

Getting Clinical Audit Right to Benefit Patients

Contents	Page
Foreword	v
Acknowledgements	vii
Purpose	1
1 — The clinical audit process	2
Why do clinical audit	2
Clinical audit defined	2
The clinical audit process	3
Rapid-cycle approach to clinical audit	5
Clinical survey versus clinical audit	6
Clinical audit and research	7
Relating research and clinical audit to providing clinically effective care	9
The quality improvement process	9
Risk management processes	13
Patient safety processes	16
An accountability framework	17
2 — How to design a clinical audit	19
The importance of doing clinical audit effectively	19
Expectations for clinical audit	19
How to design a clinical audit	20
How to select subjects for clinical audit	21
<i>Quality impact analysis</i>	22
How to develop a clinical audit objective	24
<i>Selecting a verb to express intent</i>	25
<i>Defining quality</i>	26
<i>Formulating the clinical audit objective statement</i>	26
How to title a clinical audit	28
How to consider stakeholders	28

Contents	Page
How to select the right cases for a clinical audit	29
How to think about the number of cases to include and how they will be selected	30
How many cases should be included	30
How to decide on a population or a sample	32
How to select a sampling technique	34
How to decide on sample size	36
How to decide on a data collection strategy	39
3 — How to draw up measures for a clinical audit	41
Why 'measures'	41
Clinical audit measure defined	41
How to draw up a clinical audit measure	44
How to convert a clinical audit objective to a clinical audit measure	46
How to define a standard	47
Templates for clinical audit measures	49
<i>For a measure on access (measured in time)</i>	50
<i>For a measure on appropriateness</i>	51
<i>For a measure on effectiveness</i>	52
<i>For a measure on efficiency</i>	53
<i>For a measure on acceptability (patient and carer experience)</i>	54
<i>For a measure on efficacy (benefits or outcomes)</i>	55
Approaches to measures	56
Outcome versus process measures	57
Types of clinical audit measures	58
How to define the denominator and the numerator	59
Exclusions versus exceptions for individual clinical audit measures	62
How to measure a complication	64
Characteristics of a clinical audit measure	67
<i>How to test the validity of a quality-of-care measure</i>	68
How to evaluate a clinical audit design and measures	71
How to convert evidence into clinical audit measures	72
4 — How to collect and collate data for a clinical audit	75
How to develop a data collection protocol	75
<i>Data sources</i>	77
<i>Data collectors</i>	77
<i>How to test the reliability of data collection</i>	77
<i>Case selection</i>	79
<i>Data collection tools</i>	80

Contents	Page
<i>Timing of data collection</i>	84
<i>Data protection and control</i>	84
How to do a pilot test	85
What data collection involves	87
How to record data	88
How to collate preliminary clinical audit findings	91
How to calculate preliminary compliance	92
How to calculate preliminary compliance for a complication measure	96
5 — How to review findings of a clinical audit	97
The importance of careful review of preliminary findings of a clinical audit	97
What's involved in reviewing preliminary findings	97
Sensitivity and specificity	98
<i>How to test the sensitivity and specificity of a clinical audit measure</i>	98
How to review individual cases	100
How to carry out review of preliminary clinical audit findings	101
How to calculate final compliance	102
How to calculate final compliance for a complication measure	103
What the preliminary review of clinical audit findings achieves	104
How to carry out review of final clinical audit findings	105
How to display and analyse variation in clinical audit findings	106
Types of variation	108
<i>Common cause variation</i>	109
<i>Special cause variation</i>	109
How to determine the type of variation	111
How to act on variation	114
How to present the findings of a clinical audit	115
6 — How to identify problems and their causes	117
The importance of taking time to analyse problems	117
How to focus on improvement	118
Problems and causes	118
How to state a problem	119
How to find the causes of a problem	120
<i>Fishbone (cause-and-effect) diagramming</i>	120
<i>Asking why five times</i>	123
<i>Process mapping</i>	124
Causes of problems	128

Contents	Page
7 — How to plan change to achieve improvement and repeat measurement	130
What works to achieve change	130
The I–M–P–R–O–V–E–S model	132
Identifying the improvement	133
<i>Express the improvement</i>	134
<i>Identify the types of changes</i>	136
Moulding (or mobilizing) opinion	138
Preparing a strategy for change	140
Redesigning current practice	142
Operating the new way	144
Verifying that the new way works	146
Eliminating unwanted variation	146
Stabilizing change	147
Measuring the impact of actions	147
Continuing the clinical audit process	148
How to plan repeat measurement	148
Repeat data collection strategies	149
How to carry out follow-up	150
8 — Putting clinical audit in context	151
Organizational support	151
Ethics considerations	152
Glossary	153
References	168
Appendix	177
Index	178

Foreword

This book is written for doctors; specialist, management and staff nurses; allied health professionals; doctors, nurses and other healthcare professionals in training; clinical audit and quality improvement specialists; and anyone else who is interested in clinical audit. It reflects our collective experience teaching clinical audit to thousands of healthcare professionals over years in the UK, Botswana, the Republic of Ireland, Italy, the Kingdom of Saudi Arabia, the Netherlands, Taiwan and other countries.

The book is about carrying out clinical audits in clinical teams at a local level. It includes a number of practical tools and ways of thinking about the clinical audit process that we have developed through working directly with healthcare professionals in their own settings. The book is intended to present a balance between being practical about carrying out a clinical audit and following a scientifically sound method for measuring and improving the quality or safety of patient care.

We recommend that an individual clinical audit should normally have only one or two objectives and only a few measures of quality. We are fussy about the reliability of data collected and analysis of the data for those measures. We recognize how difficult it is to achieve real changes in the way patient care is delivered, and believe that it may be more feasible for local teams to achieve changes in practice through well-designed and executed focused clinical audits.

There are two technical notes for readers. Because this book is intended as a practical reference, we have not attempted to review all the published literature about clinical audit or base our work on other publications on clinical audit. We have used references that have influenced our thinking about clinical audit or that have helped us clarify our intentions about what the clinical audit process should achieve.

Throughout the book, where the word patient is used, the word is meant to include a service user or patient advocate. The word care and the word practice are used generally to refer to any aspect of a healthcare service that may directly or indirectly affect a patient. The terms healthcare professional and clinician are used interchangeably to refer to any professionally qualified person who provides clinical care to patients.

We hope this book is a helpful reference to people interested in clinical audit. We also hope that at least some of our ideas will help readers carry out audits that in the end benefit patients.

We welcome feedback from readers to our email address: hqq@hqq.co.uk

Acknowledgements

Publication of this book represents a real team effort. Mary Pearce made a substantial contribution as researcher and active reviewer, particularly on the sections that relate to the analysis of data. Adèle Louise Humphrey designed and produced the original book. Eva Jiménez Berlanga produced this version. Liz Cox proofread the book and provided continual support to the entire team. For the author, the wonderful part about this team is that everyone was consistently helpful — and cheerful — throughout the entire creative process.

As important to acknowledge as the creative team are the thousands of doctors, nurses, allied health professionals and clinical audit and quality improvement specialists who have participated in our courses and workshops on clinical audit and contributed to our thinking about the clinical audit process. We have learned from the continual experience of helping clinicians see that carrying out a clinical audit is stimulating, can be fun and easier than they thought, and most important, can lead to substantial improvements in the quality or safety of patient care.

In addition, we want to acknowledge the healthcare organizations that have asked us to design and carry out large-scale clinical audits on their behalf. These experiences have reinforced our commitment to a scientifically sound approach to clinical audit and have helped us refine the methods we suggest in this book.

Finally, as of the publication of the 7th printing of the book, we acknowledge the tremendous contribution to our thinking about clinical audit that has come about through working with Professor Ulrich Wienand at the University of Ferrara, Italy, and with doctors, nurses and other professionals who participated in clinical audit courses in the Emilia–Romagna region in Italy. Translation of some of our clinical audit concepts and methods into Italian has produced further beneficial clarifications of our ideas.

Purpose

This book is intended to help healthcare professionals carry out clinical audits the right way so that the audits actually result in measurable benefits for patients, staff or others. The book encourages professionals to carry out practical audits in short time frames. It includes tools, methods and ideas for each step in the clinical audit process, including the following:

- identifying subjects worth auditing
- developing objectives for a clinical audit
- deciding on the cases to include and the strategy for data collection
- considering who to involve in a clinical audit and how
- defining quality of care for clinical audit purposes and formulating measures of quality
- evaluating the design and measures of a clinical audit before starting data collection
- preparing for collecting or acquiring data for a clinical audit
- reviewing the preliminary findings from data collection
- analysing variation in clinical practice and deciding on the nature of the action to take
- analysing problems revealed by an audit to find their root causes
- planning and taking action to achieve improvements that will benefit patients, staff or others
- repeating data collection to show the effects of the action taken.

The book advises that although a clinical audit may be led or supported by one or more individuals, a clinical team should be involved throughout the process in order to facilitate any changes in practice shown as needed by the audit.