

Sign-posting the future in EBHC

Dr Amanda Burls

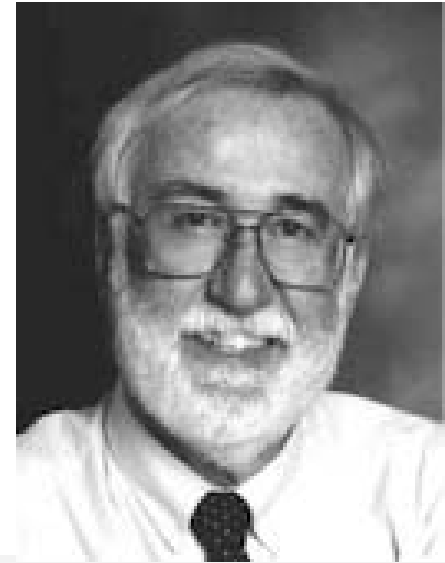
West Midlands Health Technology Assessment Collaboration

University of Birmingham

Evidence-based health care

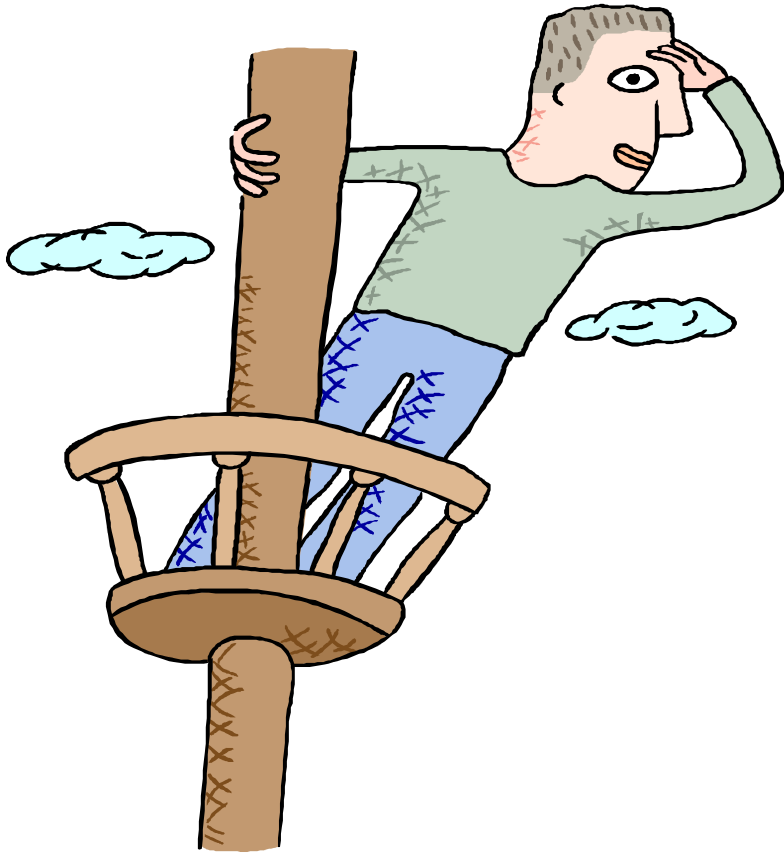
“Evidence-based medicine is the integration of best research evidence with clinical expertise and patient values”

Dave Sackett



“Evidence-based healthcare is the integration of best research evidence with clinical expertise and patient values when taking decisions”

Sign-posting the future in EBHC



- A. Why did the EBHC movement come about?
- B. Where have we got to?
- C. Where do we want to be?
- D. Future challenges for EBHC

A. Why did EBHC come about?

1. Exponential growth in knowledge and evidence
2. Wide variations in practice
3. Continued use of ineffective treatments
4. Excess use of inappropriate treatments
5. Poor uptake of effective practice
6. Technically feasible
7. Increasing demand on resources
8. Increasingly educated population

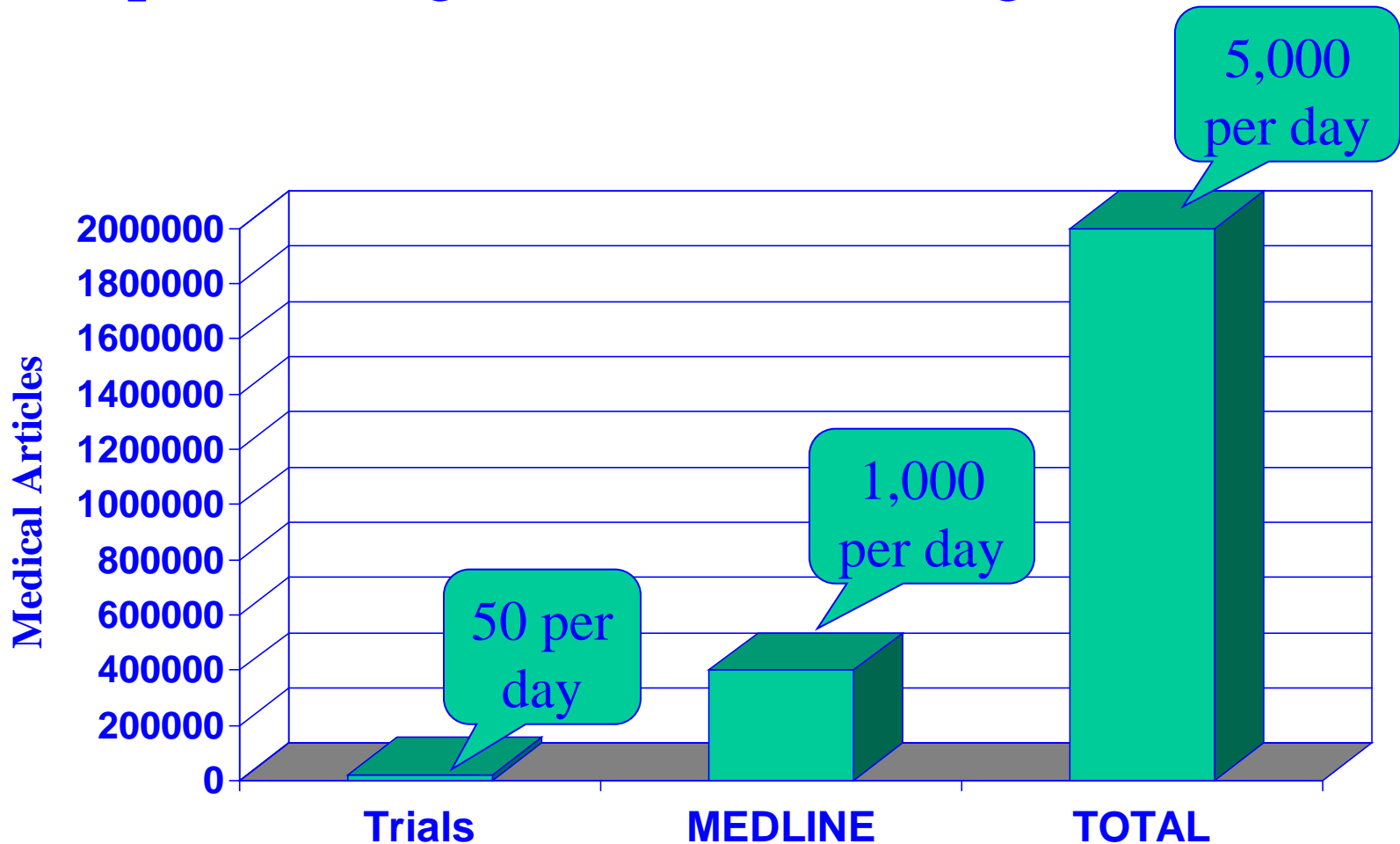
Exponential growth in knowledge and evidence

"Kill as Few Patients as Possible" - Oscar London

Rule 31 - Review The World Literature Fortnightly

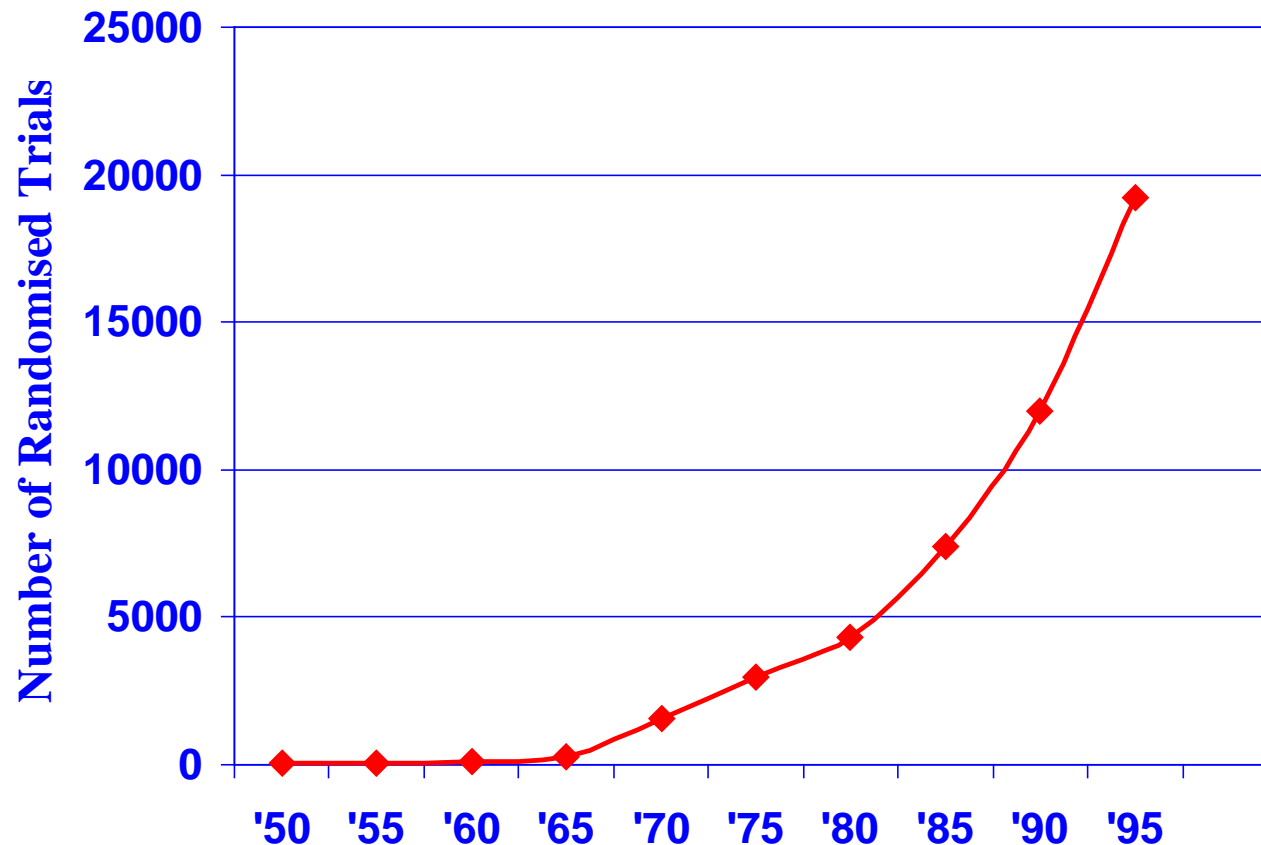
*This slide was adapted from a presentation given by Professor Paul Glasziou
and we are grateful for his permission to reproduce it*

Exponential growth in knowledge and evidence



This slide was adapted from a presentation given by Professor Paul Glasziou and we are grateful for his permission to reproduce it

Exponential growth in knowledge and evidence



This slide was adapted from a presentation given by Professor Paul Glasziou and we are grateful for his permission to reproduce it

Wide variations in clinical practice



*“Mind you only
one out of every
ten doctors
recommends it!”*

Wide variations in clinical practice

- Not accounted for by
 - Clinical need
 - Patient or society's values
 - Resources
- **CONCLUSION:** Not everyone can be making the best decisions about health care!

Continued use of ineffective treatments/ Use of inappropriate treatments

- Radical mastectomy
- Removal of 3rd molar
- D&Cs in women under 40
- Antibiotics for viral infections
- Tonsillectomies
- IV fluid resuscitation in haemorrhagic shock
- HRT for preventive reasons in post-menopausal women

Systematic review of bed rest after medical procedures

- 10 trials of bed rest after spinal puncture
 - no change in headache with bed rest
 - Increase in back pain

Allen, Glasziou, Del Mar. Lancet, 1999

What happens in practice?

Protocols in UK neurology units - 80% still recommended bed rest after lumbar puncture

Serpell M, BMJ 1998;316:1709–10

...evidence of harm available for 17 years preceding...

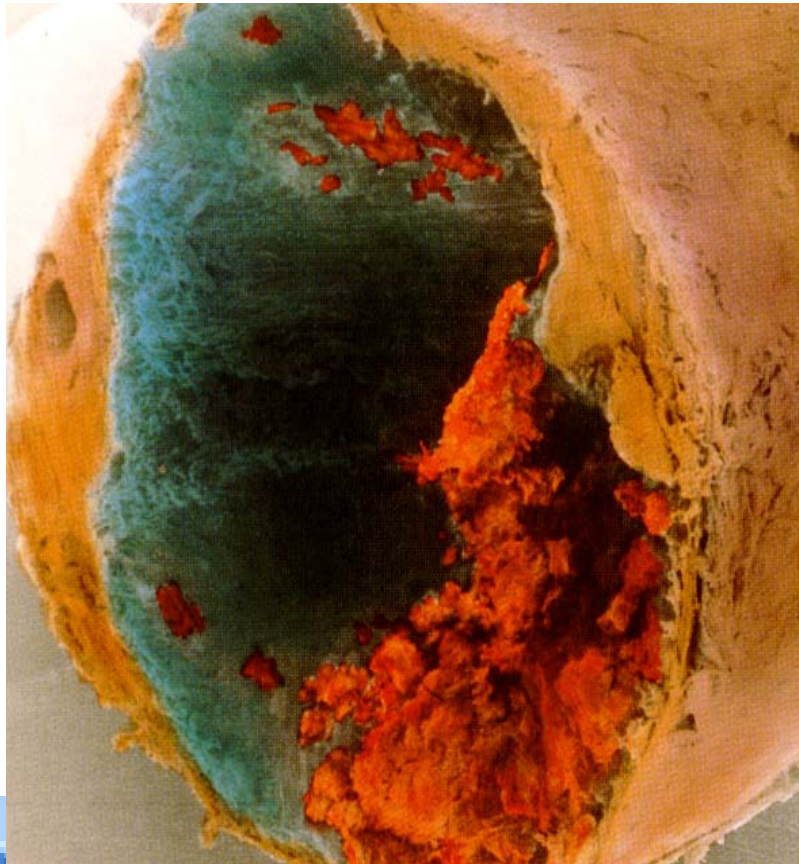
Inappropriately inappropriate treatments

“It is a scandal that the medical profession systematically mutilated thousands of women without the slightest evidence that this was likely to do more good than harm”

Iain Chalmers

In “But will it work, doctor?”

Poor uptake of effective practice



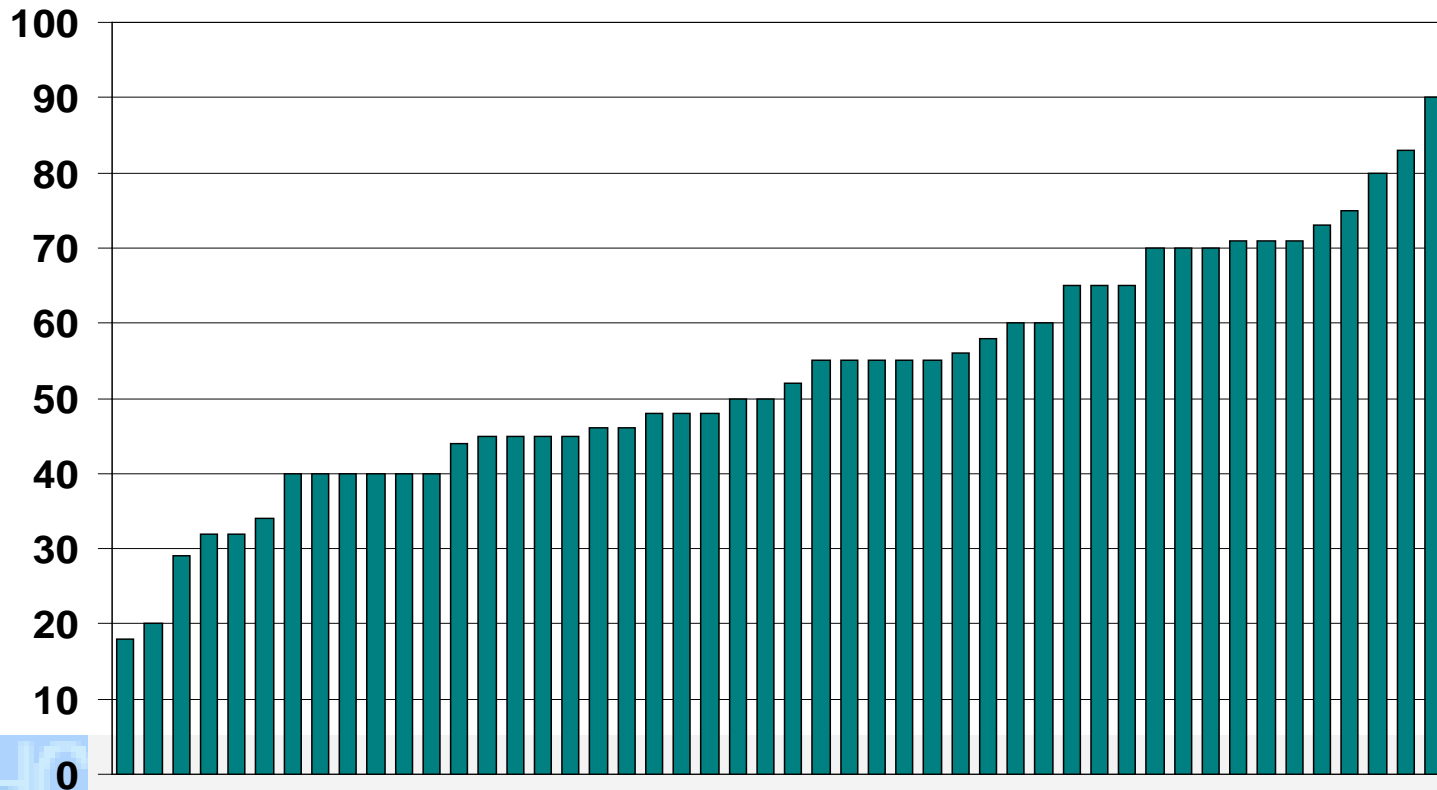
Thrombolysis is where patients are given drugs which breakdown the clot and to help restore circulation to the ischaemic tissue

The sooner thrombolysis is given, the more lives are saved¹

Hours	NNT
0-1	15
>1-2	27
>2-3	38
>3-6	34
>6-12	56
>12-24	111

¹Boersma E, *et al*
Lancet **348**:771-776

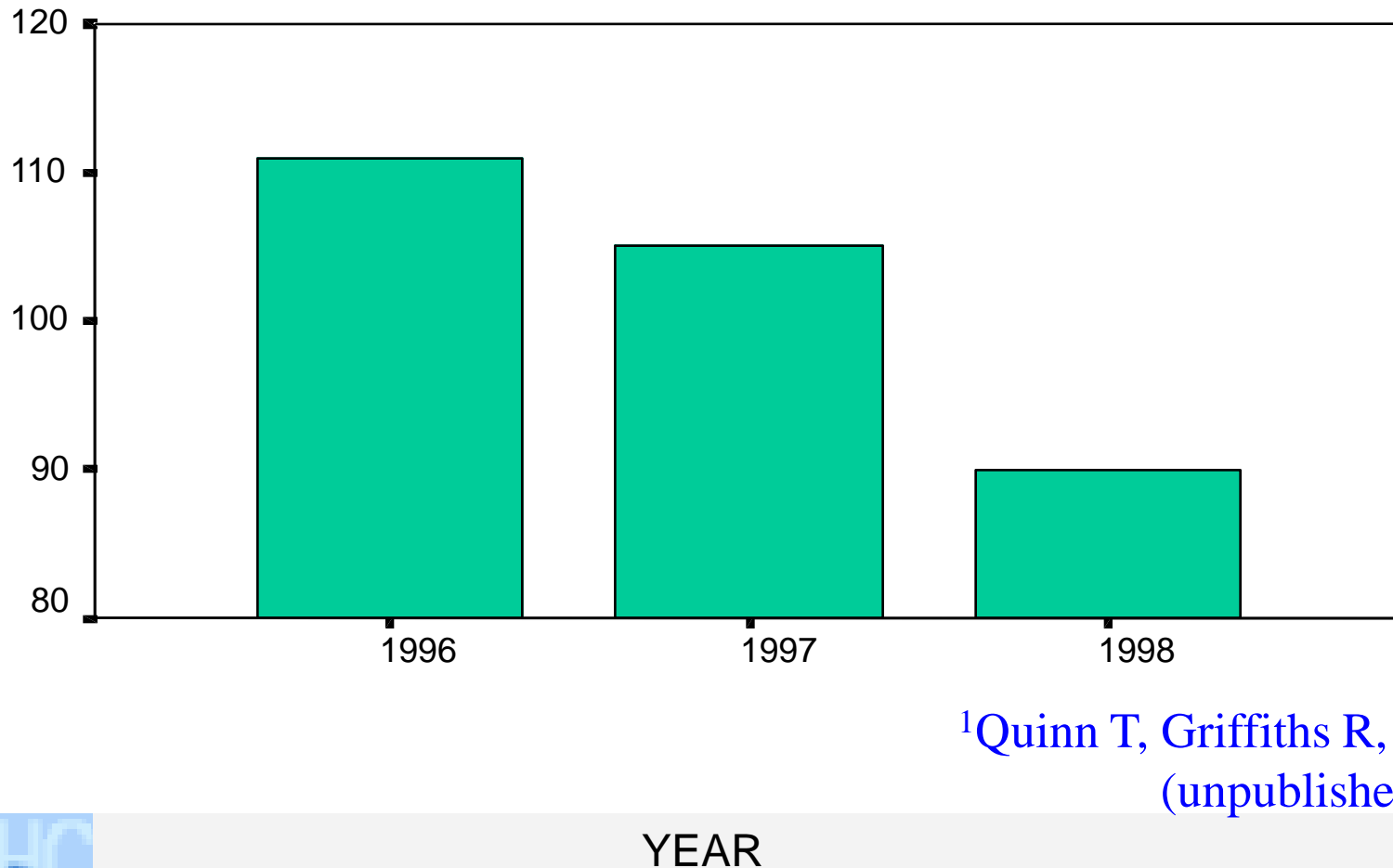
“Door to needle time”: 48 UK hospitals in 1997



**5-fold
diff.**

West Midlands Thrombolysis Project¹

Change in median “Call to Needle” time



¹Quinn T, Griffiths R, Birkhead J,
(unpublished)

Technically feasible


The Cochrane Library 2003, Issue 3

CLEAR TOPICS RECORDS MeSH HISTORY HELP BACK FORWARD OUTLINE FIND ABOUT EXIT

Search phrase: [Refine your search](#)

- The Cochrane Database of Systematic Reviews (3058 out of 3058)
- Database of Abstracts of Reviews of Effectiveness (4123 out of 4123)
- The Cochrane Central Register of Controlled Trials (CENTRAL) (375143 out of 375143)
- The Cochrane Database of Methodology Reviews (16 out of 16)
- The Cochrane Methodology Register (CMR) (4617 out of 4617)
- About the Cochrane Collaboration (85 out of 85)
- Health technology assessment database (HTA) (3178 out of 3178)
- NHS Economic evaluation database (NHS EED) (11787 out of 11787)

2003 Issue 3
ISSN 1464-780X



the cochrane library

the best single source of reliable evidence about the effects of health care

The Cochrane Library presents the work of the Cochrane Collaboration and others interested in assembling reliable information to guide health-care decisions.

[About the Cochrane Library](#)
[Using The Cochrane Library](#)
[Comments and feedback](#)
[Technical support](#)
[Reviewers' Handbook](#)
[Reviewers' Handbook Glossary](#)
[Release notes](#)



B. Where have we got to?



Evidence-Based Mental Health



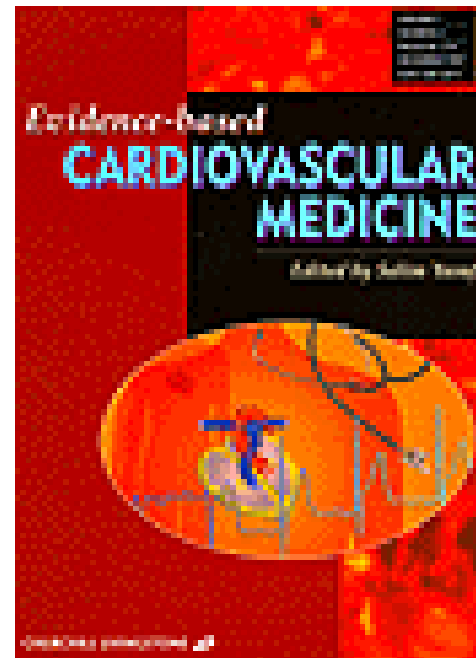
BMJ
Publishing Group

Evidence-Based Medicine



ACP
ASIM
American College of Physicians
American Society of Internal Medicine

BMJ
Publishing Group



© 1999 Blackwell Science Ltd

Evidence-Based Nursing



RCN Publishing
Company

BMJ
Publishing Group

ACP Journal Club

March/April 1999
Volume 130 • Number 2

Linking Research to Practice in Internal Medicine

Published
Bimonthly
by the
American College
of Physicians—
American Society
of Internal Medicine

■ THERAPEUTICS	
Review: β -blockers benefit patients with chronic heart failure	29
PTCA and CABG had similar long-term mortality and myocardial infarction rates	30
Prostatitis reduced all-cause mortality, CHD mortality, and cardiovascular disease mortality in patients with existing CHD	31
Prostatitis reduced cardiovascular events in older patients with myocardial infarction and average cholesterol levels	32
Carotid endarterectomy had a modest benefit for 50% to 60% stenosis after TIA or nondisabling stroke and no benefit for < 50% stenosis	33
Alcohol given within 6 hours of stroke did not improve clinical outcomes at 90 days	34
Budonine increased remission rates more than nizatidine in active Crohn disease	35
Review: Corticosteroid therapy does not reduce the rate of relapse in Crohn disease	36
A higher dose and longer duration of interferon- α reduced the incidence of cirrhosis in chronic hepatitis C	37
Halobutane pain reliever did not change ulcer recurrence or dyspepsia rates in patients who used NSAIDs	38
anticonvulsant drug regimens had similar efficacies for generalized convulsive status epilepticus	39
Review: Cognitive behavior therapy is effective for the chronic fatigue syndrome	40
Review: Self-help interventions alone minimally increase smoking cessation	41
Chiropractic manipulation and McKenzie physiotherapy were not effective for low back pain	42
■ DIAGNOSIS	
The Alcohol Use Disorders Identification Test was not affected by ethnic and sex bias	43
Review: Clinical features and electrocardiographic changes predict myocardial infarction in adults with chest pain	44
Review: Exercise ECG is a more specific and discriminatory test than exercise SPECT for coronary artery disease	45
■ PROGNOSIS	
Women had a worse prognosis than men after myocardial infarction	46
Prochlorperazine and haloperidol in women with chronic hypertension were associated with adverse neonatal outcomes	47
■ ETIOLOGY	
Review: Investigation and prophylaxis increased road traffic crashes	48
Women had a lower risk than men for mortality after coronary revascularization	49
Review: Some health risks associated with drinking alcohol are greater for women than for men	50
Long-term dietary fat intake was associated with a decreased risk for colon cancer in women	51
■ QUALITY IMPROVEMENT	
Interdisciplinary medical rounds improved patient care efficiency and the care process and decreased costs	52
■ ECONOMICS	
Low molecular weight heparin was more cost-effective than unfractionated heparin for treating deep venous thrombosis in several clinical settings	53
Other Articles Noted	54
Contents	A-7
Editorial: Evidence-based medicine and complementary medicine	A-13
Purpose and Procedure	A-15
Glossary	A-22

Evidence-based HEALTH POLICY & MANAGEMENT

Edited by J. A. Muir Gray
& Anna Donald



CHURCHILL LIVINGSTONE

evidence-based dentistry

Volume 1, Number 1 November 1998

- Why use an evidence-based Dentistry?
- Epidemiology of care in evidence-based dentistry
- Evidence-based medicine: a working way to be successful?
- Evidence based dentistry
- How publication for the successful packaging based on evidence?
- Oral health promotion can be effective in changing knowledge
- Challenges to oral health promotion in changing behaviour in old patients
- Working beyond legal concerns for the full of care design
- Intention, value, quality and length of appointments: what responses can we expect?
- Oral medicine in the 72 hours after diagnosis of oral squamous cell carcinoma
- Healthcare in diagnosis: what is the health service on the edge?
- Life change in a new oral health during orodontics treatment
- Evolution of fixed period dentures designed over 12 years
- Section editor in evidence based dentistry
- Springplace for effect the oral health care through the evidence
- Which journal should you read to keep up to date?
- The Cochrane Collaboration: an introduction
- Advances of evidence-based dentistry
- Which factors concerned fixed and removable partial dentures
- Adaptation of design and use in improved technology oral dentures: necessary, not essential for negative prosthodontics
- Oral evidence based dentistry: a review of symptoms in healthy populations
- Anteriorly placed implant fixed partial dentures: a review of oral health care
- Do not give up: what the health service can do

Published as a supplement to the British Dental Journal

EVIDENCE-BASED Purchasing

A selection of new material available in the *Book of Evidence* on line, available

In this issue

The aim of the **NHS R&D programme** is to assess the quality of evidence, identify and cost-effective research findings to clinicians, managers and policy makers. The purpose of this newsletter is to highlight some of the new research emerging from R&D programmes in the last quarter.

In this issue, research findings do not always reduce uncertainty. Sometimes through a project starts based on going on. The study of the safety and effectiveness of water telephone consultation in out-of-hours primary care highlights in this issue is a nice example of a study that targets answers a question of immediate interest to the NHS.

The out-of-hours study was funded by the South & West R&D responsive funding programme. Clinicians, projects submitted through the R&D programme continue to produce high quality outputs. In this issue you will find details of outputs from several programmes. The R&D programme has published several new systematic reviews. The latest issue of the Cochrane Library contains 93 new reviews. The Cochrane Database of Systematic Reviews has added 93 new quality assessed systematic reviews in the last quarter. The CDJ has published 2 effectiveness bulletins and one efficacy/evidence matters briefing. Each review is produced because it adds to our collective store of best current knowledge.

See also

Regional boundary changes

From 1st January 1999 the new boundary for the South West Region will be as follows:

- 1 Cornwall & Isles east of Lundy
- 2 Devon & East Devon
- 3 Dorset
- 4 Somerset
- 5 Gloucestershire
- 6 Bristol

New South West Region boundaries

NHS DIRECTORATE
 Director of R&D
 Robert Huxford
 Director of Evidence Based Dentistry
 Michael Croxall
 Director of Health Services
 Peter Hill
 Director of Health Services
 Peter Hill
 Director of Health Services
 Peter Hill
 Director of Health Services
 Peter Hill

EVIDENCE-BASED PRACTICE

From the Publishers of *The Journal of Family Practice*

POINT-ORIENTED EVIDENCE THAT MATTERS

Volume 7, Number 7 July 1998

- EDITORS**
- David Mannion MBBS
Associate Professor
Dept of Oral Medicine
University of Virginia
 - Alan Worthington, FRD
Director of Research
Huntingdon Health Practice Research
 - Alan Clark, MD, PhD
Associate Professor
Dept of Family Practice
McGill's York University
 - Henry Bunn, MD, PhD
Associate Professor
Dept of Family Practice
McGill's York University

Statement of Purpose

The purpose of the newsletter is to highlight **PEBPs** (Point Oriented Evidence Based Practice) in research articles that investigate specific conditions in primary care, include clear objectives, and have the potential to change the way we practice.

CME CREDIT

This activity has been certified and accredited to contribute to the continuing medical education (CME) credit of the American Medical Association (AMA) and the Royal College of General Practitioners (RCGP) in the United Kingdom.

The *Evidence-Based Practice* newsletter is published quarterly by the American Medical Association (AMA) and the Royal College of General Practitioners (RCGP). Each issue contains 12 articles, 6 of which are point-oriented evidence based practice (PEBP) articles. The newsletter is published quarterly by the American Medical Association (AMA) and the Royal College of General Practitioners (RCGP).

How We Select and Evaluate Articles

The four editors of *Evidence-Based Practice* use the principles of the *Brinkley's Evaluation to choose* articles from more than 80 journals that we review each month. The equation states:

$$\text{Usefulness of Information} = \text{Relevance} \times \text{Validity} / \text{Work}$$

To decrease the amount of work you need to do each month, we find articles with the highest relevance to practicing clinicians. Preliminary study results, conference, or studies on animals are not for us. Once an article with relevant results is identified, we evaluate the information to make sure that it is valid. All of us are trained in the evidence-based approach to evaluating journal articles. Sometimes we will highlight articles with relevant outcomes but significant research flaws to let you know that the information, while exciting, cannot be relied on for patient care decisions. Expanded reviews for particularly relevant articles are included in the PEBPs section of *The Journal of Family Practice*.

We have also added an editorial board to help keep us on target and to further ensure validity and relevance. The diverse group is drawn from academia and practice in the United States and Canada. The editorial board members are listed on page 12.

Our best editors, however, are our readers. Many improvements have been made since the inception of the newsletter on the basis of letters and phone calls from readers. We would love to hear your comments, positive and negative, about the newsletter. You can reach us by e-mail at ebp@vetnet.uab.edu. Thank!

POEM OF THE MONTH

Riboflavin for Preventing Migraines

OBJECTIVE To determine if riboflavin is safe and effective as a prophylaxis for migraine headaches.

DESIGN Randomized controlled trial (double-blind).

SETTING Outpatient (specialty).

SYMPTOMS Adult patients with a history of migraine headaches for at least 1 year who had

Organisational elements in UK

- NCCHTA and NHS R&D
- NELH/Cochrane Library/NHS CRD in York
- Academic independent HTA units
- National Institute for Clinical Excellence (NICE)
- Other bodies, e.g. National Screening Committee, National Prescribing Centre, SIGN, CHiQ, TRIP
- Professional organisations (e.g. Royal Colleges)
- Skills training/change management programmes (e.g. CASP, Clinical Effectiveness & Clinical Audit Programmes)
- Commission for Health Improvement
- National Audit Commission

Government rationale for NICE

"...there is currently no coherent approach to the appraisal of research evidence and the production of guidance for clinical practice.... NICE will end this confusion by providing a single, national, focus"

A First Class Service

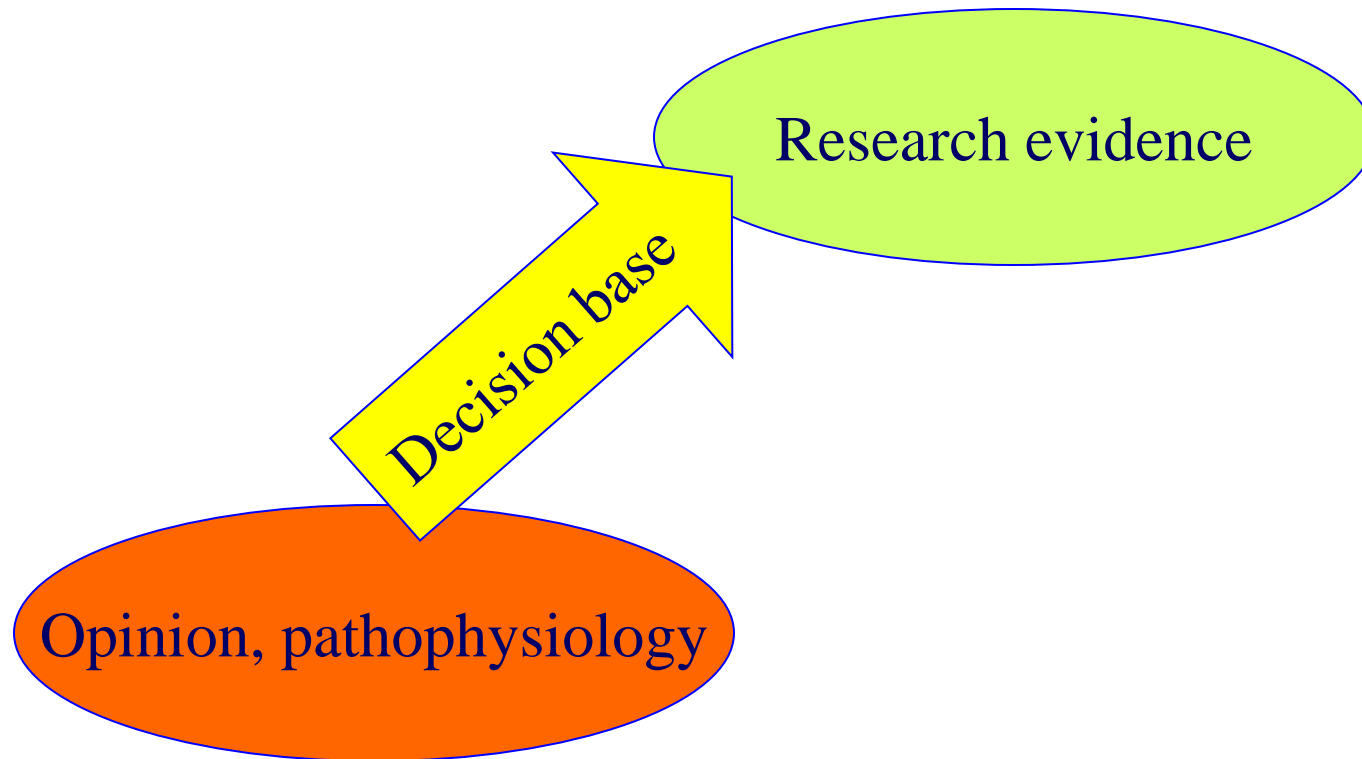
NICE's work programme

- Technology appraisals
- Clinical guidelines and audit
- Referral protocols
- Promoting effective practice
- Effective practice publications

C. Where do we want to be?

- We have a common goal
 - To make the best health care decisions we can
 - This is true whether we are users, policy makers, managers or providers of health services
 - In order to do this we need to be informed by the best available research evidence

C. Where do we want to be?



Reasons for variations in clinical practice

- Differences in patients' needs, demands or values
- Resources available
- “Supply led” e.g. number and type of doctors
- Financial system e.g. “Fee for Service” or private health care
- Poor evidence
- Tradition
- Ignorance
- Failure to carry out what is known

Unacceptability



How did we get here?



D. Future challenges for EBHC

1. Improving the evidence base
 - Primary research
 - Systematic reviews
 - Research synthesis
2. Improving skills to appraise, interpret and use research evidence
3. Creating a supportive infrastructure
4. Creating a culture which facilitates EBHC

D. Future challenges for EBHC –

1. Improving the evidence base

- Primary research
 - Methodologically sound
 - Addressing relevant problems including:
 - a. Diagnostic tests
 - b. Service delivery and organisation
 - c. Effective methods for teaching/implementing
- Research synthesis
 - Systematic reviews
 - Integrating different types of evidence together (levels of evidence)

D. Future challenges for EBHC –

2. *Improving skills*

- Finding evidence
- Appraising evidence
- Sharing evidence
- Interpreting evidence
- Integrating with patient values
- Implementing
- Evaluating our practice

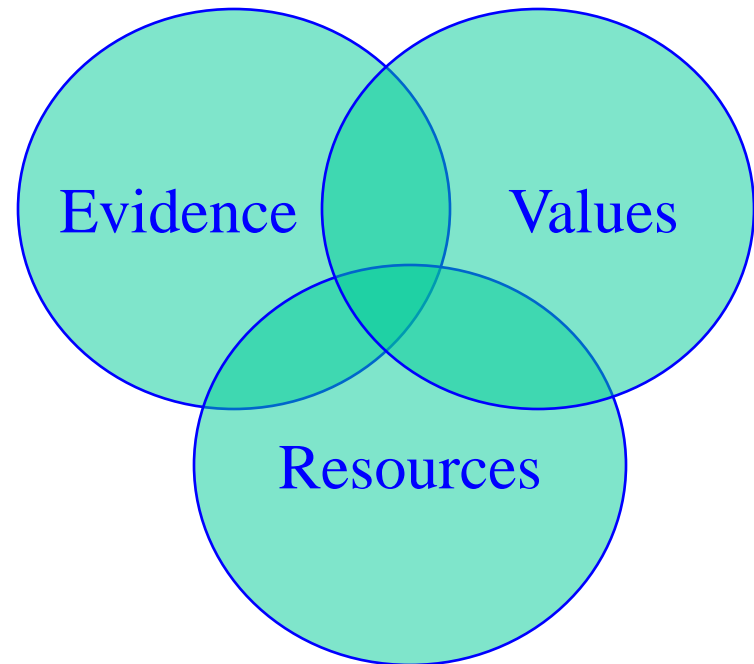
D. Future challenges for EBHC –

3. *Creating an infrastructure*

- Trustworthy summaries
- Evidence-based guidelines
- Up-to-date
- Timely
- Appropriate “push” and “pull” information
- Accessible
 - Fast
 - Hypertext – get down to primary evidence
 - Free

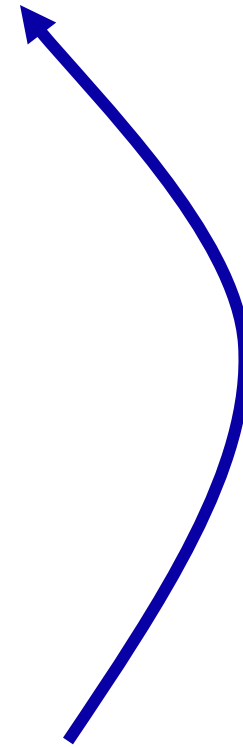
Evidence-based policy

- Decision-makers should use scientific, explicit, transparent and open methods when making decisions



Evidence-based policy requires

- Identify knowledge gaps
- Undertake relevant research
- Find research evidence
- Appraise evidence
- Synthesise evidence
- Disseminate evidence
- Implement evidence/EBP
- Monitor and evaluate practice



D. Future challenges for EBHC –

4. Creating an EB culture

- Non-authoritarian
- Objective criteria for discussing decisions
- Capable of admitting and dealing with uncertainty
- TQM in a non-blame culture
- Reflective practice
- Respecting patient individuality
- Multi-disciplinary working
- Commitment and resources for life-long learning
- Necessary infrastructure (e.g. computer access, information specialists)

D. Future challenges for EBHC –

4. *Creating an EB culture*



“I suppose you know you’re doing that all wrong.”

D. Future challenges for EBHC – 4. *Creating an EB culture*



D. Future challenges for EBHC – 4. *Creating an EB culture*





Sign-posting the future in EBHC

