
Perspectives in Nursing Management and Care for Older Adults

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The aim of this book series is to provide a comprehensive guide to nursing management and care for older adults, addressing specific problems in nursing and allied health professions. It provides a unique resource for nurses, enabling them to provide high-quality care for older adults in all care settings. The respective volumes are designed to provide practitioners with highly accessible information on evidence-based management and care for older adults, with a focus on practical guidance and advice.

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Karen Hertz • Julie Santy-Tomlinson
Editors

Fragility Fracture Nursing

Holistic Care and Management of the
Orthogeriatric Patient

 Springer Open

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ISSN 2522-8838 ISSN 2522-8846 (electronic)
Perspectives in Nursing Management and Care for Older Adults
ISBN 978-3-319-76680-5 ISBN 978-3-319-76681-2 (eBook)
<https://doi.org/10.1007/978-3-319-76681-2>

Library of Congress Control Number: 2018942542

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Printed on acid-free paper

This Springer imprint is published by the registered company Springer International Publishing AG part of Springer Nature

The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Foreword

One of the biggest public health challenges we now face globally is the tsunami of hip and other fragility fractures, which is the consequence of rapidly ageing populations worldwide. In developed economies, this process has been under way for many years, and we have had the time to learn that there are two innovations that can help us cope with the challenge. They are (1) orthopaedic–geriatric co-management of the acute fracture episode and (2) secondary prevention, reliably delivered by a Fracture Liaison Service model.

One notable aspect of both these innovations is that their successful implementation is heavily dependent on the involvement of specially trained nurses. This is not only because the number of patients involved is so huge and there are simply not enough doctors available to deliver what is needed; it is also because skilled, highly educated nurses can collaboratively coordinate and deliver excellent care over the full 24-h period—with a significant impact on outcomes. This is even more true in those countries where population ageing is happening later and at a more hectic pace—particularly in emerging economies, but also many countries in Europe. Unfortunately, these tend to be countries in which the health services culture is inimical to autonomous action and decision-taking by nurses.

The nurse-education project which has produced this book, therefore, has twin goals:

1. To define the knowledge base and skill set that nurses need to be professionally competent to deliver the care that fragility fracture patients need
2. To assert the *appropriateness* of the delivery of such care by nurses with a fair degree of autonomy, albeit in the context of protocols that are developed and monitored in collaboration with the relevant medical specialists.

The process by which the book has been produced is itself a manifestation of this philosophy. The chapters were brainstormed in sessions containing, and led by, nurse leaders from 29 European countries, with minimal input from a handful of medical advisors. Meticulous preparation of these sessions by the editors ensured that the important issues were addressed and that the seminal studies that produced the relevant evidence for each issue were known and available to participants. This educational nurse meeting was hosted by Prof. Stefania Maggi and the European Interdisciplinary Council on Aging (EICA) in San Servolo Island, Venice Lagoon,

15/16 May 2017. The project was endorsed by the major international organisations concerned with osteoporosis and fragility fracture (EFORT, ESCEO, EUGMS, FFN, IAGG-ER, ICON and IOF).

We know that this is a work in progress that will have to be updated as more evidence accumulates. We also know that maximum benefit will be realised only when the material has been translated into many different languages and, in some respects, modified for different health care systems. We are confident that these things will happen, again, led by nurses.

We are very grateful to Springer for agreeing to make this English version available on the Internet for open access and to UCB for their unconditional financial support. This will speed up the roll-out process considerably. We are sure that this open access educational nursing book will greatly contribute to the growth of nursing community all over the world in the field of osteoporosis and fragility fractures.

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Preface

Patients with fragility fractures are the most common orthopaedic trauma inpatients, found in great numbers in every acute hospital in every country. Their care is provided in hospital units as well as pre-hospital care settings, emergency departments, outpatient clinics, rehabilitation units and community settings. Despite their high numbers and presence in a wide range of settings, nurses have rarely received formal education in the care and management of this vulnerable group of patients and the centrality of the nursing role is not well recognised in the literature. The aim of this book (as well as the associated educational programme) is to ensure that this is resolved.

Patients who have sustained a fragility fracture are usually elderly and often frail. Although many may have suffered a relatively minor fracture that can be treated as an outpatient, such injuries are warning signs of a fracture that is the result of fragile bone caused by osteoporosis, which requires treatment to prevent further fractures. Those patients requiring hospitalisation often have a hip fracture, a significant injury that nearly always requires major orthopaedic surgery and places significant physiological and psychological stress on the patient, potentially leading to significant reduction in function and mobility, loss of independence, complications and death.

There are several different models of care, not only nationally but internationally, and not everyone gets the same care or the care they deserve. Hospitalisation may result in admission to a general orthopaedic trauma unit, but increasingly health services are recognising the unique needs of this group of frail and vulnerable patients and are developing 'enhanced care' units, often known as orthogeriatric units or hip fracture wards/units, where there is access to specialist medical and nursing care that includes geriatricians and other members of a multidisciplinary team with advanced skills in caring for patients with highly complex needs following a fracture. Patients are often frail and have multiple co-morbidities. Their preparation and recovery from surgery requires optimisation so that these factors are not only considered but actively managed. Patients whose care and management is not optimised have very poor outcomes in terms of regaining functional abilities and experience prolonged pain and complications that can, ultimately, lead to death.

Nurses caring for this group of hospital patients require provision of evidence-based, multidisciplinary care that brings together the skills and knowledge of acute orthopaedic care, acute geriatric care, rehabilitation, and palliative care. This requires both advanced knowledge and enhanced skills. However, this is not the

complete picture: patients with fragility fractures also need skilled and professional care in community and outpatient settings with a particular focus on bone health and fracture prevention. What is special about nurses and nursing is that they spend more time than any other member of the team with patients, in or outside the hospital, and often provide care over the full 24-h period. They have a different skill set from other members of the multidisciplinary team and can work at different levels from novice through to expert [1]. At all of these levels, nurses perceive and understand patients' care needs holistically and are able to provide high-quality care.

This book has been written by a group of expert nurses, each with skills and knowledge in specific aspects of fragility fracture care. The group were brought together for the first time in May 2017, on the Island of San Servolo, Venice Lagoon, Italy, as part of a project aimed at designing an education programme with the specific goal of improving the care of fragility fracture patients across Europe. At that meeting a 'big conversation' took place about what nurses need to know in order to provide excellent nursing care. Even in the short time since that meeting, the project's reach has begun to extend well beyond Europe and the venture has become known as the 'San Servolo Project'.

Each contributor has a different background, offering the opportunity for the book to truly bring together a depth of experience of multidisciplinary practice and to acknowledge the need for practice development across a world where local practice varies according to social, cultural and political influences. For example, in some countries there are no geriatricians to act as clinical leaders for fragility fracture care and local nursing practice has developed accordingly. Despite the differences in local practice, what we noticed was consistent when we discussed nursing and fragility fracture care for the first time in San Servolo was the prominence of the team approach and multi/interdisciplinary working in those conversations, a prominence that is now reflected in this book. There is strength in a team that is much more than the sum of its parts. That team also includes the patient and his/her family, friends and informal caregivers. This reflects the ethos of the Fragility Fracture Network (FFN <http://fragilityfracturenetwork.org/>), an organisation aimed at optimising globally '...the multidisciplinary management of the patient with a fragility fracture, including secondary prevention', with nurses participating as equals, offering complementary knowledge and skills to the other members of the team.

The wealth of fragility fracture/orthogeriatric knowledge presented in this book is accessible to all nurses who care for these patients in any setting and, we hope, will be available to the next generation of nurses who want to practise in this challenging field and continue to improve care. This knowledge comes from the evidence base, as well as the diverse and extensive experience of the contributors. The chapters will provide the reader with a wealth of information that they can apply to their practices, but their learning should not finish at the end of the book. It should go on to be continuous: through the suggestions for further study and self-assessment at the end of each chapter and beyond. The chapters will help nurses to develop their orthogeriatric knowledge and skills so that they can provide care that reflects it them. This process will involve deepening their knowledge about the causes of fragility fracture—specifically bone fragility due to osteoporosis and falls. It also

involves understanding the importance of a well-led systematic approach to bone health, falls and fracture prevention.

Comprehensive assessment of the older person with a fragility fracture, especially hip fracture, is central to effective, evidence-based care in the emergency, perioperative and recovery periods, and an understanding of frailty and sarcopenia underpins all of this. Many aspects of care are discussed, but pain management, complication prevention, remobilisation, nutrition, hydration, wound management and pressure ulcer prevention are singled out for specific attention here because they are so central to improving patient outcomes and, so, are intertwined with nursing. Delirium and other cognitive impairments such as dementia are, like depression, major insults to the recovery and rehabilitation of patients following fragility fracture and surgery and need to be carefully managed. Nurses also need to be aware that, in some cases, hip fracture may be the beginning of the final phase of a person's life and that sensitive palliative care, with effective symptom control and emotional and psychological support for patients and their families may also be needed. Nurses are well placed to do all of this with the collaboration of the patient and his/her family.

Sharing knowledge and skills nationally and internationally through local, national and global organisations such as local and national nursing groups, the Fragility Fracture Network (FFN) and the International Collaboration of Orthopaedic Nurses (ICON) is an integral part of the development of nursing practice.

This is a 'sister' book to *Orthogeriatrics* edited by Falaschi and Marsh [2]. Numerous medical organisations with members specialising in bone health and fragility fracture have, to date, supported the San Servolo Project including the European Interdisciplinary Council on Aging (EICA) and has been endorsed by the major international organisations concerned with osteoporosis and fragility fracture (EFORT, ESCEO, EUGMS, FFN, IAGG-ER, ICON and IOF). Recently, this culminated in an unrestricted educational grant from our industry partner, UCB, enabling the book to be published online as an open access eBook so that the education it offers is freely available to all nurses across the globe, no matter what their location or income. This support has been freely offered because every individual and organisation believes in the power of nursing to make the care of patients with fragility fractures the very best it can be so that their suffering can be much less and their outcomes much better.

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Acknowledgment

Open access publication has been possible through an unconditioned educational grant from UCB

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Karen Hertz is a registered nurse with extensive experience of clinical practice in a wide range of acute hospital settings with a focus on orthopaedic/trauma and orthogeriatric nursing as well as all aspects of adult nursing. She has developed a clinical career in the role of Advanced Nurse Practitioner in which she provides patient focused care, using advanced assessments skills and nurse prescribing privileges to provide autonomous clinical practice for patients within a trauma unit in a large University Hospital. She has a track record of national and international networking that includes membership of various boards and committees relevant to her practice and has co-authored several book chapters.

Dr. Julie Santy-Tomlinson is a registered nurse with clinical interests in orthopaedics and trauma, wound management, tissue viability and nursing care of the older adult. She has worked in nursing education in the UK for over 20 years and currently works at the University of Manchester as a Senior Lecturer where she teaches a broad spectrum of nursing topics. She is also Editor in Chief of the *International Journal of Orthopaedic and Trauma Nursing* and has authored, co-authored and co-edited numerous journal papers, clinical guidelines, books and book chapters.

Abbreviations

AADLs	Advanced activities of daily living
ABCDE	Airway, breathing, circulation, disability, exposure
ADLs	Activities of daily living
APIE	Assessment, planning, implementation and evaluation
BADLs	Basic activities of daily living
BMD	Bone mineral density
BMI	Body mass index
BOA	British Orthopaedic Association
BP	Blood pressure
CGA	Comprehensive Geriatric Assessment
DAI	Deficit Accumulation Index
DVT	Deep vein thrombosis
DXA	Dual-energy X-ray absorptiometry
ED	Emergency Department
EWGSOP	European Working Group on Sarcopenia in Older People
FFN	Fragility Fracture Network
FLS	Fracture Liaison Service
HAI	Hospital acquired infection
IAD	Incontinence-associated dermatitis
IADLs	Instrumental or intermediate activities of daily living
ICP	Integrated care pathway
ICN	International Council of Nurses
IOF	International Osteoporosis Foundation
ITD	Intertriginous dermatitis
MARS	Medical adhesive-related skin injury
MASD	Moisture-associated skin damage
MDT	Multidisciplinary team
NOF	National Osteoporosis Federation
NOS	National Osteoporosis Society
ONJ	Osteonecrosis of the jaw
PE	Pulmonary embolism
PFP	Physical Frailty Phenotype
QoL	Quality of life
RDA	Recommended daily dietary allowance

SD	Standard deviations
SERM	Selective Estrogen Receptor Modulator
SOF	Study of Osteoporotic Fractures
UTI	Urinary tract infection
VFA	Vertebral Fracture Assessment
VTE	Venous thromboembolism
WHO	World Health Organization

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