KOZIER AND ERB’S
FUNDAMENTALS
OF NURSING

FIRST AUSTRALIAN EDITION

VOLUME ONE
Cover art

Robert Stuurman is a Noongar from Western Australia who does Aboriginal art as a result of meeting his birth mother in 1994. He is from the Stolen Generations.

The cover of this book is adapted from one of his paintings called *Pathways through the Sea*. This painting shows that knowing one's ability in an environment reflects knowing what to do in situations and circumstances—in this case knowing the seasons and cycles of the sea.

Starfish indicate a form of tenaciousness, because when one of their arms is cut off it grows back again. This tenaciousness for life is also reflected in the amount of dot work that is indicative of this story.

Tenacity and persistence is also reflected in the field of nursing. Due to nurses' willingness to make a difference to promote life, in many respects they are the unsung heroes that stay true to their pathway. Much like the pathways of the sea, they are always there.

This book cover is dedicated to would-be nurses who read this book and to the ones out in remote places that have had to make do with little.

Robert Stuurman, artist
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Audrey Berman received her BSN from the University of California, San Francisco, and later returned to that campus to obtain her MS in physiologic nursing and her PhD in nursing. Her dissertation was entitled *Sailing a course through chemotherapy: The experience of women with breast cancer.* She worked in oncology at Samuel Merritt Hospital prior to beginning her teaching career in the diploma program at Samuel Merritt Hospital School of Nursing in 1976. As a faculty member, she participated in the transition of that program into a baccalaureate degree and in the development of the master of science in nursing program. Over the years, she has taught a variety of medical-surgical nursing courses in the prelicensure programs. She currently serves as the dean of nursing at Samuel Merritt College (an affiliate of Sutter Health).

Dr Berman has travelled extensively, visiting nursing and health care institutions in Germany, Israel, Spain, Korea, Botswana, Australia, Japan and Brazil. She serves on the board of directors for the Bay Area Tumor Institute. She is a member of the American Nurses Association and Sigma Theta Tau and is a site visitor for the Commission on Collegiate Nursing Education. She has twice participated as an NCLEX-RN item writer for the National Council of State Boards of Nursing. She is certified as an advanced oncology nurse and as an AIDS educator and has presented locally, nationally and internationally on topics related to nursing education, breast cancer and technology in health care.

Dr Berman authored the scripts for more than 35 nursing skills videotapes in the 1990s. She was a co-author of the sixth and seventh editions of *Fundamentals of nursing* and, with Shirlee Snyder, co-author of the fifth edition of *Kozier & Erb's techniques in clinical nursing.*

Shirlee J. Snyder graduated from Columbia Hospital School of Nursing in Milwaukee, Wisconsin, and subsequently received a bachelor of science in nursing from University of Wisconsin–Milwaukee. Because of an interest in cardiac nursing and teaching, she earned a master of science in nursing with a minor in cardiovascular clinical specialist and teaching from the University of Alabama in Birmingham. A move to California resulted in becoming a faculty member at Samuel Merritt Hospital School of Nursing in Oakland, California. Shirlee was fortunate to be involved in the phasing out of the diploma and ADN programs and development of a baccalaureate intercollegiate nursing program. She held numerous positions during her 15-year tenure at Samuel Merritt College, including curriculum coordinator, assistant director—instruction, dean of instruction and associate dean of the Intercollegiate Nursing Program. She is an associate professor alumnus at Samuel Merritt College. Her interest and experiences in nursing education resulted in Shirlee obtaining a doctorate of education focused in curriculum and instruction from the University of San Francisco.

Dr Snyder moved to Portland, Oregon, in 1990 and taught in the ADN program at Portland Community College for eight years. During this teaching experience she became interested in computer-assisted instruction (CAI) and initiated web-based assessment testing for student learning. She presented locally and nationally on topics related to using multimedia in the classroom and promoting ethnic and minority student success.

Another career opportunity in 1998 led her to the Community College of Southern Nevada in Las Vegas, Nevada, where Dr Snyder was the nursing program director with responsibilities for the associate degree and practical nursing programs for five years. During this time she became involved in co-authoring the fifth edition of *Kozier & Erb's techniques in clinical nursing* with Audrey Berman.

In 2003, Dr Snyder returned to baccalaureate nursing education. She embraced the opportunity to be one of the nursing faculty teaching the first nursing class in the baccalaureate nursing program at the first state college in Nevada, which opened in 2002. She is currently the Associate Dean of the School of Nursing at Nevada State College in Henderson, Nevada.

Dr Snyder is an advisory board member for the Nevada Geriatric Education Center and a member of the American Nurses Association, Sigma Theta Tau, and a variety of task groups addressing the Southern Nevada nursing shortage. She has been a site visitor for the National League for Nursing Accrediting Commission and the Northwest Association of Schools and Colleges.

Dr Snyder's experiences in nursing education and teaching keep her current in nursing and nursing education. She appreciates all she has learnt from the students she has taught and her past and present faculty colleagues.
Barbara Koziere was educated in Vancouver, British Columbia, Canada. After obtaining a bachelor of arts degree from the University of British Columbia, she entered the nursing program at that institution. After four years of study she graduated with a bachelor's degree in nursing. She obtained a position at Bella Bella, an aboriginal settlement on the northern coast of British Columbia. She then nursed with the Victorian Order of Nurses providing home care. Following a position with a large general hospital as an acute care nurse in a medical-surgical unit, she taught medical and surgical nursing, pediatric nursing, psychiatric nursing and community nursing courses at the Vancouver General Hospital School of Nursing. Ms Koziere then enrolled at the University of Washington where she studied for two years, taught part time and obtained her master of nursing title.

Barbara is a member of three honour societies: Sigma Theta Tau (nursing), Pi Lambda Theta (education) and Delta Sigma Pi (Canadian Honor Society for University Women). Barbara was a member and a chair of many nursing and government committees. She wrote a number of texts and collaborated with Glenora Erb on four books: *Techniques of clinical nursing, Fundamentals of nursing, Concepts and issues in nursing practice and Essentials of nursing practice.*

Glenora Lea Erb was born in Calgary, Alberta, Canada. All her schooling took place in Calgary and, with her identical twin sister, she attended the Nursing School of Calgary General Hospital. She was awarded a gold medal when she graduated and was recognised as an outstanding bedside nurse.

Following two years travelling in Asia, Europe, India, Australia and New Zealand, Ms Erb returned to Vancouver and taught nursing at St Paul's Hospital School of Nursing, and later at a 2-year program at the British Columbia Institute of Technology. At this time she also coauthored textbooks on *Fundamentals of nursing, Techniques of clinical nursing, Concepts and issues in nursing practice and Essentials of nursing practice.*

Glen died at home on 24 December 2001 of breast cancer. Her death has meant that nursing has lost a highly skilled clinical nurse and her friends and family have lost a sensitive and giving person.
The authors listed below are the Unit coordinators for the first Australian edition of *Fundamentals of Nursing*. For a complete list of contributors, see page xxiv.

**Tracy Levet-Jones** is the Deputy Head of School (Teaching and Learning) at the School of Nursing and Midwifery at the University of Newcastle. Her research interests include the phenomenon of ‘belonging’, clinical education, information and communicating technology (ICT) in health care, clinical reasoning and simulation. Tracy’s doctoral research explored the clinical learning experiences of students in Australia and the United Kingdom. She has a broad clinical background and prior to her academic career worked as a women's health nurse, nurse educator and new graduate program coordinator. She is a co-author of the book *The clinical placement: An essential guide for nursing students*, the 2007 recipient of the NSW Minister for Education Quality Teaching Award and a 2008 recipient of an Australian Teaching and Learning Council Citation for Outstanding Contributions to Student Learning.

**Trudy Dwyer** completed a hospital-based nursing program at the Rockhampton Hospital, Queensland, where she developed a passion for critical care nursing and travel. Working her way around Australia she completed a Post-Basic Intensive Care course and a Bachelor of Health Science degree. After seven years travelling, she returned to Rockhampton to work as a nurse academic with Central Queensland University (CQU) and nurse clinician at the Rockhampton Hospital in intensive care. She then completed a Graduate Certificate of Flexible Learning, a Master’s of Clinical Education from the University of New South Wales and a PhD. For the past 20 years she has been an active member of the Australian College of Critical Care Nurses and was the foundation president of the Central Queensland sub-branch of the ACCCN. Trudy is currently a Senior Lecturer of Nursing in the Faculty of Sciences, Engineering and Health at CQU. Trudy has a long career as a nurse academic, coordinating undergraduate and postgraduate nursing courses and the Honours program. She is also a supervisor of Master’s and PhD research students. Her research interests include resuscitation, clinical education and population health. She has published in international refereed scholarly journals, book chapters and is the co-author of the highly successful *Student nurse: Clinical survival guide*.

**Majella Hales** works at the Australian Catholic University in Brisbane. Originally hospital trained, she completed a post-registration Bachelor of Nursing, Master’s of Applied Science (Research), and a Graduate Certificate in Higher Education. She is currently enrolled in a PhD investigating simulation in nursing education. Majella lectures primarily in the science and nursing units of the undergraduate nursing degree. She is passionate about teaching and learning and also offers critical care electives and online education for postgraduate students enrolled in cardiothoracic and emergency specialties.

With a long history in emergency and cardiothoracic intensive care, she has also been a member of teams providing critical care and education assistance to Solomon Islands, Fiji and Brazil.

**Nichole Harvey** has been a registered nurse since 1988 and an endorsed midwife since 1995. Nichole’s qualifications include a Critical Care Certificate, Trauma Nursing Certificate, Non-Medical Vaccinator’s Certificate, Bachelor of Nursing, Master of Nursing Studies and a Graduate Certificate in Education (Tertiary Teaching). Nichole has extensive clinical experience, having worked in both large city and rural and remote locations, as well as overseas. Her main area of clinical expertise is emergency and trauma nursing with a special interest in midwifery.

Nichole has held an academic role with the School of Nursing, Midwifery and Nutrition, James Cook University, since 2000. Since that time Nichole has been involved in the development and teaching of both nursing and midwifery curricula. Nichole is a reviewer for the *Australian Journal of Rural and Remote Health*, a past panel member for the Queensland Nursing Council’s Midwifery Review Panel and a member of a number of local and state nursing and midwifery committees/organisations. Nichole is undertaking her PhD to investigate the triage and management of pregnant women in emergency departments.
Yoni Luxford is a Senior Lecturer in Nursing in the School of Health at the University of New England, Armidale, NSW. Yoni has written a number of publications, and is co-author (with Anderson) of Women growing older: A health and wellness manual for working with woman around 60 years & over, published by the Southern Women’s Health and Community Centre.

Lorna Moxham actively contributes to the nursing profession at state, national and international levels as well as to the broader community in numerous ways. Lorna has served on numerous ministerial committees as a member and chair and has held several leadership and governance roles both within the tertiary education sector and in industry. These currently include Chair of the CQU University HREC and Chair of the Rockhampton and District Health Community Council (HCC). As the current chair of the mental health peer review panel and a member of the education committee, Lorna’s involvement in nurse regulation and licensure via the QNC enables her to actively contribute to on-going professional integrity and development.

Passionate about nursing, its past, present and future, Lorna has an extensive publication record and has led and been an investigator in many research projects. A fellow of the Australian College of Mental Health Nurses identifies her discipline expertise and passion.

Tanya Pork is a registered nurse, an endorsed mental health nurse, an endorsed midwife and a credentialed mental health nurse. Her nursing experience includes private and public settings (in rural, remote and urban centres) including crisis, community and emergency mental health services. She joined the School of Nursing, Midwifery & Nutrition at James Cook University in 2005 and has had the opportunity to teach both undergraduate and postgraduate students. She is currently undertaking her PhD to investigate the ‘Prevention of weight gain with second generation antipsychotics: a nurse-led intervention’. She is a Member of the Australian College of Mental Health Nurses and reviewer for the International Journal of Mental Health Nursing.

Barbara Parker has worked extensively in the clinical environment, specifically in the areas of anaesthetics and recovery and orthopaedic and urology surgical nursing. She has published in the area of obesity and diabetes and has expertise in gastrointestinal and nutritional physiology as well as expertise in programs in obesity, impaired glucose tolerance and diabetes in both pharmacological and lifestyle interventions. Dr Parker is a Program Director in the School of Nursing and Midwifery and teaches within the undergraduate nursing program at the University of South Australia.

Kerry Reid-Searl is a Senior Lecturer at Central Queensland University. Kerry first completed her nursing qualifications in Tasmania. Since then she has gained experience in Queensland as a remote area nurse, a generalist nurse, a midwife and in more recent years she has worked in the clinical area of paediatrics. Kerry has over 17 years experience in undergraduate nursing education. She holds a Bachelor of Health Science degree, a Master’s qualification in Clinical Education and a PhD. Kerry has a strong interest in clinical education, wound care and medication safety.

David Stanley began his nursing career in the days when nurses wore huge belt buckles and funny hats. He 'trained' as a registered nurse and midwife in South Australia and worked through his formative career in a number of hospitals and clinical environments in Australia. In 1993 he completed a Bachelor of Nursing at Flinders University, Adelaide (for which he was awarded the University Medal) and after a number of years of volunteer work in Africa he moved to the United Kingdom and worked as the Coordinator of Children’s Services and as a nurse practitioner. He completed a Master’s of Health Science degree at Birmingham University. For a short time he worked in Central Australia for Remote Health Services, before returning to the United Kingdom to complete his nursing doctorate, researching in the area of clinical leadership. He is currently teaching undergraduate and postgraduate nursing at Curtin University of Technology, Western Australia.
Contemporary nursing in Australia and internationally is challenging, complex, dynamic and very rewarding. Many of our clients are older and sicker that they were a decade ago, often with complex health and psychosocial needs. This means that nurses today must be clinically competent, flexible and knowledgeable. They must have a broad and deep knowledge of physiology, pathophysiology, pharmacology, epidemiology, therapeutics, culture, ethics and law, as well as an understanding of evidence-based practice. Today’s nurses have many roles and functions—clinician, educator, manager, researcher, to name just a few. They must be highly skilled with the ability to problem solve and they must possess sophisticated critical thinking skills. They must be life-long learners and confident in the use of information and communication technology. Nurses must be able to communicate effectively, with their clients, with each other and with other members of the health care team. Above all, they must care for their patients in ways that signify respect, acceptance, empathy, connectedness, cultural sensitivity and genuine concern.

Against this background, the first Australian edition of Kozier and Erb’s fundamentals of nursing will be of immense benefit to both beginning students and those who are more advanced. This comprehensive textbook, with its unique Australian perspective, introduces the reader to vitally important nursing issues, concepts, practices and theories. The book will prepare students for practice in a range of diverse clinical settings and help them understand what it means to be a competent professional nurse in the twenty-first century.

**LANGUAGE AND TERMINOLOGY**

**Patient, clients and health care consumers**
In developing this text we have used terminology that is familiar and applicable to most Australians. To achieve this, we have used the terms ‘client’, ‘patient’ and ‘health care consumer’ throughout the text, applying each according to its context. This remains consistent with the terminology set out in the Code of ethics for nurses in Australia, published by the Australian Nursing and Midwifery Council (ANMC 2005).

**Indigenous Australians**
Throughout the text we have integrated issues relevant to the Indigenous Australian population. In covering the issues we have acknowledged the importance of using non-discriminatory and appropriate language to describe groups of people, policies and events, and have thus followed the guidelines as set out by NSW Health in its publication Communicating positively: A guide to appropriate Aboriginal terminology.

**Nursing Diagnoses**
In 2002, the North American Nursing Diagnosis Association (NANDA) was changed to NANDA-International (NANDA-I), in recognition of the broadening global scope of its membership. The NANDA-I taxonomy provides nurses with a shared language of diagnostic terminology and is particularly useful for the beginning nurse, and thus we have incorporated it into our text. We do acknowledge, however, that Australian nurses often adapt the NANDA-I terminology to meet their own context and specific client needs.

**ORGANISATION OF THE BOOK**
The detailed table of contents at the beginning of the book provides a clear structural map to the content included in the 10 units and 54 chapters.

**Unit 1, The Nature of Nursing**, clusters five chapters that provide comprehensive coverage of introductory concepts of nursing. The history of nursing in Australia and the Australian legal system provide a contextual backdrop to the chapters that follow.

**Unit 2, Contemporary Health Care**, four chapters focus on contemporary health care topics such as health care delivery systems, community-based care, home care and the use of information and communication technology in health care.

**Unit 3 is The Nursing Process.** Six chapters introduce students to this important framework, with each chapter dedicated to a specific step of the nursing process. Chapter 10 outlines critical thinking and the nursing process. A Nursing in Action case study is used as the frame of reference for applying content in all phases of the nursing process in Chapter 11, Assessing, Chapter 12, Diagnosing, Chapter 13, Planning, and Chapter 14, Implementing and Evaluating. Chapter 15 covers documenting and reporting.

Starting in this unit and incorporated throughout the book, we refer to the new NANDA International (NANDA-I) nursing diagnoses.

**Unit 4, Health Beliefs and Practices**, four chapters cover health-related beliefs and practices for individuals and families from a variety of different cultural backgrounds. This Unit emphasises the importance of cultural sensitivity when caring for clients from different backgrounds and it has a particular focus on Indigenous Australian people—a focus that continues throughout the book. Practical issues related to nursing management is an additional strength of this unit.

**Unit 5, Lifespan Development**, consists of five chapters that discuss development from conception to old age. Chapter 23 is a new chapter devoted specifically to the care of the older adult.

**Unit 6, Integral Aspects of Nursing**, discusses topics such as caring, communicating, teaching, leading, managing and delegating. These topics are all crucial elements for providing competent nursing care.

**Unit 7, Assessing Health**, covers vital signs and health assessment in two separate chapters, so beginning students can understand normal assessment techniques and findings.
Chapter 29, Vital Signs, introduces students to the health assessment skills that are crucial to competent professional practice.

In Unit 8, Integral Components of Client Care, the focus shifts to those issues of relevance to all clients: asepsis, safety, hygiene, diagnostic testing, medications, wound care and pre-operative care.

Unit 9, Promoting Psychosocial Health, includes six chapters that cover a wide range of areas that affect one’s health. Sensory perception, self-concept, sexuality, spirituality, stress and loss are all things that a nurse needs to consider to properly care for a client.

Unit 10, Promoting Physiologic Health, discusses a variety of physiologic concepts that provide the foundations for nursing care. These include activity and exercise; sleep; pain; nutrition; elimination; oxygenation; circulation; and fluid, electrolyte and acid-base balance.
For years, the American edition of *Kozier & Erb's Fundamentals of Nursing* has been a gold standard that helps students embark on their careers in nursing. This first Australian edition retains many of the features that have made this textbook the number-one choice of nursing students and lecturers. To further enhance this popular fundamentals textbook and ensure its appropriate application for Australian students, nursing academics from across Australia were invited to review and comments on each of the 52 chapters. Their detailed feedback has ensured that *Kozier & Erb's Fundamentals of Nursing: First Australian edition* is a current, engaging and uniquely Australian textbook that will help students succeed in their nursing studies.

### Features

- **Anatomy & Physiology Reviews** provides students with a quick review of the human bioscience that is fundamental to competent practice.

- **Assessment Interviews** show students how to ask appropriate questions in their clinical encounters.

- **Client Teaching** gives students a guide for what to say when educating clients.

- **Clinical Alerts** highlight special information such as safety issues.
Drug Capsules boxes help student learn the implications of certain medications that they may see in their clinical encounters.

Home Care Considerations instruct students to consider adaptation for performing the skill in the home.

Practice Guidelines provide instant summaries of clinical dos and don’ts.

Critical Thinking Checkpoints provide brief case studies followed by questions that encourage students to analyse, compare, contemplate, interpret and evaluate information.

Concept Maps reinforce the steps of the nursing process by using different colours and by mapping difficult concepts diagrammatically.

Step-by-step Skills help students understand techniques and practice sequence. They include a complete equipment list and full-colour photos and illustrations for critical steps.
Lifespan Considerations alert students to the needs of clients of different ages.

Real-World Practice provides students with a real-world perspective of practice.

Research Notes introduce students to the concept of evidence-based nursing practice by reviewing relevant nursing research and discussing the implications for nursing practice.
SUPPLEMENTS FOR STUDENTS AND EDUCATORS

To supplement the textbook and facilitate active student learning, we include a variety of teaching and learning aids in our comprehensive supplements package.


MyNursingKit is designed to help students apply concepts in the book. Each chapter contains learning outcomes, a glossary, case studies, care plan activities and application activities, as well as a full eBook. Instructors can use grade tracker to monitor student progress.

NURSING SKILLS VIDEOS offer students the essential foundation for competency in performing clinical nursing skills. The volumes in this series consist of comprehensive procedures, demonstrated in hundreds of realistic video clips, animations, illustrations and photographs. Throughout the videos, students will experience the real-life aspects of therapeutic communication between the nurse and the patient, patients’ reaction to invasive skills, and issues related to culture, gender and age.

INSTRUCTORS’ MANUAL. This manual contains a wealth of material to help instructors with the planning of curricula, particularly for first-year nursing programs. It includes chapter overviews, detailed lecture suggestions and outlines, learning outcomes, teaching tips, and more, for each chapter.

POWERPOINT SLIDES and DIGITAL IMAGE LIBRARY. To facilitate classroom presentation, this dynamic, multimedia resource pairs key points covered in the chapters with images from the textbook to encourage effective lectures and classroom discussions.

COMPUTERISED TEST BANK. The test bank allows educators to customise the bank of questions to meet specific teaching needs and add/revise questions as needed. It consists of more than 2,000 true-false, multiple-choice, short-answer, essay and matching questions complete with solutions. Using Pearson’s TestGen software, educators can create professional-looking exams in just minutes by building tests from the existing database of questions, editing questions, or adding their own. TestGen also allows instructors to prepare printed, network and online tests.
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