards of care are essential	The overwhelming nature of a large-scale disaster does require different standards of care than those ordinarily governing care; associated liability questions should be resolved.
Hodge and Brown (2010)	US legal analysis/liability of hospitals to prepare for emergencies	Concludes that while hospitals should make preparations for a wide range of possible emergencies and associated changes in care, they should not be held liable if they encounter an extremely rare or truly overwhelming situation.

Table 1 (*Continued*)

Authors (see references for full citations)	Method and focus	Conclusions or recommendations
Holt (2008)	Literature review and conclusions/US physician orientation	Ethical decision making in disaster situations should be included in medical education, based on a model that includes triage, prioritisation, liability, altered standards of care, justice and equity, patient autonomy, scope of practice and ethical responsibilities.
Institute of Medicine (2012)	US institutional and professional perspective on standards	Peer-reviewed report that concludes there is a need for crisis standards of care to support professional practice in the face of overwhelming disasters.
Johnstone and Turale (2014)	Who should receive life support during a public health emergency? Using ethical principles to improve allocation decisions	The review confirmed there is a significant gap in the literature on nurses' experiences of ethical preparedness for managing public health emergencies and healthcare disasters, and the ethical quandaries they encounter during such events. This finding highlights the need for ethical considerations in emergency planning, preparedness, and response by nurses to be given more focused attention in the interests of better informing the ethical basis of emergency disaster management.
Kanter and Moran (2007)	Simulation of paediatric ICU demand in an emergency	While hospital capacity could be expanded to absorb surge following large-scale disaster, paediatric ICU capacity would remain inadequate.
Koenig (2012)	Response to Schultz & Annas (2011) and IOM (2012)/Crisis standards of care are essential	Disagrees with Schultz/Annas that no crisis standards are needed and with IOM that there might be different crisis standards in different situations; argues for a single set of crisis standards.
Koenig et al. (2011)	Primarily US medical and emergency department background and support for crisis standards of care	Crisis standard of care are essential for good practice in the face of major disasters and should be based on legal considerations; procedural justice; evidence-based decision-making process; ethics and public engagement and communication. Institutions can then make specific plans for triage or allocation of resources.
Koenig, Cone, Burstein, and Camargo (2006)	Analysis of missing discussions in 'surge capacity' preparation	Early argument for clarity on clear standards for care in disaster situations, not simply guidelines or failure to use evidence to consider a wide range of situations and decisions.
Kuschner et al. (2007)	Systems approach to resource allocation/US system based	A triage and scarce resource allocation team (TSRA) can provide a structure that formally oversees the need for rapid and ethically challenging decision making when there is an enormous surge in the need for care in a public health emergency such as influenza.
Levin, Cadigan, Biddinger, Condon, and Koh (2009)	Policy working group/USA state-based approach to decision-making for care-givers	Identifies 4 goals and 7 principles that would guide decision-making in the case of pandemic influenza overwhelms the care system.
Lo and Katz (2005)	Hypothetical SARS case studies that highlight application of public health rather than individual ethical view	Analysis of conflict between typical individual physician decision-making and public health decision-making are in conflict during a major public health crisis, recommending advance dialogue to increase likelihood of better decision-making in a real event.

Table 1 (*Continued*)

Authors (see references for full citations)	Method and focus	Conclusions or recommendations
Mariner (2005)	US legal analysis/public health law	Identifies the need for public health to collaborate with medicine, and both to understand legal parameters governing them, especially in emergency situations
Rebmann, Carrico, and English (2007)	Survey research/USA Infection control practitioners	40-item survey of infection control professionals (many of them nurses) regarding the state of emergency planning in their hospitals; results suggest larger hospitals better prepared and more fully engage infection control professionals
Robert and Moran (2007)	Peadiatric hospital and intensive care unit in USA in regional disasters/expanding capacity by altering standards of care	Simulation study of hypothetical alterations of standards of care for hospital surge capacity. Identified that ICU capacity would remain inadequate for large disasters.
Schultz and Annas (2012)	Legal and ethical analysis	Differentiates 'standard of care' from the application of those standards by 'reasonably prudent physicians under same or similar conditions
Sinding et al. (2010)	Qualitative study of health care workers in situations of constrained resources	Treatment decisions are based on tacit ethical frameworks, which would be better understood if made more explicit.
Stein (2007)	State-specific nursing application of AHRQ guidance (AHRQ 2005)	Uses Oklahoma-specific examples of the advance policy development and education that would facilitate adherence to the AHRQ guidance in a major disaster event.
University of Toronto Joint Centre for Bioethics Pandemic Influenza Working Group (2005)	Ethical framework/Canadian Specific to influenza pandemic	Differentiates the values needed in ethical processes from the values on which ethical decision-making should be based. Strongly urges advance reflection on ethics.
Usher (2010)	Editorial/Australian & international nursing focus	Editorial review of international nursing activities intended to increase the capacity of nursing to appropriately respond to disasters; argues the priority for this given the numbers of nurses available in most countries.
White, Katz, Luce, and Lo (2009)	Ethical principles in allocation/USA physician perspective	Compares usual decision-making about individual patients with community-wide decision-making needed in the face of shortages in a major emergency; strongly advocates community engagement with professional community in advance development of guidance
Wise (2006)	Institutional focus/USA hospital accreditation system	Description of how the US hospital accreditation agency (The Joint Commission) proceeds to develop a new standard, and why a standard for care in catastrophic events was being created

hospital beds and the daily decisions made about discharge from and admission to intensive care units (Lin, Chaboyer, & Wallis, 2009)), in an extreme event the number of allocation and prioritisation decisions needed may escalate and if not anticipated, may become overwhelming. The shifting ethical basis for decisions may not be fully understood.

Without a discussion in advance of a disaster around what adapted standards of care mean for the Australian nursing profession, the individual nurse and the communities they serve, the emotional impact of decision-making under highly adverse circumstances in any phase of disaster response can be devastating.

The authors strongly urge the professional nursing organisations, Chief Nurses, unions, and regulation authorities within Australia to convene a working group that will consider key topics, such as:

- Do current standards of care documentation provide adequate guidance for application under extreme conditions?

- Are there emergency laws or regulations that would have an impact on nurses' practice during an emergency or disaster?
- What content on adapting standards of care should be included in pre-registration nursing curricula?
- What content on adapting standards of care should be provided routinely to all practicing professional nurses?
- How will the nursing profession engage with the community in these discussions?
- How will the nursing profession engage other health professions and the broader national emergency services in these discussions should they need to work together under unusual circumstances if necessitated by a disaster?

6. Conclusion

Literature reviews and commentary by informed or concerned nurses may provide the background for the suggested dialogue. But it is the engagement of a broadly representative segment of the professional nursing community that appropriate guidance on adapting standards of care under extreme conditions can be developed and integrated into the professional world view of nursing in Australia.

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