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# DISASTER NURSING AND EMERGENCY PREPAREDNESS

For Chemical, Biological,  
and Radiological Terrorism  
and other Hazards



TENER GOODWIN VEENEMA



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# **DISASTER NURSING AND EMERGENCY PREPAREDNESS**

**Tener Goodwin Veenema, PhD, MPH, MS, RN, FAAN**, is Professor of Nursing and Public Health at the Johns Hopkins School of Nursing and the Center for Humanitarian Health at the Johns Hopkins Bloomberg School of Public Health. As an internationally recognized expert in disaster nursing and public health emergency preparedness, she has served as senior scientist to the U.S. Department of Health and Human Services (HHS) Office of Human Services Emergency Preparedness and Response (OHSEPR), Department of Homeland Security (DHS), Department of Veterans Affairs (VA), Veterans Affairs Emergency Management Evaluation Center (VEMEC), and the Federal Emergency Management Agency (FEMA). An accomplished disaster researcher, Dr. Veenema has received significant career funding and numerous awards for her work. She is a member of the American Red Cross National Scientific Advisory Board and is an elected fellow in the American Academy of Nursing, the National Academies of Practice, and the Faculty of Nursing and Midwifery at the Royal College of Surgeons, Dublin, Ireland. In 2013, Dr. Veenema was awarded the Florence Nightingale Medal of Honor (International Red Crescent), the highest international award in nursing, for her professional service in disasters and public health emergencies. She was awarded a Fulbright U.S. Scholar Award (2017) and was selected as the 2017–2018 Distinguished Nurse Scholar-in-Residence at the National Academy of Medicine (Washington, DC).

A highly successful editor and a prolific author, Dr. Veenema has published textbooks, handbooks, decision support software, and over 90 articles on emergency nursing and disaster preparedness. She has taught public health preparedness for over 25 years and has authored four highly successful national e-learning courses in disaster and public health preparedness for healthcare providers (Coursera, Elsevier, MC Strategies, American Red Cross). These interactive, e-learning programs have trained thousands of nurses and other disaster health services responders in caring for victims of disasters, terrorist events, and public health emergencies. A motivated, energetic, and self-directed leader with an impressive degree of creativity and innovation, Dr. Veenema is in high demand as a speaker and her information technology applications for disaster response have been presented at conferences around the globe. Dr. Veenema is the developer of *Disaster Nursing*, an innovative technology application (“App”) for the smartphone and tablet (Unbound Medicine).

Dr. Veenema received her Bachelor of Science degree in Nursing from Columbia University in 1980, a Master of Science in Nursing Administration (1992), post-master’s degree in the Care of Children and Families (1993) from the University of Rochester School of Nursing, and a Master’s in Public Health (1999) and PhD in Health Services Research and Policy (2001) from the University of Rochester School of Medicine and Dentistry. A nationally certified pediatric nurse practitioner, Dr. Veenema was the recipient of the 2010 Distinguished Alumni Leadership Award from her alma mater Suffield Academy (Suffield, CT).

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For Chemical, Biological,  
and Radiological Terrorism,  
and Other Hazards

Fourth Edition

**TENER GOODWIN VEENEMA, PhD, MPH, MS, RN, FAAN**

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*Our world is not safe. Fraught with peril, it continues to be a dangerous place in which to live. And yet we know that our children and grandchildren need safe homes, safe schools, and safe communities to live in if they are to grow to be healthy, happy, and secure adults. They are counting on us to be there for them—no matter what the circumstances. They are counting on us to provide love, protection, and a safe harbor in the storm. They are counting on us to be prepared. They are counting on us to rescue them when they need rescuing. This textbook is dedicated to the children of the world—and to Kyle, Kendall, Blair, and Ryne in particular—you are everything to me. Always know how much I love you and how proud I am of you. Know that no matter how far away life takes you, home is always a safe harbor. And know that I tried to make the world a safer place.*





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# Foreword

It is a humbling honor to be chosen to write this foreword for the Fourth Edition of *Disaster Nursing and Emergency Preparedness*, a scholarly compendium of the work of the most experienced practitioners and researchers involved in disaster and crisis nursing. As I write this foreword, I am fully aware that we collectively face, in this increasingly globalized world, an unprecedented number of major challenges to the preparation and protection of victims from an expanding array of threats to their safety and livelihood. While our knowledge base in the science of disasters has made great strides, especially in technical and communication innovations, this information has not always been successfully translated into improved preparedness and response capabilities. Nor has this evidence base been successfully translated into improved effectiveness and efficiency in meeting increasing healthcare challenges to the ever-changing variety of crisis events leading some humanitarian sector experts to claim that the “system is broken.” Admittedly, improvements will arise first from a commitment to scale up research in improving evidence for healthcare prevention, preparedness, and response, placing a priority on identifying research gaps, and finally translating these advances into educational and training priorities. The fourth edition speaks to those advances.

Nursing is the world’s largest health profession and consistently contributes 70% or more of professionals responding to local, national, regional, and global crises. Historically, nursing organizations and leadership have always considered disaster preparedness and response a vital role of nursing practice; however, it has been only in the last several decades that both professional and academic institutions have formally focused on preparing nurses with the required educational and operational competencies and courses for response and on implementing the vital roles the nursing profession has in advancing disaster research, policy, practice, and administration.

Research has shown that the nature of major crises and how the world responds to them have dramatically changed every 10 to 15 years or sooner. Whereas the first edition clearly met the challenge to be relevant to that era, subsequent editions have been remarkable in guaranteeing the most updated evidence-based information necessary to meet new educational and operational competencies—whether the crisis occurs in one’s community or demands a global workforce deployment of medical teams

to sudden onset natural disasters, public health emergencies of international concern such as the Ebola epidemic, war, armed conflict, and complex humanitarian emergencies. Each edition historically chronicles the unique advances across the disaster cycle from prevention, preparedness, response to recovery, and rehabilitation. The diligent work of editor Dr. Tener Goodwin Veenema, a highly respected academic nursing scholar with firsthand field experience and solid policy credentials, has consistently focused on ensuring that each volume in the series has met the operational requirements facing the individual nurse and the profession at large.

The fourth edition is unique in recognizing the rapid changes in both the causes of these crises and the latest attempts to provide timely multidisciplinary approaches to the practice of this growing specialty, as well as the inclusion of the rapidly growing influence of advances in science, technology, social sciences, international law and policy, and globalization, to name but a few. What we do as healthcare professionals in mitigating mortality and morbidity is most evident in new chapters that reflect the emerging operational vocabulary such as “public health emergencies”—one of the most crucial challenges of our time. Unfortunately, while we have embraced the fact that disasters possess the unique quality of defining the state of the public health and immediately exposing its deficiencies, collectively we have a poor history in overcoming political barriers to uncover and prevent the deficiencies in essential public health infrastructure: food, shelter, water, sanitation, access to and availability of health services, and energy that each disaster, once again, predictably reveals. Interestingly, energy was added to the list of essential infrastructure only after the 1988 Armenian earthquake resulted in an unprecedented rapid rise of preventable mortality as victims froze from the lack of heat during the following cruel winter months. Yet again, the loss of energy to posthurricane rehabilitation of Puerto Rico in 2017 was predictable and preventable and underscores societal failures in accepting that 1 U.S. dollar put to prevention can save 4 U.S. dollars in response—an economic fact rarely heeded by decision makers in the planning for disaster recovery and rehabilitation.

Additional new and timely chapters address the Sendai Agreement for Disaster Risk Reduction and the targets adopted by the United Nations (UN) Sustainable Development Goals (SDGs)

designed to both prevent public health crises and protect vulnerable populations; the consequences of climate-related disasters that have increased by over 50% in the last decade with loss of essential aquifers, major droughts, and loss of viable land, leaving developing countries unable to survive or participate in adapting, further resulting in unprecedented internal migration, escalation of internal conflicts, urban warfare, and massive numbers of refugees leaving the Middle East and Northern Africa; the rapidly escalating incidence of domestic civil unrest and community violence; active shooters and mass shootings and the burden that is creating for healthcare systems; and the ever-compelling importance of preparedness for radiation emergencies and blast injuries that leave no country unprotected. In many situations, public health interventions could have prevented the acceleration of governmental mismanagement, poverty, and the mass exodus of refugees, especially those in the health professions.

A persuasive argument of Dr. Veenema's that is evident throughout this edition is the call to identify crisis leadership among the increasingly talented base of nurses who have

responsibility to move the profession to recognize and accept that they can be advocates for better planning, coordination, education, and training. Whereas nursing duties today are extremely demanding, there remain unfilled requirements for those willing to be leaders in disasters, crisis nursing, and especially public health emergencies. There is no other option but for nurses to take ownership of their responsibility to be prepared.

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# Foreword

The burden upon healthcare systems that disasters create is immeasurable and stretches across all levels of society and the capacities of both official and civilian responses. Regardless of the setting, nurses play a pivotal role in disaster management. In December 2016, the Johns Hopkins School of Nursing was pleased to host *Society for the Advancement of Disaster Nursing: Nursing Administration and Leadership in an Emerging Clinical Arena*, a 2-day national conference that brought together nurse leaders, hospital administrators, and public health and emergency management specialists from across the country who are committed to the advancement of national nurse readiness. Convening thought leaders was pivotal to sustaining our U.S. National Health Security Strategy, which is “built on a foundation of community resilience—healthy individuals, families, and communities with access to health care and the knowledge and resources to know what to do to care for themselves and others in both routine and emergency situations.”<sup>1</sup> Little did we know that this system would be further tested in the natural disasters of 2017—from hurricanes, floods, and forest fires.

While much has been accomplished over the past few years to increase awareness of nursing’s many roles and responsibilities during disasters and large-scale public health emergencies, much remains to be done. Nursing as a profession represents the largest sector of the healthcare workforce and a potentially untapped resource for achieving surge capacity goals and optimizing population health outcomes following these challenging events. Ensuring that our national nursing workforce has the knowledge, skills, and abilities to respond to a disaster or public health emergency in a timely and appropriate manner must be a priority and is certainly worthy of our continued efforts.

In this Fourth Edition of *Disaster Nursing and Emergency Preparedness*, Dr. Veenema continues her mission to help our nation’s nurses develop the knowledge, skills, and abilities

needed to efficiently and effectively respond to disasters. In order to achieve the goal of Making Every Nurse a Prepared Nurse, it is essential to ensure that all nurses understand the implications of natural and man-made disasters, so they are prepared to respond if required. This impressive edition builds upon the solid foundation of the first three award-winning editions with an expanded focus on climate change–related disasters, globalization and its implications for emerging and reemerging infectious diseases, the accommodation of high-risk, high-vulnerability populations, and the potential for disaster arising from a world witnessing increasing community violence and civil unrest. From her work at the National Academy of Medicine in medical and public health preparedness, Dr. Veenema has woven the current state of the science throughout the book.

Internationally regarded for her expertise in workforce development for disasters, mass gatherings, and public health emergency preparedness, Dr. Veenema has maintained a laser focus on the importance of the international relevance of the book, adding new chapters that address the landmark agreements: the Sendai Framework for Disaster Risk Reduction 2015–2030, the UN Sustainable Development Goals (SDGs), and the Paris Climate Agreement. Global disaster nursing leadership has never been more important and nursing’s voice across all continents can advocate for the achievement of these policies that will reduce and mitigate the impact of natural disasters and complex human emergencies.

Many times nurses assume that they are not emergency responders, so they do not need to understand how the emergency health system works. When a disaster strikes a community—whether a bus accident, an earthquake, a hurricane, terrorist attack, or riots and civil unrest—nurses will be on the front lines helping those who are in need. To protect themselves, their families, and their communities, nurses need to understand the principles and content of this comprehensive textbook. An all-hazards and whole-community approach is needed for our nation to be resilient in the face of disaster and this must include the nurses in our country and across the globe.

<sup>1</sup> Department of Health and Human Services Office of the Assistant Secretary for Preparedness and Response. Retrieved from <https://www.phe.gov/Preparedness/planning/authority/nhss/Pages/default.aspx>

Dr. Veenema has achieved a masterful accomplishment with the publication of this edition, and I encourage all nurses to develop the knowledge, skills, and abilities presented here, which are needed to achieve the vision of disaster preparedness locally, nationally, and internationally.

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# Foreword

In the past, each new edition of *Disaster Nursing and Emergency Preparedness* seemed like the “best time” for the arrival of a new update. Today, more than ever before, is unquestionably the most propitious time for the fourth edition. What supports that observation? I believe it is the particular social, economic, technological, political, and environmental climate of our times. Natural and man-made disasters are not new, but the global nature, rate, type, and totality of the environments impacted are increasing. Complex human emergencies leading to population migration, violence, and infectious disease outbreaks now persist for years without resolution. These horrendous and tragic human situations are generating the urgency for a greater need for awareness, preparedness, political prowess, and leadership, and, most of all, teamwork on all levels of governments, educational institutions, human services, environmental organizations, and many others. Social media and the lightning transmission of reporting of these events and our responses make these happenings unique. Rather than separating us from the rest of the world, they may be a uniting factor with all of us sharing the same concerns, risks, threats, and consequences. They may require us to not only communicate more fully and swiftly but also plan strategies of information sharing, preventive designs, and positive promotional activities that will not only offer societies protection but also institute environments of problem solving that are more predictive, productive, and positive than we are experiencing today. Given the speed of global communications and cyberspace capacity, worldwide attention must be paid to our population’s mental as well as physical health, our communities’ resources and preparation, national policies and plans for prevention as well as response, and our commitment for everyone to be involved. Disasters are everyone’s problem and should not be left to the

professional responders alone. Each and every one of us, as citizens and as nurses, has a responsibility for preparedness, not only for ourselves, but our neighbors and communities as well. We need to think of ourselves as “first responders,” not as standby observers or the last hope for survival.

This new and greatly expanded edition addresses all of these needs with an in-depth focus on the impact of climate change, the threat of growing civil unrest and community violence, the critical importance of planning for and accommodating vulnerable populations, and the design of disaster health services for those at high risk such as children, pregnant women, the elderly, and chronically ill.

The contributing authors read like a “Who’s Who” of disaster leaders. They lend their special expertise and insights, which are supported and elucidated by cogent learning strategies in the use of case studies, student questions, and packed content in all areas of disaster participation, preparedness, policies, and research.

Many teachers, students, practitioners, and policymakers will find this edition a treasure trove of new information, ideas, and ideologies and will use this volume as a text, a reference, and resource for the challenging work they do in disaster preparedness and practice. For over 16 years, *Disaster Nursing and Emergency Preparedness* has been the hallmark text in its field, and this edition proves to be the best ever.

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# Preface

Chance favors the prepared mind.

—Louis Pasteur

In the global community within which we live, concern for the sustainability of our environment, the health and well-being of our citizens, and the overall planetary health has rapidly accelerated. In light of recent world events and increasing geopolitical tensions, our concerns have now expanded to include the ubiquitous threat of terrorism; the potential detonation of thermonuclear weapons; acknowledgment of the devastating impact of climate change; emerging and reemerging infectious diseases such as Ebola, Zika, and coronavirus; and the increasing frequency and intensity of natural disasters such as hurricanes, floods, tsunamis, and earthquakes.

*Disaster Nursing and Emergency Preparedness* has always evolved to meet the unique learning needs of nurses across the globe, and the fourth edition of this hallmark text promises to be the most comprehensive ever. As the leading textbook in the field approaches 20 years, I am extremely proud and excited to present our newest edition along with its sister “e-book” and companion digital instructor’s manual.

The fourth edition of this textbook holds us to our highest standards ever with an ambitious goal—to once again provide nurses, nurse midwives, nurse practitioners, and nurse executives with the most *current, valid, and reliable evidence-based* content available. The text presents a broad and comprehensive overview of existing domestic and international disaster health policy coverage. The genesis of the book was predicated on the belief that *all nurses should possess the knowledge, skills, and attitudes (KSAs) to be able and willing to respond in a timely and appropriate manner to any disaster or major public health emergency and keep themselves and their patients safe*. Our goal is simple—to *improve population health outcomes following a disaster event or public health emergency*.

Every chapter in this fourth edition has been carefully researched, fact-checked, reviewed by subject matter experts, and matched to the highest standards in disaster education. Whenever possible, we have mapped all content to published core competencies for preparing the health profession’s students for response to terrorism, disaster events, and public health emergencies. As with previous editions, this edition contains a significant amount of new content and strives to expand our focus as nurses to: (a) acknowledge anthropogenic climate

change, (b) deepen our understanding of the importance of global disaster risk reduction and mitigation strategies, (c) continually expand the international scope of the book to meet the needs of our global nursing colleagues, (d) address the growing threat of pandemics, and (e) increase our awareness of the health implications of urban civil unrest and community violence.

We have remained vigilant to the release of relevant major policy recommendations by international organizations, congressionally convened commissions, panels, scientific advisory boards, and organizations such as the National Academy of Medicine (Washington, DC) to inform the evolution of our discipline. In 2015, several notable UN agreements were adopted and include: the Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals (SDGs), and the Conference of the Parties 21’s (COP21’s) Paris Climate Agreement. The policy areas pertaining to these landmark frameworks are closely interrelated, and their importance in protecting the future of human health is incalculable. For example, climate mitigation and adaptation strategies may contribute to reducing the frequency of disasters, which in turn supports sustainable development and healthy communities. We recognize the forces of globalization and the importance of addressing “One Health.”

The framework of the book relates directly to the 2015 UN agreements, the World Health Organization (WHO) Global Health Security Strategy, and the WHO and U.S. Centers for Disease Control and Prevention (CDC) Office of Emergency Preparedness and Response Guidelines for response to public health emergency events. The fourth edition aligns with the U.S. National Health Security Strategy and remains consistent with the five U.S. National Planning Frameworks and the National Incident Management System. It describes activation and deployment of the U.S. Strategic National Stockpile and the use of medical countermeasures. As with the previous editions, the overarching concepts of the book have been mapped to the Public Health Preparedness and Response Core Competency Model ([www.asph.org](http://www.asph.org)), the Office of the Assistant Secretary for Preparedness and Response 2017–2022 Healthcare Preparedness and Response Capabilities, and the International Council of Nurses foundational competencies for disaster nursing practice. We have added several new chapters addressing critical topics such as (a) public health emergencies involving community violence and civil unrest; (b) nursing in disasters, catastrophes, and public health emergencies worldwide; (c) disaster nursing

and the 2015 UN landmark agreements; and (d) national disaster nurse readiness. We have expanded our coverage of planning for and accommodating high-risk, high-vulnerability populations and have built upon our fundamental belief in a safe and clean environment as a foundational building block for health. We have updated and expanded existing chapters on natural disasters, environmental disasters, CBRNE events, and restoring public health following a disaster. We have addressed the importance of “One Health,” which recognizes that the health of people is connected to the health of animals and the environment. Nurses can advance the goal of One Health by working locally, nationally, and globally—to achieve the best health for people, animals, and our environment.

We live in an increasingly complicated world where our healthcare systems are severely taxed, financially stressed, and our emergency departments are functioning in disaster mode on a daily basis. The concept of accommodating a sudden, unanticipated “surge” of patients remains overwhelming. We have reason to believe that these challenges will continue and clinical demands on staff and the need for workforce preparedness will continue to grow in the future. We will need many nurses to get involved in efforts to increase both U.S. national and global nurse readiness. Working with colleagues at the U.S. Veterans Administration Emergency Management and Evaluation Center (VEMEC) and supported by nurses from major universities and professional nursing organizations, the recently established Society for the Advancement of Disaster Nursing (2017) is working to engage more U.S. nurses in this effort. Led by a dynamic group of nurses with an unwavering commitment to disaster nursing, this group is making major inroads in advancing disaster nursing practice, education, research, and policy. Several of these amazing nurses are chapter authors in this book, which brings me to note that this textbook, like the previous editions before it, represents a major “team” effort. I gratefully acknowledge the wonderful contributions of each of my coauthors and reviewers. Many of these nurse and physician colleagues have been authors in previous editions of this book. Several authors are former graduate students of mine, now trusted colleagues. There is no way to adequately express my gratitude for the time, talent, and treasure of their work and the friendship provided by these subject matter experts. Thank you most sincerely.

This textbook represents one step in my lifelong journey to contribute to building strength and safety in emergency health services and readiness within our nursing workforce. I

remain personally committed to my work in preparing a *global nursing workforce that is adequately prepared* to respond to any disaster or public health emergency and I encourage you to join me and get involved. This work involves improving and expanding programs for interdisciplinary disaster education, lobbying for the advancement of nurses in federal and other key leadership positions to develop disaster-related policies, coalition building across key stakeholders, ensuring access to appropriate and sufficient supplies of personal protective equipment, and much more. This includes working to establish functional and ongoing community partnerships that foster collaboration and mutual planning for the health of our communities and the sustainability of our environment. It includes acknowledging and aggressively addressing climate change. It means giving reflective consideration to the realities of the clinical demands placed on nurses during catastrophic events and the need for consideration of crisis standards for clinical care during disasters and public health emergencies. It includes looking at innovative applications of technology to enhance sustainable learning and disaster nursing response. Take a look at *Disaster Nursing* (Unbound Medicine, at the App store), a digital app for the smartphones that includes just-in-time information and clinical guidelines for over 400 disaster and public health emergency events, designed specifically for nurses!

This fourth edition of this textbook continues to be a reflection of my love for writing and research, as well as a *deep desire to help nurses protect themselves*, their families, and their communities. Disaster nursing is a patient safety issue. Nurses can protect their patients only if they themselves are safe first. The fourth edition represents a substantive attempt to collect, expand, update, and include the most valid and reliable information currently available about various disasters, public health emergencies, and acts of terrorism. As stated earlier, the target audience for the book is all nurses—*making every nurse a prepared nurse*—staff nurses, nurse practitioners, educators, and administrators.

This book continues to represent the foundation for *best practice in disaster nursing and emergency preparedness*, and is a stepping-stone for the discipline of disaster nursing research. There is much work to be done, and it continues to be very rewarding to witness increased interest in disaster nursing as more nurses get involved. The editor welcomes constructive comments regarding the content of this text.

Tener Goodwin Veenema



# How to Use This Book

## **GUIDELINES FOR NURSING FACULTY AND STAFF DEVELOPMENT SPECIALISTS**

### **Update on What Is New in the Fourth Edition**

Greetings colleagues! The newest edition of this AJN Book of the Year is bigger and better than ever and continues to provide U.S. and international nurse educators with the high-quality evidence-based content needed to incorporate into both undergraduate and graduate course curricula for optimal student learning related to disaster nurse readiness. The book provides student nurses with the most comprehensive, current, and reliable information available so they can acquire the unique knowledge and develop the skills they need to efficiently and effectively respond to all types of disasters or public health emergencies. Meticulously researched and reviewed by the world's foremost experts in preparedness for terrorism, natural disasters, and other unanticipated public health emergencies, the text has been revised, expanded, and updated with significant new content, including a new chapter.

The book provides comprehensive coverage related to leadership and management in disaster and emergency health systems as well as both basic and advanced disaster clinical nursing response. This new edition has strengthened its pediatric focus with updated and expanded chapters on caring for children's physical, mental, and behavioral health following a disaster. Additional new chapters address 21st-century threats including climate change, emerging infectious diseases, global complex human emergencies, caring for patients with HIV/AIDS following a disaster, disaster information technology, and hospital and emergency department preparedness. The book provides a vast amount of evidence-based information on disaster planning and response for natural and environmental disasters and those caused by chemical, biological, and radiological elements, as well as disaster recovery. It also addresses leadership, management, and policy issues in disaster nursing and deepens our understanding of the importance of protecting mental health throughout the disaster life cycle. Each chapter is clearly formatted and includes key messages and learning objectives. Appendices present diagnosis and treatment regimens, creating personal disaster plans, a damage assessment guide, a glossary of terms, and more. Consistent with the National

Response and Recovery Framework, the Centers for Disease Control and Prevention (CDC) Public Health Emergency Preparedness and Response Capabilities, and the National Health Security Strategy, the book promotes competency-based expert nursing care during disasters and positive health outcomes for small and large populations.

## **KEY FEATURES OF THE FOURTH EDITION**

- Disseminates state-of-the-science, evidence-based information
- Provides a new chapter and new expanded content throughout the book
- Includes digital teacher's guide with exercises and critical thinking questions
- Is consistent with current U.S. federal and international guidelines for disaster response
- Empowers nurses as leaders in disaster and public health emergency preparedness planning

## **DIGITAL INSTRUCTOR'S GUIDE**

This edition of the textbook is accompanied by a digital adjunct teacher's guide with PowerPoint presentations, student group exercises, and critical thinking questions. Faculty will find that the use of selected chapters from the text along with the digital instructor's guide and supportive materials will allow easy integration of crucial disaster content into existing courses across programs.

The goal of all nursing education programs as it relates to disaster preparedness is to ensure that all nurses possess a minimum knowledge base and skill set before graduation to ensure that they will be able to participate in a disaster response in a timely and safe manner. Both patient safety and nurse safety are critical elements in any disaster response effort. The optimization of population-based health outcomes will be achieved only if nurse responders are safe and prepared to meet the demands of a sudden surge of victims from a disaster event or major public health emergency.

In order to meet the *Essentials in Baccalaureate Education* for population-based healthcare:

*Assess the health, healthcare, and emergency preparedness needs of a defined population.*

*Use clinical judgment and decision-making skills in appropriate, timely nursing care during disaster, mass casualty, and other emergency situations.*

For the *Essentials for Master's Education* topic areas in disaster preparedness and management, **faculty** are strongly encouraged to first read the following chapter before teaching this content:

*Chapter 36: U.S. National Disaster Nurse Readiness: Practice and Education for a Prepared Workforce*

Nurse educators may find it extremely helpful to use the following rubric in determining what components of the book and course materials they wish to integrate into their courses.

## DISASTER CONTENT RUBRIC

1. Nurse educators are encouraged to include the following chapters and digital instructor's materials to present a basic CORE clinical/health systems disaster nursing overview:
  - Essentials of Disaster Planning
  - Leadership and Coordination in Disaster Healthcare Systems: The U.S. National Preparedness System
  - Hospital and Emergency Department Preparedness
  - Disaster Management
  - Disaster Triage
  - Legal and Ethical Issues in Disaster Response
  - Understanding the Psychosocial Impact of Disasters
2. Nurse educators are encouraged to include the following chapters and digital instructor's materials to present a program for ADVANCED clinical disaster nursing:
  - Decontamination and Personal Protective Equipment
  - Chemical Agents of Concern
  - Radiological Incidents and Emergencies
  - Management of Burn Casualty Incidents
  - Traumatic Injury Due to Explosives and Blast Injuries
  - Management of the Psychosocial Effects of Disasters
3. Nurse educators are encouraged to include the following chapters and digital instructor's materials to present content for Maternal & Child Health programs:
  - Identifying and Accommodating High-Risk High-Vulnerability Populations in Disasters
  - Unique Needs of Children During Disasters and Other Public Health Emergencies

- Disaster Nursing in Schools and Other Child Congregate Care Settings
  - Care of the Pregnant Woman and Newborn Following a Disaster
  - Human Services Needs Following Disaster Events and Disaster Case Management
4. Nurse educators are encouraged to include the following chapters and digital instructor's materials to present content related to Public Health Outbreak Management:
    - Surveillance Systems for Detection of Biological Events
    - Biological Agents of Concern
    - Infectious Disease Emergencies
    - Medical Countermeasures Dispensing
    - Role of the Public Health Nurse in Disaster Response
  5. Nurse educators are encouraged to include the following chapters and digital instructor's materials to present content related to *global* disaster nursing and humanitarian response:
    - Disaster Nursing and the United Nations 2015 Landmark Agreements—A Vital Force for Change in the Field of Disaster Nursing
    - Natural Disasters
    - Complex Human Emergencies
    - Nursing in Disasters, Catastrophes and Complex Humanitarian Emergencies Worldwide
    - Restoring Public Health Under Disaster Conditions: Basic Sanitation, Water and Food Supply, and Shelter
    - Human Services in Disasters and Public Health Emergencies: Social Disruption, Individual Empowerment, and Community Resilience
    - Climate Change and Health: The Nurse's Role in Policy and Practice

My hope is that you find this information valuable, facilitating your adoption of the book and supportive materials into your educational setting. Let us work together to *Make Every Nurse a Prepared Nurse*. We owe it to our patients, our families, and our communities for they are counting on us as a profession to be there when they need us.

Most sincerely,

Tener Goodwin Veenema  
Editor

2017–2018 Distinguished Scholar in Residence  
National Academy of Medicine  
Washington, District of Columbia



# Editor's Note

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The information presented in this book has been verified up to the date of submission for publication; however, this field is dynamic and the science and relevant health policies related to disasters and public health emergencies are constantly changing. References, clinical guidelines, and resources frequently change to reflect new knowledge. Readers are strongly encouraged to use this textbook as a resource and

as a guide, and to frequently visit web links at the WHO and the U.S. federal websites (ASPR, CDC, FEMA, DHS, EPA, etc.) for updates. Visit the ASPR website at [www.phe.gov](http://www.phe.gov), the CDC website at [www.cdc.gov](http://www.cdc.gov), the DHS website at [www.dhs.gov/index.shtm](http://www.dhs.gov/index.shtm), the FEMA website at [www.fema.gov](http://www.fema.gov), and the preparedness page of the ASPR at [www.phe.gov/preparedness/pages/default.aspx](http://www.phe.gov/preparedness/pages/default.aspx) for the most current, available information.