NUFFIELD DEPARTMENT OF
PRIMARY CARE
HEALTH SCIENCES

UNIVERSITY OF OXFORD

Evidence-based Medicine: from crisis to renaissance

Professor Trish Greenhalgh FMedSci

Taormina, 30th October 2015

Thanks for inviting me!

And sorry I can’t be with you in person

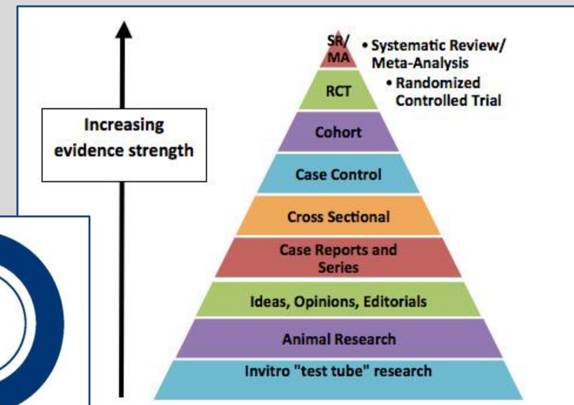
NUFFIELD DEPARTMENT OF
PRIMARY CARE
HEALTH SCIENCES

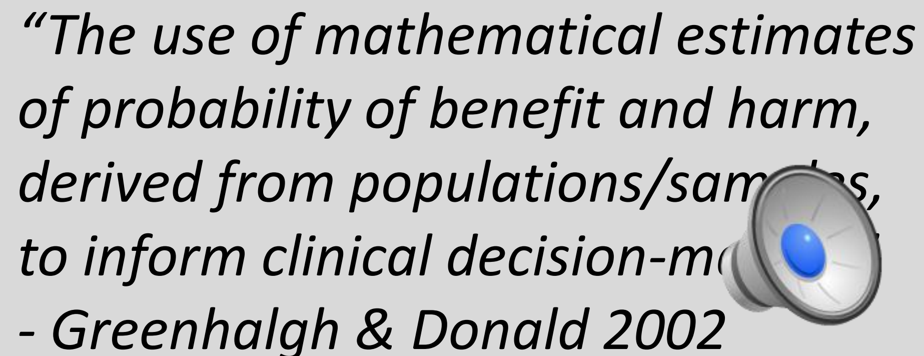
UNIVERSITY OF
OXFORD

EBM is….

"The conscientious, judicious and explicit use of current best evidence in making decisions about the care of individual patients" - Sackett et al 1996

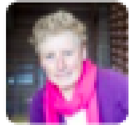
"motherhood and apple pie"???





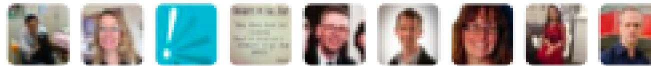
"The use of mathematical estimates of probability of benefit and harm, derived from populations/samples, to inform clinical decision-making"
- Greenhalgh & Donald 2002

Campaign for #RealEBM 2014



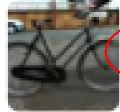
Trisha Greenhalgh @trishgreenhalgh · Nov 20
"Patients who visit GPs with persistent tiredness should be fast-tracked for cancer tests within 48 hrs" **#RubbishEBM** telegraph.co.uk/health/nhs/112...

RETWEETS 11 FAVORITES 9



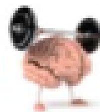
11:47 AM

Jon Brassey retweeted



margaretmccartney @mgtmccartney · Jan 14
#realEBM need skills on shared decision making - but real relationships need improvisation and humanity - not incentives and targets

Harry Burns and 9 others follow



The Sports Physio @AdamMeakins · Jan 14
I think it's also critical to remember that at times the individual in front of us doesn't equal the population studied **#RealEBM**

carl heneghan @cebmblog · Jan 14
RT Iona Heath - **#RealEBM** 'the command not to treat person as a thing' - Great talk - will need to re-listen when hopefully we post it

NUFFIELD DEPARTMENT OF
PRIMARY CARE
HEALTH SCIENCES

UNIVERSITY OF OXFORD

#Rubbish EBM We shared stories about…

…patients and loved ones who died without (and sometimes despite) the best evidence-based care

…a generation of doctors who engage defensively rather than critically with evidence-based guidelines

…the seductive but ever-receding goal of succinct, universally-accessible, evidence summaries

…Cochrane reviews that are 'methodologically robust' but fail to inspire, inform or influence

…appropriation and commercialisation of the EBM brand by pharma and other vested interests

… 'shared decision making' failing to deliver despite (or maybe because of) evidence-based tools

…government interference in professional practice, using EBM as an 'instrument of abuse'

…an ethical and existential agenda (how should we live? when should we die?) pushed aside by EBM

…the lack of attention paid by people who *produce* 'evidence' to the needs of those who might *use* it

…our own Janus identities: convinced of EBM's benefits, but wary of its potential h

NUFFIELD DEPARTMENT OF
PRIMARY CARE
HEALTH SCIENCES

UNIVERSITY OF OXFORD

BMJ

BMJ 2014;348:g3725 doi: 10.1136/bmj.g3725 (Published 13 June 2014)

ANALYSIS

ESSAY

Evidence based medicine: a movement in crisis?

Trisha Greenhalgh and colleagues argue that, although evidence based medicine has had many benefits, it has also had some negative unintended consequences. They offer a preliminary agenda for the movement's renaissance, refocusing on providing useable evidence that can be combined with context and professional expertise so that individual patients get optimal treatment

Trisha Greenhalgh *dean for research impact*[1], Jeremy Howick *senior research fellow*[2], Neal Maskrey *professor of evidence informed decision making*[3], for the Evidence Based Medicine Renaissance Group

[1]Barts and the London School of Medicine and Dentistry, London E1 2AB, UK; [2]Centre for Evidence-Based Medicine, University of Oxford, Oxford OX2 6NW, UK; [3]Keele University, Staffs ST5 5BG, UK

It is more than 20 years since the evidence based medicine working group announced a "new paradigm" for teaching and practising clinical medicine.[1] Tradition, anecdote, and theoretical reasoning from basic sciences would be replaced by evidence

Two decades of enthusiasm and funding have produced numerous successes for evidence based medicine. An early example was the British Thoracic Society's 1990 asthma guidelines, developed through consensus but based on a

NUFFIELD DEPARTMENT OF
PRIMARY CARE
HEALTH SCIENCES

UNIVERSITY OF
OXFORD

Is evidence based medicine broken?

Yes: 346 (51%)

No: 336 (49%)

Total votes cast: 682

Trisha Greenhalgh
@trishgreenhalgh

#RealEBM @RichardLehman1 Getting provocative now: Rubbish EBM = Maximally Disruptive Medicine

Reply Delete Favorited ••• More

Results of Rubbish EBM for Heart Failure

- Maximally Disruptive Medicine: piling on of drugs, meaningless up-titration, endless testing
- Minimal symptomatic benefit
- Minimal effect on hospital usage
- Slight increase in length of dying process
- ...sts – QOF, HF clinics, ICDs, HF nu...s etc
- Patients' lives dominated by disease and ... needs often ignored

Heart Failure 1: Making the Patient Obey the Evidence (Richard Lehman)

Patients in Real Life:

Median age 76, equal gender mix, half have preserved LV ejection fraction, invariably have comorbidity

Patients in "Landmark Trials":

Median age 63, 70-90% male, recruited for reduced LVEF, comorbidity an exclusion criterion

Heart Failure: Making the Patient Obey the Evidence (Richard Lehman)

<u>End points in heart failure trials:</u>

Patient Priorities:

Relief of breathlessness, fatigue, pain

Most will trade better function for shorter life

Trial Outcome Measures:

Survival

Hospitalization

Heart Failure: Making the Patient Obey the Evidence (Richard Lehman)

<u>Heart failure drugs and doses:</u>

Patient priorities:

Maximum absolute personal benefit: NNT/NNH

Minimum harm and disruption

Triallist priorities:

Incremental relative gain

Up-titration of dosage till the patient drops

Close monitoring e.g. of electrolytes, creatinine, weight

Heart Failure: Making the Patient Obey the Evidence (Richard Lehman)

"Rubbish EBM" in heart failure:

- Maximally Disruptive Medicine: more and more drugs, meaningless up-titration, endless testing
- Minimal symptomatic benefit
- Minimal effect on hospital usage
- Slight increase in length of dying process
- Huge costs – heart failure clinics, nurses etc
- Patients' lives dominated by disease and uncertainty
- 'Shared decision making' doesn't really happen

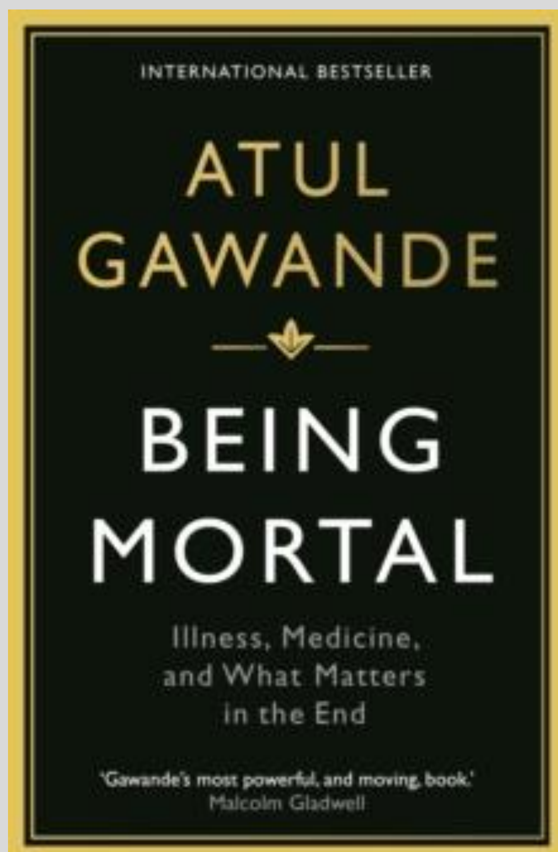
#RealEBM: defining features

- Makes the **ethical care of the patient** its top priority
- Demands **individualised evidence** in a format that clinicians and patients can understand
- Is characterised by **expert judgment** rather than mechanical rule following
- Shares decisions with patients through **meaningful conversations**
- Applies these principles at **community level** for evidence based public health

What is this word 'Renaissance'?

- French for 'rebirth'
- Began in Italy, 14th C
- A major focus was on *humanism*
- e.g. Mirandola's *Oration on the Dignity of Man*
- Understand dignity [and suffering etc] through art, music and literature

Example



- The nature of his father's suffering
- The evidence base for different interventions / approaches to treatment and palliative support
- The ethical question "what to do (professionally, personally)?"
- An autobiographical narrative (evocative, compelling, moving)

A Renaissance for EBM?

Michelangelo, Creation of Adam, c1512

- Recognise that not all research questions are reducible to PICO
- Value, and seek to understand, other disciplines e.g. philosophy, social sciences, literature
- Build a new, stronger *interdisciplinary* agenda for EBM

NUFFIELD DEPARTMENT OF
PRIMARY CARE
HEALTH SCIENCES

UNIVERSITY OF
OXFORD

Some questions for EBM's Renaissance

…an ethical and existential agenda (how should we live? when should we die?) pushed aside by EBM

…government interference in professional practice, using EBM as an 'instrument of abuse'

…a generation of doctors who engage defensively rather than critically with evidence-based guidelines

How can we combine our knowledge of clinical epidemiology with insights from other disciplines to study…

- …the nature of human dignity and what it is to suffer?
- … the instrumental and rhetorical use of evidence by the powerful?
- … how to promote professional judgement and virtues (empathy, compassion, altruism)?

NUFFIELD DEPARTMENT OF
PRIMARY CARE
HEALTH SCIENCES

UNIVERSITY OF OXFORD

BMC Medicine 'Extending EBM' series…

Greenhalgh *et al. BMC Medicine* (2015) 13:200
DOI 10.1186/s12916-015-0437-x

DEBATE

Six 'biases' against patients and carers in evidence-based medicine

Trisha Greenhalgh*, Rosamund Snow, Sara Ryan, Sian Rees and Helen Salisbury

Abstract

Background: Evidence-based medicine (EBM) is maturing from its early focus on epidemiology to … range of disciplines and methodologies. At the heart of EBM is the patient, whose informed choices h… recognised as paramount. However, good evidence-based care is more than choices.

Discussion: We discuss six potential 'biases' in EBM that may inadvertently devalue the patient and c…

Pearce *et al. Trials* (2015) 16:394
DOI 10.1186/s13063-015-0917-5

REVIEW — Open Access

Randomised trials in context: practical problems and social aspects of evidence-based medicine and policy

…an[1] and Andrew Turner[2]

…de excellent evidence of treatment benefit in medicine. Over the last 50 years,

Elwyn *et al. BMC Medicine*
DOI 10.1186/s12916-015-0436-y

OPINION

Trustworthy guidelines – excellent; customized care tools – even better

Glyn Elwyn[1*], Casey Quinlan[2], Albert Mulley[1], Thomas Agoritsas[3], Per Olav Vandvik[4] and

Abstract

Background: The ability to do online searches for health information has led to concerns…

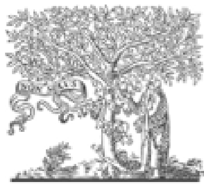
The importance of values in evidence-based medicine

Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits unrestric… distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative…

NUFFIELD DEPARTMENT OF
PRIMARY CARE
HEALTH SCIENCES

UNIVERSITY OF OXFORD

Social Science & Medicine 93 (2013) 86–94



ELSEVIER

Contents lists available at SciVerse ScienceDirect

Social Science & Medicine

What matters to old
phenomenological a
telecare☆

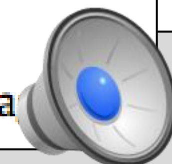
Trisha Greenhalgh [a,*], Joe
Rob Stones [c]

[a] Centre for Primary Care and Public Health,
London E1 2AB, UK
[b] Department of Computer Science, Universi
[c] University of Western Sydney, Australia

ARTICLE INFO

Pierre has high blood pressure, dizziness, a stomach ulcer, an eye condition that gives him blurred vision (for which he is under a specialist eye clinic), pain and stiffness in the shoulders and knees, and urinary incontinence following an operation on his prostate gland. … He moves slowly and is in evident pain. He stops frequently to lean on furniture and when he tries to make the researcher a cup of tea he becomes so tired he is unable to finish the task. Pierre's sleep quality is severely disrupted by his continence problems and shoulder pain. He wakes up about 6 times during the night and has to use a bucket at the side of the bed. For this reason, his wife sleeps in a separate room. He has little energy in the mornings due to poor sleep, and attributes much of his dizziness to his sleep disturbance.

From case summary of Pierre, African, a



Conclusion

There is huge potential for EBM to work with other disciplines so as to enrich its contribution to human health and well-being.

Working in an inter-disciplinary way will require some *un-learning* of deeply-held methods and principles. These methods and principles are not wrong, but they don't address all the questions.

BMC's 'Extending EBM' series needs to grow!

NUFFIELD DEPARTMENT OF
PRIMARY CARE
HEALTH SCIENCES

UNIVERSITY OF OXFORD

Thank you for your attention

Trish Greenhalgh