Evidence-Based Clinical Practice in Nursing and Health Care

Assimilating research, experience and expertise

Alan Pearson John Field Zoe Jordan



© 2007 by Alan Pearson, John Field and Zoe Jordan

Blackwell Publishing editorial offices:

Blackwell Publishing Ltd, 9600 Garsington Road, Oxford OX4 2DQ, UK

Tel: +44 (0)1865 776868

Blackwell Publishing Inc., 350 Main Street, Malden, MA 02148-5020, USA

Tel: +1 781 388 8250

Blackwell Publishing Asia Pty Ltd, 550 Swanston Street, Carlton, Victoria 3053, Australia

Tel: +61 (0)3 8359 1011

The right of the Author to be identified as the Author of this Work has been asserted in accordance with the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, except as permitted by the UK Copyright, Designs and Patents Act 1988, without the prior permission of the publisher.

First published 2007 by Blackwell Publishing Ltd

ISBN-10: 1-4051-5740-2 ISBN-13: 978-1-4051-5740-7

Library of Congress Cataloging-in-Publication Data

Pearson, Alan, SRN.

Evidence-based clinical practice in nursing and healthcare : assimilating research, experience, and expertise / Alan Pearson, John Field, Zoe Jordan.

p. ; cm

Includes bibliographical references and index.

ISBN-13: 978-1-4051-5740-7 (pbk.: alk. paper)

ISBN-10: 1-4051-5740-2 (pbk. : alk. paper)

- 1. Evidence-based nursing. 2. Evidence-based medicine. I. Field, John, RPN. II. Jordan, Zoc. III. Title. [DNLM: 1. Joanna Briggs Institute for Evidence Based Nursing and Midwifery.
- 2. Nursing Care-methods. 3. Evidence-Based Medicine-methods. 4. Models, Nursing. WY 100 P361e 2006]

RT42.P412 2006 610.73 - dc22 2006013659

A catalogue record for this title is available from the British Library

Set in 10/12.5 pt Palatino by SNP Best-set Typesetter Ltd., Hong Kong Printed and bound in Singapore by COS Printers Pte Ltd

The publisher's policy is to use permanent paper from mills that operate a sustainable forestry policy, and which has been manufactured from pulp processed using acid-free and elementary chlorine-free practices. Furthermore, the publisher ensures that the text paper and cover board used have met acceptable environmental accreditation standards.

For further information on Blackwell Publishing, visit our website: www.blackwellpublishing.com



Contents

Preface About the authors		ix
		xi
1	The Evolution of Evidence-Based Practice	1
	Introduction	1
	Evidence-based health care (EBHC)	4
	Evidence-based medicine	5
	Evidence-based practice around the world	6
	Evidence-based practice: beyond medicine	8
	A multidisciplinary affair	9
	The roles of consumers	10
	Criticisms of the evidence-based approach	11
	Conclusion	14
2	A Comprehensive Approach to Evidence-Based Health Care:	
	The JBI Model	16
	Introduction	16
	Health care evidence generation	18
	Evidence synthesis	21
	Evidence (knowledge) transfer	24
	Evidence utilisation	25
	Conclusion	25
3	What is Evidence for Practice?	27
	Introduction	27
	Feasibility, appropriateness, meaningfulness and effectiveness Achieving a balance between evidence of effectiveness and other	28
	evidence interests for clinicians and consumers	30
	The nature of evidence	31
	Evidence for health professionals	32
	Evidence for health consumers	34
	Conclusion	35
4	Health Care Evidence Generation	36
	Introduction	37
	Guiding paradigms in research	38
	The qualitative/quantitative debate	42
	Paradigm, methodology and method	43
	The quantitative research approach	43
	The interpretive research approach	44
	The critical research approach	45

vi Contents

	Sources for evidence of feasibility	49
	Sources for evidence of appropriateness	49
	Sources for evidence of meaningfulness	50
	Sources for evidence of effectiveness	50
	Conclusion	50
5	Evidence Synthesis: The Systematic Review	52
	Introduction	53
	Overview of the systematic review process	54
	The importance of systematic reviews of evidence	63
	Finding the evidence	64
	Study selection	69
	Conclusion	70
6	Evidence Synthesis: Critical Appraisal, Data Extraction and the	
	Synthesis of Findings	72
	Introduction	73
	Critical appraisal of evidence	74
	The limitations of critical appraisal	88
	Data extraction	89
	Data analysis and synthesis	92
	Practical tools for systematic reviews Conclusion	96 97
	Conclusion	. 97
7	Evidence Transfer: Writing Up a Systematic Review Report and	
	Developing Clinical Guidelines	99
	Introduction	100
	The purpose of the systematic review report	103
	Writing the report	102
	What is a clinical guideline?	103
	Medicine-specific guidelines	104
	Nursing-specific clinical guidelines	104
	Allied-health-specific guidelines 'Consensus' versus 'evidence'	104 105
	Strategies for guideline development	105
	The quality of the evidence	107
	Grades of recommendation	108
	Consumer involvement in guideline development	112
	Guideline appraisal	113
	The role of guidelines in practice	114
	Practical tools for guideline development	115
	Conclusion	116
8	Evidence Utilisation: Implementing Evidence-Based Guidelines	118
	Introduction	119
	Barriers to change	120

	Contents	vii
Changing practice		122
Evidence-based health care and practice change		12 4
The theory behind change		125
A process for change		125
Tools and strategies		127
Models for change		130
Knowledge translation		133
Evaluation		1,33
Conclusion		135
9 Evidence Utilisation: Clinical Audit		137
Introduction		138
Clinical effectiveness		139
Clinical audit		139
Strategies to promote successful auditing		148
Writing an audit report		148
Practical tools for clinical audit		149
Clinical audit and research		151
Conclusion		152
10 Evidence-Based Practice: Issues and Challenges		154
Introduction		156
Evidence-based practice and the role of organisations		156
Legal and policy implications of evidence-based practice		158
Health care takes the lead and others follow		162
Consumer participation		163
The rise and rise of information technology		164
Conclusion		166
References		168
Further Reading		172
Appendices		173
Systematic Review Protocol Example		173
Critical Appraisal Tools		177
Data Extraction Tools		183
Index		187

Preface

Evidence-based health care (EBHC) is widely promoted internationally and is now a fundamental component of health planning, health services funding and the education of undergraduate and postgraduate health professionals in most countries. In medicine, nursing and the allied health professions, the Cochrane Collaboration approach to EBHC (focusing on evidence of effectiveness through the meta-analysis of randomised controlled trials) is well accepted. However, as useful as it is, this emphasis on evidence of effectiveness is recognised as a limitation by an increasing number of clinicians because it does not adequately take account of the broader interest of health-care professions in the human condition and human experience.

Most current texts on EBHC concentrate largely on effectiveness and on the 'Cochrane' approach to what constitutes usable evidence. There are, however, emerging alternatives and this book has as its organising framework the Joanna Briggs Institute Model of Evidence-Based Health Care. This model, developed by the Joanna Briggs Institute, recognises the three spheres of research, theory and practice as sources of evidence. Our aim was to develop a source book for students and practitioners of nursing and the other health professions that links evidence from diverse sources to the core of professional practice in health care: clinical decision-making and practice improvement.

Using the book

This book takes a practical approach to developing, implementing and evaluating practice based on 'evidence' in its broadest sense. It does this by describing the complexities of evidence-based practice without over-simplifying the issues and processes involved. Where necessary for a comprehensive understanding of the principles of evidence-based practice, the theoretical underpinnings are explained and explored. A number of devices are incorporated in the book for this purpose. For example, scenarios from practice are included to give the reader an opportunity to apply the principles and strategies examined in the book. As an adjunct to this process, a toolbox approach is incorporated in the various chapters to aid in the identification of the right tool for the particular task.

As well as examining the concept of clinical effectiveness and the Cochrane Collaboration approach to the meta-analysis of quantitative research findings, we consider other forms of evidence and describe how they can be used as legitimate sources of evidence for practice. The book also describes the development of condensed practice information sheets and clinical guidelines. It gives practical guidance on the implementation of evidence-based practice. Evaluation is also addressed, utilising the mechanism of the clinical audit.

x Preface

The book has been written for those who are committed to basing their practice on the best available evidence. It gives practical guidance to students and practising health professionals on the processes involved in pursuing a broad, comprehensive approach to the identification, appraisal and implementation of evidence for clinical practice. Thus, the book will be of assistance to people involved in the delivery of health care at every level from student health professionals through senior clinicians to those charged with the responsibility for managing health-care services.

Chapter 1 describes the development of evidence-based health care internationally and Chapter 2 overviews the JBI Model of Evidence-Based Health Care. Chapters 3 to 9 examine the components and elements of the JBI Model of Evidence-Based Health Care (What is Evidence for Practice? Chapter 3; Evidence Generation, Chapter 4; Evidence Synthesis, Chapters 5 and 6; Evidence Transfer, Chapter 7; and Evidence Utilisation, Chapters 8 and 9). Chapter 10 considers the future of evidence-based practice.

Each chapter includes additional resources for those who wish to explore further particular aspects of evidence-based health care.

Alan Pearson John Field Zoe Jordan

About the Authors

Professor Alan Pearson PhD FRCNA FAAG FRCN RN

Professor Alan Pearson has extensive experience in nursing practice, nursing research and academic nursing. Professor Pearson has been an active researcher since 1981 and is known internationally for his pioneering work on the establishment and evaluation of nursing beds in Oxford, UK, from 1981–1986 and for his ongoing work, which emphasises the centrality of practice and evidence-based practice.

Professor Pearson was appointed to Australia's first Chair in Nursing at Deakin University in 1986; was Foundation Professor of Nursing at the University of New England from 1992–1995; was Foundation Professor of Clinical Nursing at The University of Adelaide from 1995–1999; and was appointed as a Chairperson of the Commonwealth Aged Care Complaints Resolution Committee in 1998.

He has conducted a large number of competitively funded research projects. As well as his ongoing research in the fields of aged care, nursing history, and brain death and organ donation, Professor Pearson was founder of the Joanna Briggs Institute. He is currently Executive Director of the Institute, and Professor of Nursing at The University of Adelaide. Professor Pearson is Editor of the International Journal of Nursing Practice and has authored over 40 books and over 120 journal articles. He is active in developing and promoting evidence-based practice at the state, national and international levels.

John Field DNE (CumbCHS) BLegSt (Macq) GCertManag (NE) FRCNA FCN RN

John Field is a nurse and a lawyer who has been involved in mental health nursing and academic nursing for more than 30 years. With qualifications in nursing, law, education and management, John is currently a Senior Lecturer at James Cook University in Queensland, Australia, where his teaching and research are focused on health law and ethics, evidence-based practice, and nursing education in developing communities. Since being appointed as a senior lecturer at the University of New England in 1991, he has held such posts as Head of School, Health Sciences, University of New England; Director, International and Flexible Learning Unit, The University of Adelaide; and Director, International Programs Unit, School of Nursing and Midwifery, La Trobe University. For much of the past decade his professional work has been focused on the development and administration of nursing education programmes in such countries as Bangladesh, Bhutan, Hong Kong, Singapore, and Sri Lanka.

Zoe Jordan MA BA

Zoe Jordan has been actively involved in the field of health research and communication for the last eight years. She has a Master of Arts (Communication Studies) for which much of her work was focused on utilisation of the mass media for the effective and accurate transfer of information. Having worked at the Joanna Briggs Institute for six years, Zoe has been intrinsically involved in the systematic review process, both as a reviewer and as a co-ordinator of the peer review process. She is currently the Manager, Communications and Consumers, at the Joanna Briggs Institute. This service endeavours to provide current, reliable, evidence-based health information to consumers of health care. Her work at the Institute focuses on contemporary approaches to health communication, specifically with regard to the emerging interrelationship and convergence of communication, media and culture in the context of a global society.