A Message from the President

WADEM Professional Nursing Section and Nursing Insight

The development of a Professional Nursing Section constitutes a major step forward for the World Association for Disaster and Emergency Medicine (WADEM). The Nursing Section is this first professional subgroup formed by the WADEM. The creation of this Section was based on the suggestion of nurses from Latin America and the Caribbean during the Regional WADEM Congress in San Salvador in May 2004, and was approved by the WADEM Board and General Assembly during the 14th World Congress on Disaster and Emergency Medicine in Edinburgh in May 2005.

A principal reason for initiating the Nursing Section was that during crises many issues relative to nursing arise that can be solved by nursing and do not require the efforts of the entire WADEM organization. In addition any nurses stated that it was not possible for them to pay the fees required to become full members of WADEM, but that they could pay the costs encumbered by the Nursing Section. Thus, it is possible to become members of the Nursing Section of WADEM for US$50/year without becoming full members of WADEM ($90-150). This entitles limited membership Nursing Section members to Nursing Insight, discounts for international congresses, and access to the WADEM Journal, Prehospital and Disaster Medicine, including password-protected issues.

Nursing Insight is an exciting new publication of the WADEM. It is dedicated to keeping members of the Section up-to-date on the developments in the field of disaster health that have special significance to nurses. Articles that meet these criteria are selected, reviewed, and commented upon by experts in Disaster and Emergency Nursing. The reviewers not only analyze the science of the papers selected, but also point out the significance of the findings for nursing. This is a new process that provides section members access to the latest science without having to search through numerous publications. Nursing Insight will be translated into several languages and will be mailed directly to members, will be available to members on the Internet, and will be password-protected for members of the Nursing Section and of WADEM.

It is with great excitement that the WADEM brings this important addition to the world of Disaster and Emergency Health. I know that the efforts of the Editor and Review Board will be of value to all of the WADEM membership in general and nursing, in particular. I extend an invitation to nurses everywhere to join in this effort.

Marvin L. Birnbaum, MD, PhD
President, World Association for Disaster and Emergency Medicine

A Message from the Editor

Welcome to the very first issue of Nursing Insight. This new publication is a product of the newly-created WADEM Nursing Section. Our aim is to glean a wide variety of disaster-related publications relevant to the nursing profession. These articles are reviewed, critiqued, and summarized by WADEM nurses. Nursing Insight will be published quarterly. Our hope is to develop a reviewed repository of information that will be of value to the many roles played by nurses in the arena of disaster health care. As we are in a nascent state with this publication, all feedback and suggestions are welcome. If you are interested in using your expertise to assist in reviewing articles for publication, please contact the Editor at elainedaily@earthlink.net.

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Hospital Bed Surge Capacity in the Event of a Mass-Casualty Incident

Davis DP; Poste JC; Hicks T; Polk D; Rymer TE; Jacoby I

Reviewed by Robert Powers

PURPOSE: To determine hospital bed surge capacity within a county at 2, 24, and 72 hours following a mass-casualty incident.

METHODS: Overnight and day-shift nurse managers from each in-patient unit at the four hospitals in the county were asked to assess each patient under their care as to their predicted disposition at 2, 24, and 72 hours post-mass-casualty event, including transfer to a hypothetical, on-site nursing facility. Attending or resident physicians at the two academic institutions in the county also were asked to provide similar information. Age, gender, and admission diagnosis were recorded for each patient and the hospital admission records were reviewed for three consecutive days to determine hospital and emergency department admissions.

RESULTS: A total of 1,741 assessments of 788 patients were made by 82 nurse managers and 25 physicians from the four institutions. Overall, a large number of beds could be made available at 2, 24, and 72 hours. Nurse managers assessed approximately one-third of all patients as dischargeable at 24 hours and approximately one-half at 72 hours; one-quarter of the patients were assessed as being transferable to a hypothetical, on-site nursing facility at both of these time points. Physicians were more likely than were nurse managers to send patients to such a facility or discharge them, but less likely than the nurses to transfer patients out of the intensive care unit (ICU). Inter-facility variability was explained by differences in the distribution of patient diagnoses.

COMMENT: This research study is an important step in identifying methods other than bed census rates to predict hospital surge capacity and describes a method or template for hospitals to use to predict the dischargeability of patients with similar admission diagnoses, during a mass-casualty incident.

The predictions of nurse managers and physicians for determining the dischargeability of patients at 2, 24, and 72 hours were all made at the same “zero hour”. If they could have re-evaluated the patients at those specific times to verify that, in fact, they were correct in their discharge prediction, there would have been more validity in the high potential discharge rates this study produced. Without some additional form of verification, the discharge predictions are little more than an educated guess; the same educated guess made from reviewing bed census figures to determine surge capacity—which is what the study is attempting to avoid.

Included in this study is a hypothetical surge area, or on-site nursing facility, as an additional option for relocating existing patients. At both 24 and 72 hours, the nurse managers predicted that 25% of the patients could be relocated there. The authors note that these potential surge areas were “checked” to verify that the space could accommodate the number of patients hypothetically being relocated there. However, there is more to setting up and operating a surge area than identifying space; supplies and personnel also are needed. Without definite plans in place at these hospitals, it would be difficult to determine if the hypothetical surge beds would actually drain the normal patient units of needed staff and supplies to such a degree that the hospital wouldn't be able to staff its existing beds (the proverbial “robbing Peter to pay Paul”). The study would have greater value if it had limited its assessments to the plans and options the hospitals actually had in place rather than to include the hypothetical.

The information provided in this study warrants further investigation regarding the consistency of these discharge rates in other countries or parts of the US, as well as during peak vs. non-peak admission times of the year. Developing a guide or tool that predicts the dischargeability of patients based on similar admitting diagnoses would greatly assist hospitals in determining how they compare to the current surge capacity benchmark (500 per 1 million population) by yielding a better defined, perhaps higher, discharge rate than previously calculated. Hospitals then would have a clearer understanding of their surge capacity deficits, if any, and know what additional planning they must pursue (e.g. “surg[ing] in place,” with double room occupancy or a divvying up of the disaster patients among the existing inpatient areas, creating an in-patient surge area, or developing a full-blown surge hospital) they need to pursue.

Nursing in Sudden-Onset Disasters: Factors and Information that Affect Participation

Mitani S; Kuboyama K; Shirakawa T
Prehospital and Disaster Medicine 2003;(18)4:359–366

Reviewed by K. Joanne McGlown

PURPOSE: To explore issues and concerns of Japanese nurses requested to respond to the 1995 Great Hanshin-Awaji Earthquake in Japan.

METHODS: A standardized written survey tool and questionnaire were sent to 823 nurses who worked in four hospitals near the affected area.

RESULTS: A total of 457 of 823 (56%) questionnaires were returned and usable for analyses. Of these respondents, 309 (65%) were qualified nurses and 148 (36%) were students. Sixty-nine (15%) of the respondents (58 qualified nurses and 11 student nurses) actually participated in the earthquake disaster response and most (78%) of those were dispatched from their base hospital. Reasons given by the remaining 388 nurses for not joining the disaster relief included: (1) distance from home; (2) being a student; (3) not understanding their abilities; (4) not receiving an order from their supervisor to respond; (5) lacking information as to where to respond; and (6) being “hesitant”.

Most nurses in the survey (388, or 85%) had not joined the disaster relief efforts; however, >95% of those who did participate in relief efforts indicated they would join in future domestic disaster activities with some conditions (84%) or without conditions (6%). Conditions and/or information required by the nurses for participation in a disaster response included: (1) knowledge of the scale of damage; (2) knowledge of the site and terms of dispatch; (3) knowledge of work conditions...
and role status; (4) transportation; and (5) knowledge of the electricity, gas, and water conditions. A thoughtful list of suggestions for nursing and hospital managers is provided to strengthen planning for future disaster events and enhance the willingness and preparedness of Japanese nurses as disaster responders in future events.

**COMMENT:** This study is well constructed, though limited, in that only 58 nurses of those surveyed actually participated in the 1995 earthquake disaster response and the data were obtained five years after the event! Nevertheless, the insight provided by all respondents concerning the conditions and/or information needed to decide to respond (concerns of family, distance and education required to enhance capabilities and confidence in their abilities) are useful and applicable to nurses in all countries. The study and thoughtful commentary compared these findings with at least four other similar nursing and responder surveys from various countries, confirming some aspects of prior findings. The introduction of disaster nursing skills into the curriculum of primary nursing and continuing education programs globally is long overdue and an imperative step in preparing nurses as disaster responders, as is the need to integrate nursing into the disaster response education and planning in each country.

**Rapid Epidemiological Assessment of Health Status in Displaced Populations—An Evolution toward Standardized Minimum Essential Data Sets**

**Bradt D; Drummond CM**

Prehospital and Disaster Medicine 2003;17(4):178-185

Reviewed by Robert Powers

**PURPOSE:** To develop a standardized Minimum Essential Data Set (MEDS) for health needs assessment and ongoing monitoring at sites of displaced populations

**METHODS:** Evaluation criteria of best-practice attributes were developed and a study sample of protocols for post-disaster event Rapid Epidemiological Assessments (REAs) from various relief agencies were compared against the developed criteria.

**RESULTS:** After itemized analysis of inconsistencies and deficits of existing REAs from nine agencies, a MEDS was developed and is proposed for use by relief agencies in post-disaster REA of the health status in displaced populations.

**COMMENT:** As the authors of this study note, the varying REA protocols used among relief agencies result in difficulty sharing information. In addition, many of the existing REA protocols are lengthy and lack focus. This study proposes the use of an MEDS, developed by the authors, to overcome these impediments and to correct variances through utilization of a standardized data collection tool. Brevity is accomplished by limiting the MEDS tool to two pages with a purported completion time of two hours in limited (≤10,000) populations. However, there is no basis for comparison of the time frame of completion because the various agency REAs provide no estimated completion times.
times. Granted, the 27 page REA checklist cited will more than likely take longer than the two page MEDS; however, brevity in length is not always indicative of speed of completion or quality of data. A study of the use of the MEDS by users other than the authors is necessary to determine if its brevity accomplishes its goal of faster completion.

Additionally, while brevity is an under-appreciated virtue of any data collection form, it should not be at the expense of obtaining needed information. There is no effort in this study to compare the use of the different REAs with the use of the MEDS. Such a study could identify correctable deficits in the MEDS or validate that, in the same usage, the capture of data is equivalent to that obtained with the lengthier REAs.

To address focus, the authors laudably separate site-specific needs from lifeline needs in the early phases of REA use. There is no need to burden the initial REA with lifeline concerns unless a site-specific need is identified as a problem. This saving of time expedites the completion of the REA and focuses a more thorough assessment on the properly identified areas of need.

The authors comment that they have used the MEDS template over the last three years; however more detail concerning that use would help support their proposal. Again, a comparison of the use of their MEDS with existing REAs over the last three years could have provided valuable data regarding the effectiveness of their tool for capturing the site needs.

The authors have developed what appears to be an effective and noteworthy tool that will expedite the ability to respond to identified needs in displaced populations. Future study is needed to validate their MEDS by comparing it to existing REAs for efficiency, timeliness of completion and for its universality in different disaster settings.

A Comparison of Patient Needs Following Two Hurricanes

Nufee K; Wilson-Ramirez G
Prehospital and Disaster Medicine 2004;19(1):146–149

Reviewed by Elaine Daily

PURPOSE: To compare patient medical needs following a disaster from the same type of event (hurricane).

METHOD: This is a retrospective chart review of all patients evaluated by the Disaster Medical Assistance Team following Hurricane Andrew and Hurricane Iniki. Data evaluated included age, past medical history, chief complaint, diagnosis, diagnostic tests, treatments, triage level and dispatch.

RESULTS: A total of 1,056 patients were evaluated (712 after Hurricane Andrew; 344 after Hurricane Iniki). Physical wounds and musculoskeletal pain were the two most common chief complaints and occurred with similar frequency with each event. Likewise, there were no significant differences among the other chief complaints of medication refills and abdominal complaints, pain, vomiting and diarrhea. The only difference in chief complaints was the greater number of upper respiratory symptoms that occurred after Hurricane Iniki. This also was the only difference in diagnoses following each event. There were no differences in the frequency of administration of tetanus toxoid, antibiotics or analgesics, or the number of patients conveyed to a hospital (approximately 6% after Hurricane Andrew vs. approximately 5% after Hurricane Iniki). However, wound care was provided more frequently after Hurricane Iniki, while medication refills and diagnostic testing occurred more frequently following Hurricane Andrew.

COMMENT: Although this is a retrospective study with all of its inherent limitations and lack of any control, it provides useful information that may be of value to teams involved in disaster planning and preparedness in areas prone to hurricanes. Data from this study support supplying teams responding to hurricane events with wound-care supplies, tetanus toxoid, antibiotics, and analgesics. However, this study must be replicated in other geographic areas to determine regional differences and, ideally, information from this study should be used to conduct a prospective study following a hurricane.


The Role of Public Health Nursing in Emergency Preparedness and Response

Rowney R; Barton G

Reviewed by Kim Applegate

PURPOSE: To identify issues related to the role of public health nurses in bioterrorism preparedness.

METHODS: This is a non-research based, informative article on the role of the public health nurse in bioterrorism preparedness and response.

SUMMARY: During a time when public health services are crucial to homeland security and defense, the role of health care professionals working in national, state, and local departments has been broadened. In addition to a lack of resources and financial cuts, adequate preparation for a bioterrorism attack may be impeded by a lack of experience, confusion of terminology, and the general nature of bioterrorism that instills anxiety and fear among the entire population, including healthcare workers.

Public health nurses are active in all phases of planning, detecting, controlling and responding to a bioterrorist attack. They are responsible for pre-disaster planning, including establishing relationships with local agencies, delivering care during an event, and conducting post-disaster evaluations. Drawing from both core nursing and public health competencies as well as competencies specific to bioterrorism, public health nurses are responsible for disease prevention, such as medication distribution and immunizations, surveillance for identification of new cases, and disease investigations. The public health nurse may work at outreach sites and mass clinics and provides community teaching support. They also evaluate the effectiveness, accessibility, and quality of public health services.

COMMENT: In this non-research based article, the authors accomplish their objective of describing the general roles of public health nurses in bioterrorism preparedness,
although the general title of the article is a bit misleading as
it is limited to bioterrorism. Issues surrounding bioterror-
ism that may impede adequate preparation for a bioterrorist
attack are identified and a table clearly defines and provides
eamples of some of the confusing terminology. The roles
of the public health nurse in planning for and preventing
bioterrorist outbreaks are discussed as well as the competen-
ties needed to properly manage a bioterrorist attack.

Overall, the article is well written and generally infor-
maive, and would be relevant and useful for healthcare
professionals in the public health realm or those who may
be considering such a role. However, as it provides only
broad descriptions, persons seriously interested in this
realm of practice would require more detailed information.
It is also informative and helpful for other healthcare pro-
essionals who will be the first or second line of defense in
the event of a bioterrorism attack.


Research Issues in Preparedness for Mass
Casualty Events, Disaster, War, and
Terrorism

Walker PH; Garmon Bibb SC; Elberson KL,
Reviewed by Elaine Daily

PURPOSE: To provide a perspective on the types of research
questions to explore and strategies to be used in relation to dis-
taster, terrorism, and mass-casualty events.

METHODS: This is a non-research based editorial examining
nursing research issues related to disasters, terrorism and mass-
casualty events.

SUMMARY: Nurses are key to improving the management
and outcomes of disasters. Historically, nurses have been shown
to work effectively on multi- and intra-disciplinary teams, to
improvise readily, to advocate for preventive approaches, and to
play critical roles in disaster planning and training. Nurses also
are experienced in integrating care related to psychological
and social support and family care. These abilities place the nurse in
an ideal role for the conduct of important research related to a
disaster.

Types of research needed include: (1) basic science (bench)
research; (2) development and validation of reliable instrumenta-
tion; (3) demonstration of preparedness evaluations; (4) research on the effectiveness of interventions; and (5) evaluation of health service delivery systems.

While most disaster-related research is retrospective, the
authors emphasize the need for prospective research that
requires that nurses participate in the evaluation of planning, of
exercises and of responses to virtual and actual disaster situations
using qualitative, quantitative, and health science research
methodologies.

COMMENT: This article presents suggestions and strategies
useful to nurses interested in conducting research related to dis-
aster preparedness and response. While heavy on data pro-
duced during wartime by military nurses (some less relevant
to the disaster world than others), it provides useful information
as well as an extensive bibliography for reference regarding pos-
sible research topics and models of study.


The Impact of Disaster on Culture, Self, and
Identity: Increased Awareness by Health
Care Professionals is Needed

Deeny P. McFetridge B
Reviewed by Kim Applegate

PURPOSE: To explore the application of the theories of the
self, identity, and culture to health care practice in dis-
asters and to offer ideas for future developments.

METHODS: A review of the literature and transcultural
and psychological theory are presented and applied to disaster
preparedness and response as provided by health caregivers.

SUMMARY: A disaster is defined as a calamitous event that
results in large scale destruction of property, social infrastruc-
ture, and human life. The existing resources, coping mecha-
nisms, and level of preparedness of individuals, groups, and
communities, as well as the value and belief components of
cultures can influence the effect of a disaster on a community.
The literature review identifies an abundance of literature
associated with the psychosocial aspects of a disaster, but very
little that relates to self, identity, and culture—the key ele-
ments of psychological well-being. However, the literature
does reveal some themes that directly or indirectly relate to
self, identity, and culture. One of these themes concerns resil-
ience and vulnerability—characteristics that are on oppo-
site ends of a continuum, with resilience being the positive
response of an individual or community, and vulnerability
reflecting an individual's or community's impairments. The
health care professional must be able to identify the resiliency
of a community and understand the area and culture as well as
previous disaster experience. Determining an individual's or
community's vulnerabilities is the cornerstone of providing
appropriate relief care. Another theme identified in the litera-
ture concerns the feelings associated with trauma. The health
care professional should be aware of the possibility of stress
reactions and those at risk for developing a chronic stress reac-
tion. The final theme concerns remembrance and mourning—
actions that are essential to healing after a disaster. Healthcare
professionals should be able to identify existing support sys-
tems and provide relevant referrals.

The importance of working closely with communities
to prepare for a disaster while taking care to preserve iden-
tity and culture is discussed.

COMMENT: Although many references are provided, the lit-
erature review was only touched upon in this article.
Theoretical frameworks on self, identity and culture are iden-
tified, and it was stated that a brief outline of the concepts
from these theories would be discussed, and recent texts in the
field addressed. The authors fail to do this in the article, only
briefly discussing transcultural theory and not identifying
current theories clearly. The identification of themes in the
literature is effective in relating culture and identity to current
practice regarding preparing for and dealing with a disaster.
Applying Risk Perception Theory to Public Health Workforce Preparedness Training

Barnett DJ, Balicer RD, Blodgett DW, Everly GS, Omer SB, Parker CL, Links JM


Reviewed by Elaine Daily

**PURPOSE:** To explore potential barriers and remedies to effective emergency response of the public health workforce.

**METHODS:** Several models of Risk Perception Theories were used to address some of the contributing factors affecting how public health workers would respond in a crisis.

**SUMMARY:** According to theoretical models of Risk Perception, potential barriers to effective response by public health workers include both physical and perceptual risk issues. Physical concerns (actual risks) may include inadequate transportation access, lack of back-up family care. In addition, risks perceived by the healthcare worker that may impact their response to a crisis include:

1. Perceived threats to the safety/well-being of family members;
2. Misunderstanding of risks of intentional public health threats;
3. Lack of understanding re: safety of the work environment during the crisis
4. Unclear understanding of the worker's role in the response;
5. Inadequate emphasis on the worker's relevance in the response; and
6. Insufficient emphasis on stress management techniques. Overcoming and addressing all potential barriers should, ideally, occur during preparedness training.

Potential physical barriers must be explored and alternative methods examined. Possible remedies for the above listed perceived risks include:

1. Providing worker family preparedness training, including home preparedness kit assembly;
2. Providing methods of obtaining additional information and regular, informed status updates;
3. Providing necessary information and assurance as well as appropriate safety measures;
4. Providing clear descriptions of worker's role including responsibilities, length of shifts, provision of food and shelter; assurance that duties will be consistent with their skill sets;
5. Emphasizing the relevance of an individual's response role to successful crisis mitigation and resolution; and
6. Providing training and resources for stress management before, during and after an event.

**COMMENT:** Although this article addresses the potential barriers to the required response of public health workers, it is applicable to disaster healthcare providers, in general. This is supported by the information obtained by Mitani et al (see reviewed article in this issue) in which nurses expressed some of the same concerns regarding joining disaster relief efforts.

Understanding disaster healthcare professionals' perceptions of risk is essential to creating effective educational and training programs. In addition to providing essential information, the inclusion of discussion of potential anxieties and concerns into disaster preparedness training programs may yield a more capable and responsive healthcare professional. This hypothesis could be tested by post-crisis response assessment of healthcare workers who have and have not received such tailored preparedness training.

Information in this article would be helpful to disaster healthcare providers, educators, managers, course directors and researchers. It provides a sound theoretical basis for the incorporation of risk perception factors into disaster readiness education.

A MESSAGE TO WADEM NURSES

The newly created WADEM Nursing Section has been busy and is working to provide important and unique input into the upcoming WCDEM Congress to be held in Amsterdam in May 2007. We hope that nursing will have a strong representation at that Congress and strongly urge all nursing members (as well as potential new members) to attend. During this Congress meeting the Nursing Section will conduct its second business meeting at which time the election of officers for the Nursing section will occur. Nurses are encouraged to submit an abstract for consideration and presentation at the World Congress (See Abstract Information at http://wadem.medicine.wisc.edu).

Please consider whether you have the interest, time and expertise to become involved in the Nursing Leadership of this organization. We will also be seeking nurse leaders for the standing committees: Membership; Education; Research; and Publications. In keeping with the international scope of the membership of WADEM, we hope to see nurses from many countries in leadership roles within the Nursing Section. Please communicate your interest to elainedaily@earthlink.net

Remember to keep the dates of May 13-16, 2007 open for attending the 15th World Congress of Disaster and Emergency Medicine in the Netherlands. Further information on the date and time of the Nursing Section Business Meeting will be forthcoming.
Membership Application Form for WADEM
World Association for Disaster and Emergency Medicine

Please print this form, fill it in completely, and fax or mail to:

World Association for Disaster and Emergency Medicine
3330 University Avenue, Suite 300
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About the WADEM Nursing Section
The Nursing Section of WADEM strives to be the organizational vehicle welcoming and representing nurses (or other professionals interested in nursing issues) from all countries with an intent and desire to strengthen and improve the practice and knowledge of disaster nursing throughout the world.

Mission
The mission of the Nursing Section of WADEM is to foster international collaboration among nurses involved in research, education, management, and practice in pre-hospital, emergency, public health, and/or disaster care.

Purpose
The purposes of the Nursing Section of WADEM are to:
1. Define international nursing issues for public health care and disaster health care;
2. Exchange scientific and professional information relevant to the practice of disaster nursing;
3. Encourage collaborative efforts enhancing and expanding the field of nursing disaster research;
4. Encourage collaboration with other international nursing organizations;
5. Inform and advise WADEM of matters related to disaster nursing.