

Edited by ROBERT POWERS and ELAINE DAILY  
World Association of Disaster and Emergency Medicine

# DISASTER NURSING

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# INTERNATIONAL DISASTER NURSING

The effects of a disaster on health care can range from conditions that immediately besiege the system with large numbers of patients, to catastrophes that strain its long-term sustainability. Nurses, as frontline health professionals, must have an understanding of the situations they may face before, during and after a disaster and they must develop the skills and strategies to provide effective and immediate care. *International Disaster Nursing* is the first truly comprehensive and internationally focused resource to address the diversity of issues and myriad scenarios that nurses and other health personnel could encounter during a disaster event.

This text defines the many roles of the nurse within a multidisciplinary team, and aids the implementation of the community's disaster plans in a crisis. International experts provide chapters on biological, chemical, natural, pandemic and explosive disasters. Others address disaster events and implications in the world's poorer countries; populations with special needs; ethical issues, and conducting disaster research. Important features include chapter objectives, real-world vignettes, and extensive references. With an alarming increase in the occurrence of disasters in the last decade, *International Disaster Nursing* is the hallmark text in the field.





# INTERNATIONAL DISASTER NURSING

ROBERT POWERS AND ELAINE DAILY | EDITORS



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# FOREWORD I

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**I***NTERNATIONAL DISASTER NURSING* will become a hallmark for the field of disaster health, and is testament to the broad scope of this discipline. It is a coherent summary of what we know today and the evidence upon which the science of disaster health is based. The editors of this book have assembled experts in their respective areas of disaster health who include not only the nurses to whom the text is directed, but experts from other disciplines who work in disaster health. The authors hail from fourteen different countries and, thus, truly represent the international community — the content has been guided to reflect many perspectives and health systems.

This text will serve those nurses interested in disaster planning and responses as it lays out the essential components of practice in extreme circumstances. It should help to hone the knowledge and skills of nurses participating in the continuum of emergency/disaster health care and public health from the evolution of plans to the implementation of plans in the prehospital, in-hospital, and non-traditional healthcare setting. It includes organizational aspects as well as individual and team roles and responsibilities. In so doing, the text provides essential elements required for the definitions of disaster health competencies. Importantly, the scope of the information in this book also will serve as the basis for the disaster education and training for health professionals in disciplines other than nursing. The information and its synthesis will be useful for all levels of practitioners.

The consistent format used in each of the chapters includes educational objectives and will facilitate the development of courses in disaster health. Further, the material easily can be adapted for planners and responders who are expected to perform at some of the many levels of responses required during a disaster.

In addition to core knowledge and information relevant to the practices in disaster health, several chapters address cutting-edge topics, such as disaster ethics and the design and conduct of disaster research and evaluations. Despite the fact that the field of disaster health is rife with ethical concerns and dilemmas, there are no other texts relevant to disaster health that comprehensively address the associated ethical issues. This book also provides a sound foundation for those who are or will become interested in the conduct of disaster research and the evaluation of interventions that have or will be used in disaster planning, relief, and recovery. It further develops the conceptual and operational frameworks that provide the structure for the conduct and reporting of disaster research/evaluation projects. Several chapters amplify the concepts and

information by providing concrete examples using specific events and the resultant disasters and others examine variations of methods used by different countries.

The references used by each of the contributing authors are the basis of the current evidence that exists in disaster health. Their sources not only have included the peer-reviewed literature, but also legal documents, standards, and guidelines developed by the humanitarian health community, as well as material found only in the gray literature. The contributing authors have added their respective synthesis of the current information using their expertise. What has resulted is a text with many faces and uses.

*International Disaster Nursing* is the first text provided by the World Association for Disaster and Emergency Medicine (WADEM). Through this publication, the Nursing Section of the WADEM has set a very high standard for future WADEM publications. The WADEM is proud to provide this extraordinary work to the health community. I congratulate all of the contributors to this compendium and especially the editors, Robert Powers and Elaine Daily, for assembling this cadre of experts and for their commitment to making this text the hallmark that it will become.

*Marvin L. Birnbaum, MD, PhD*

*Immediate Past-President, WADEM*

*Editor-in-Chief, Prehospital and Disaster Medicine*



## FOREWORD II

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**D**ISASTERS OCCUR DAILY somewhere in the world and have a dramatic impact on the quality of life of individuals, families, and communities. The *World Disasters Report 2007* confirmed a 60% increase in the occurrence of disasters in the last decade (1997–2006) compared to the previous decade.<sup>1</sup> The number of reported deaths associated with disasters increased from 600,000 to more than 1.2 million while, at the same time, the number of people affected rose from 230 million to 270 million — a 17% increase. No nation, region, community, or individual is immune to the potential devastations of a disaster.<sup>2</sup>

According to the United Nations' Bureau of Crisis Prevention and Recovery, nearly 75% of the world's population live in areas that were affected at least once by an earthquake, a tropical cyclone, flooding, or drought between 1980 and 2000. In the year 2007, 133 countries were impacted by some disaster-producing event — up from an average of 116 countries during the period 2000–2006.<sup>2</sup>

Nations with less resources are particularly vulnerable and require special attention, as they are less able to finance and support disaster preparation, emergency efforts, and infrastructure reconstruction initiatives. When disaster strikes, funds are diverted from other urgently required programs. Disasters, therefore, can change the face of a resource-poor nation in minutes, wiping out years of development. Disaster reduction and sustainable development are thus closely linked.<sup>3</sup> The data justify the importance given to sound disaster planning and mitigation efforts. Included in these efforts is the preparation of a workforce that is able to respond effectively during a disaster.

Nurses, with their technical skills and knowledge of epidemiology, physiology, pharmacology, cultural-familial structures, and psychosocial issues can and do assist in disaster preparedness programs, as well as disaster relief response and recovery activities. As team members, they can play a strategic role cooperating with health and social disciplines, government bodies, community groups, and non-governmental agencies, including humanitarian organizations. They have vital roles in prevention, mitigation, preparedness, and relief interventions. For this reason, in 2009, the International Council of Nurses and the World Health Organization/Western Pacific Region released the *ICN Framework of Disaster Nursing Competencies* — a valuable tool for education, training, and accreditation program, rosters, and deployment strategies.

There is increasing awareness of the care and support (meeting daily physical and emotional needs) that must be provided to relief workers who are experiencing human tragedy first-hand, and become stressed and fatigued, trying to

provide services with too few resources in physically unsafe circumstances. Research has documented that nurses and other care providers may experience post-traumatic stress disorders during and after a disaster. Attention must be given to their health, including accident and professional indemnity insurance coverage. The occupational health and safety of care givers must be maintained if effective health care is to be provided.

The publication of this book is timely and needed. The content covers a wide range of topics, illustrating the broad scope of disaster nursing while informing decision-making in critical aspects of disaster nursing care and preparedness planning. The learning objectives for each chapter are clearly indicated, providing easy access to specific areas of disaster nursing, including theory, practical examples, lessons learned, and recommendations for future work. *International Disaster Nursing* is a valuable reference for advancing the care provided by nurses in disaster prevention, mitigation, preparedness, and relief. Nurses have always been actively involved in such efforts. It is important to support them, advance their practice, and recognize their contributions to the well-being of our communities.

*Mireille Kingma RN, PhD  
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