

Evidence Based Practice: *the three little words in* Allied Health

Centre for Allied Health Evidence
University of South Australia
Adelaide

Ms Leah Jeffries
Mr Mathew Prior
Dr Saravana Kumar

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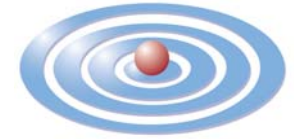
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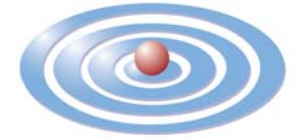
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The 'three little words'

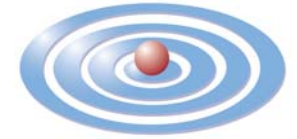
- Evidence Based Practice...
- Do you hear them with dread?
- Another lecture about how to treat your patients?





‘Evidence-based medicine is not "cook-book" medicine... External clinical evidence can inform, but can never replace, individual clinical expertise, and it is this expertise that decides whether the external evidence applies to the individual patient at all and, if so, how it should be integrated into a clinical decision’

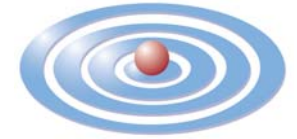
Sackett, 1996



‘The three pillars’

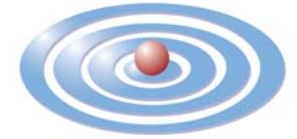
1. The best available evidence
2. Patient values
3. Clinician experience





Aims of workshop

1. To introduce CAHE
2. To understand the use of EBP as a framework for best practice
3. Steps involved in EBP
4. The role of clinical expertise in the EBP process
5. Understanding the challenges and barriers to the uptake of EBP

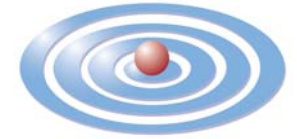


Centre for Allied Health Evidence (CAHE)

- Director – Prof. Karen Grimmer-Somers
- Staff – 12 (Two full-time and 10 part time research associates)
- One of the primary mandates of CAHE is to bridge the gap between research evidence and clinical practice
- Encourage and stimulate collaboration between all stakeholders in health care

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Centre for Allied Health Evidence (CAHE)

- First known Allied Health (AH) evidence centre in the world
- Encompasses five different disciplines of AH
- Only AH collaborating centre of Joanna Briggs Institute

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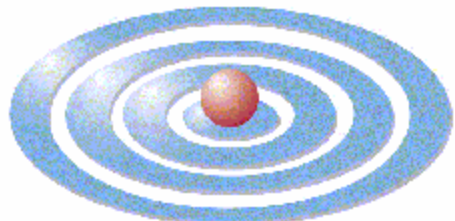


Centre for Allied Health Evidence

- On-line registration form
- AH news in review
- CAHE team
- About CAHE
- CAHE workshops
- CAHE consultancy
- CAHE executive summaries
- CAHE newsletters
- CAHE publications
- CAHE provisional journal clubs
- DOHSA AH questions
- CAHE FAQs & responses
- CAHE events
- Division of Health Sciences
- CAHE Thesis Abstracts
- CAHE Outcomes Calculator
- CAHE research activities

Centre for Allied Health Evidence

- Visit the new CAHE initiatives:**
- CAHE Allied Health News In Review
 - DoHSA question and answer service for AH clinicians and managers

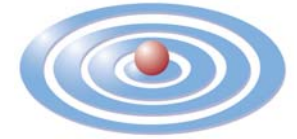


The University of South Australia is home to the new Centre for Allied Health Evidence (CAHE), a collaborating centre of the Joanna Briggs Institute, and the first of its kind in the world.

CAHE provides essential resources for allied health workers, researchers, educators, clinicians, policy makers, administrators and patients, by providing a repository for evidence-based research in a range of areas from physiotherapy through to medical radiations. The centre provides a unique opportunity to produce evidence-based solutions to allied health problems and ensure that treatment strategies are based on the best evidence and research available.

By focussing on physiotherapy, occupational therapy, podiatry, complementary and alternative therapies, and medical radiation, CAHE will increase community and clinical awareness of the importance of these therapies in the whole health picture. Evidence-based research will provide a significant impact on allied health care by taking relevant, high quality, evidence-based research and ensuring it is widely disseminated.

For further information, contact [Professor Karen Grimmer-Somers](#), Director, Centre for Allied Health Evidence.

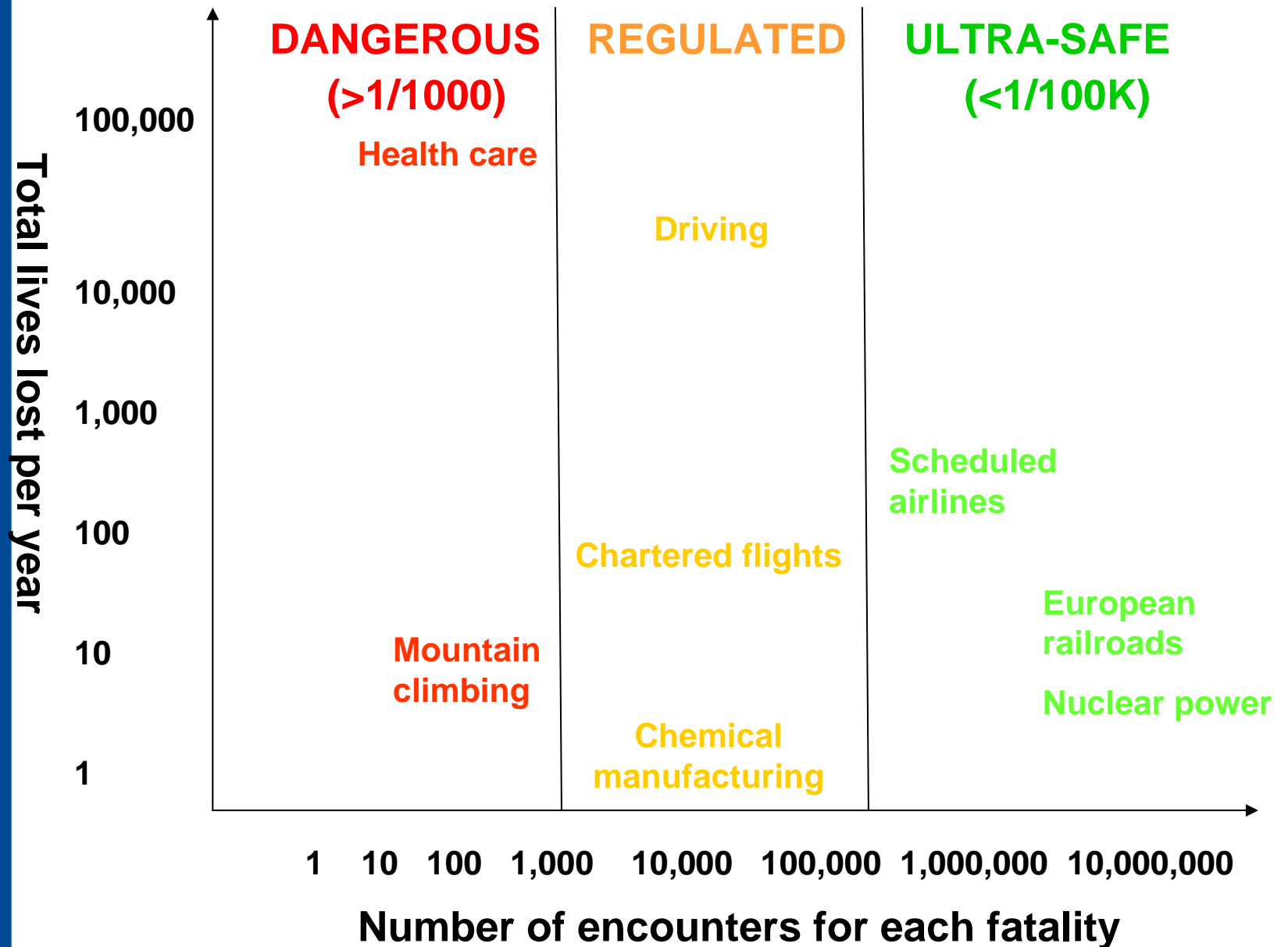


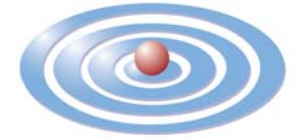
Quality in health care

- Increasing emphasis on quality in health care
 - Financial and resource constraints
 - An ageing population
 - Restructuring within health care
 - Funding shifts between federal and state governments
 - The increasing recognition of the role of the patient as a “consumer” of service
 - The movement towards patient-centred care



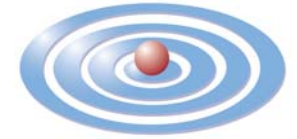
How Hazardous is Health Care? (Leape)





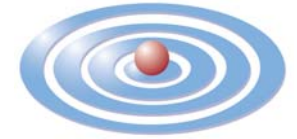
Quality in Health Care

- Quality in health care is an unknown entity
- If it exists, it is:
 - **Poorly defined**
 - **Poorly evaluated**
 - **Poorly reported**
 - **Poorly researched**
- Literature evidence almost exclusively focussed on medical professions
- Very little to no evidence for Allied Health



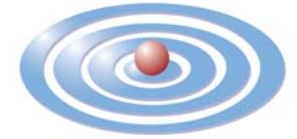
Quality & EBP

- Parallel courses in history of development
- There must be “evidence” to what you, as a health care practitioner do
- In all other aspects of life we demand “evidence” (Justice, social welfare)
- In health care, this is seen to be implicit rather than explicit



Evidence Based Practice

- The philosophy of EBP underpins the quality movement
- Quality framework contains elements of
 - Safety
 - Effectiveness
 - Patient centredness
 - Timeliness
 - Efficiency
 - Equitable
- Provides justification for health care service delivery



History of EBP



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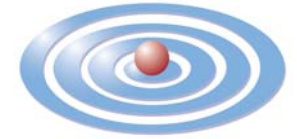
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History of EBP



1700

1800

1900

2000

Chinese emperor
Qianlong

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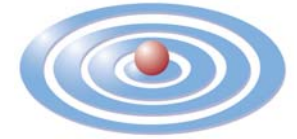
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Founding father of
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Pierre Louis

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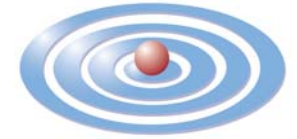
2000

Development
of modern
terminology
Gordon Guyatt
David Sackett



1800

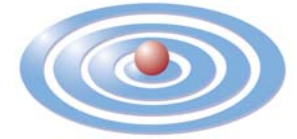
Founding father of
medical statistics
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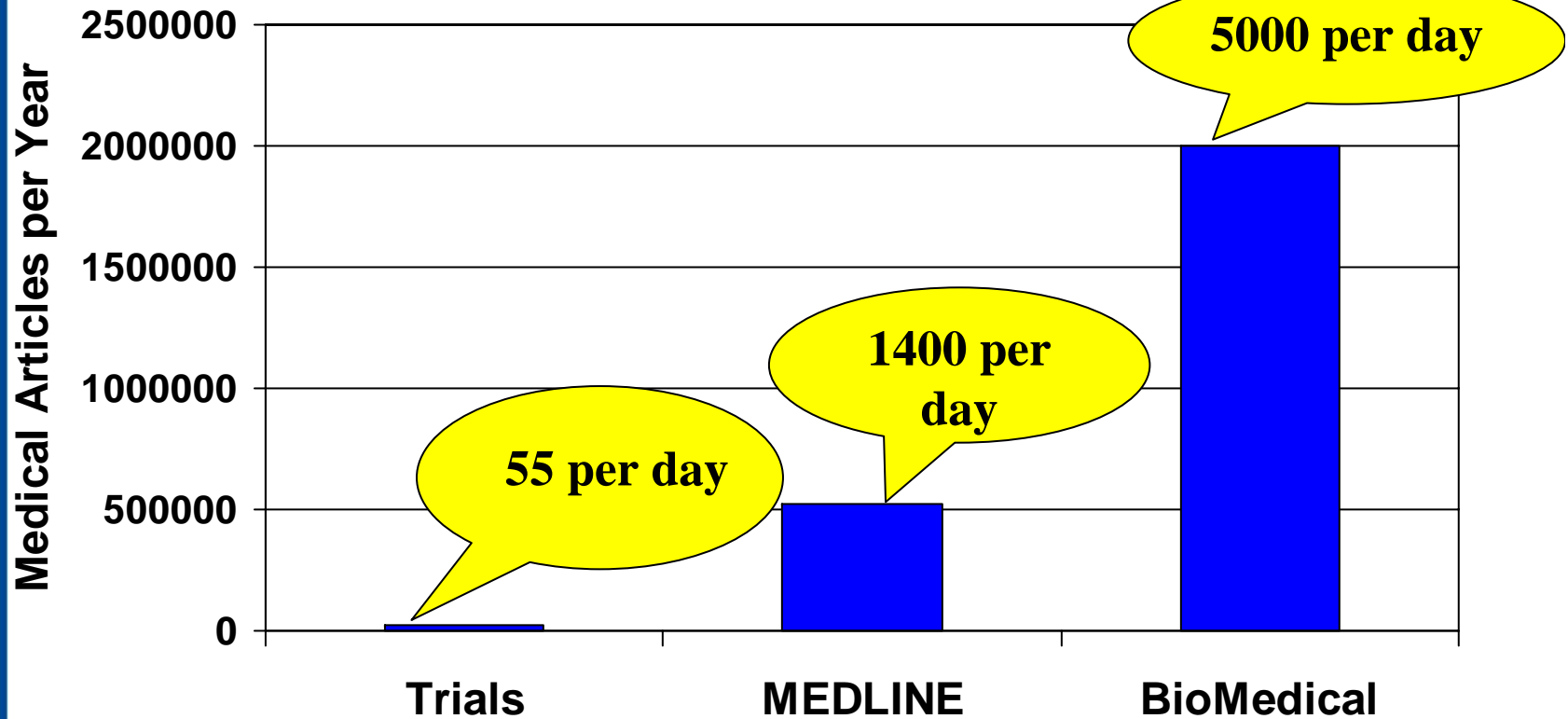
EBP: Original 'official' definition

“The explicit, conscientious, and judicious use of the current best evidence in making decisions about the care of individual patients (and populations)”

Sackett et al (1996)

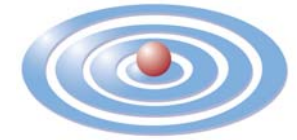


Wealth of information



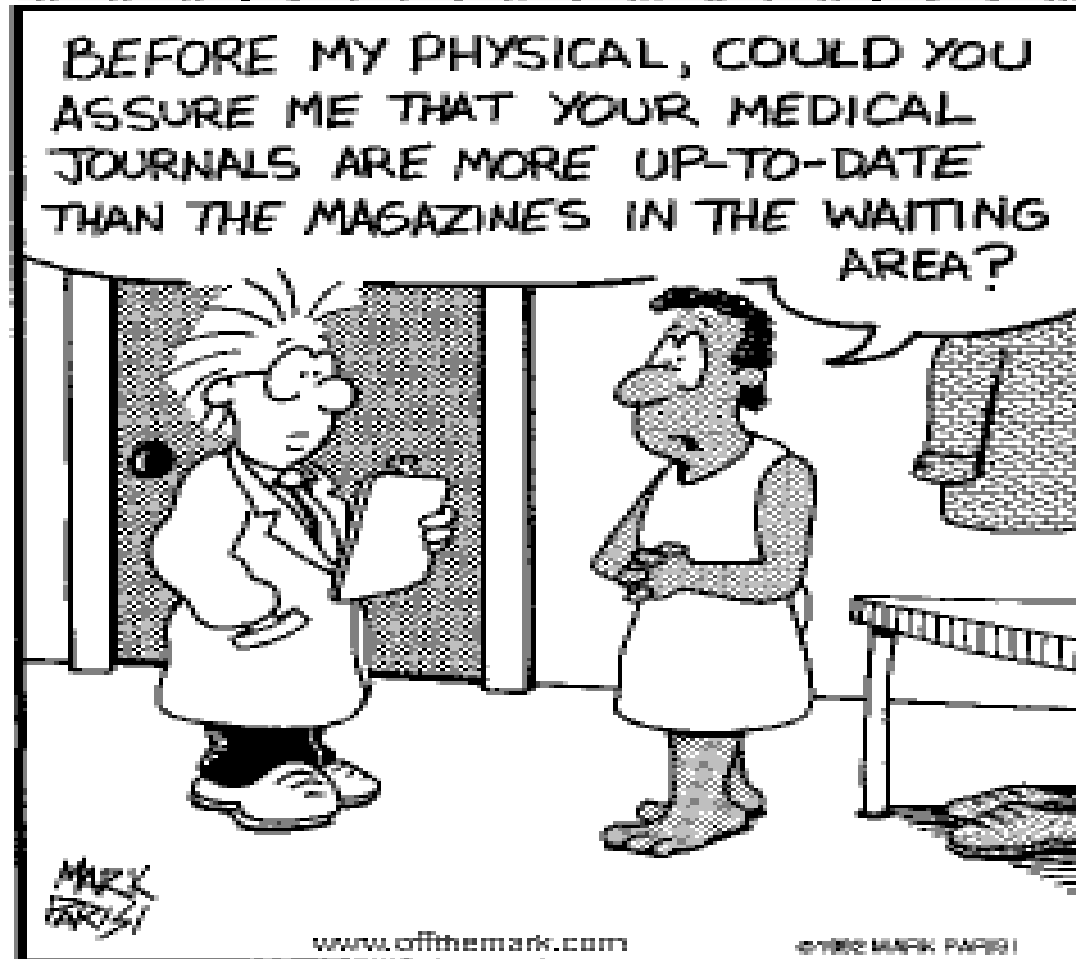
© Paul Glasziou (2003)





Up to date consumers

off the mark by Mark Parisi
www.offthemark.com

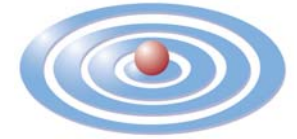


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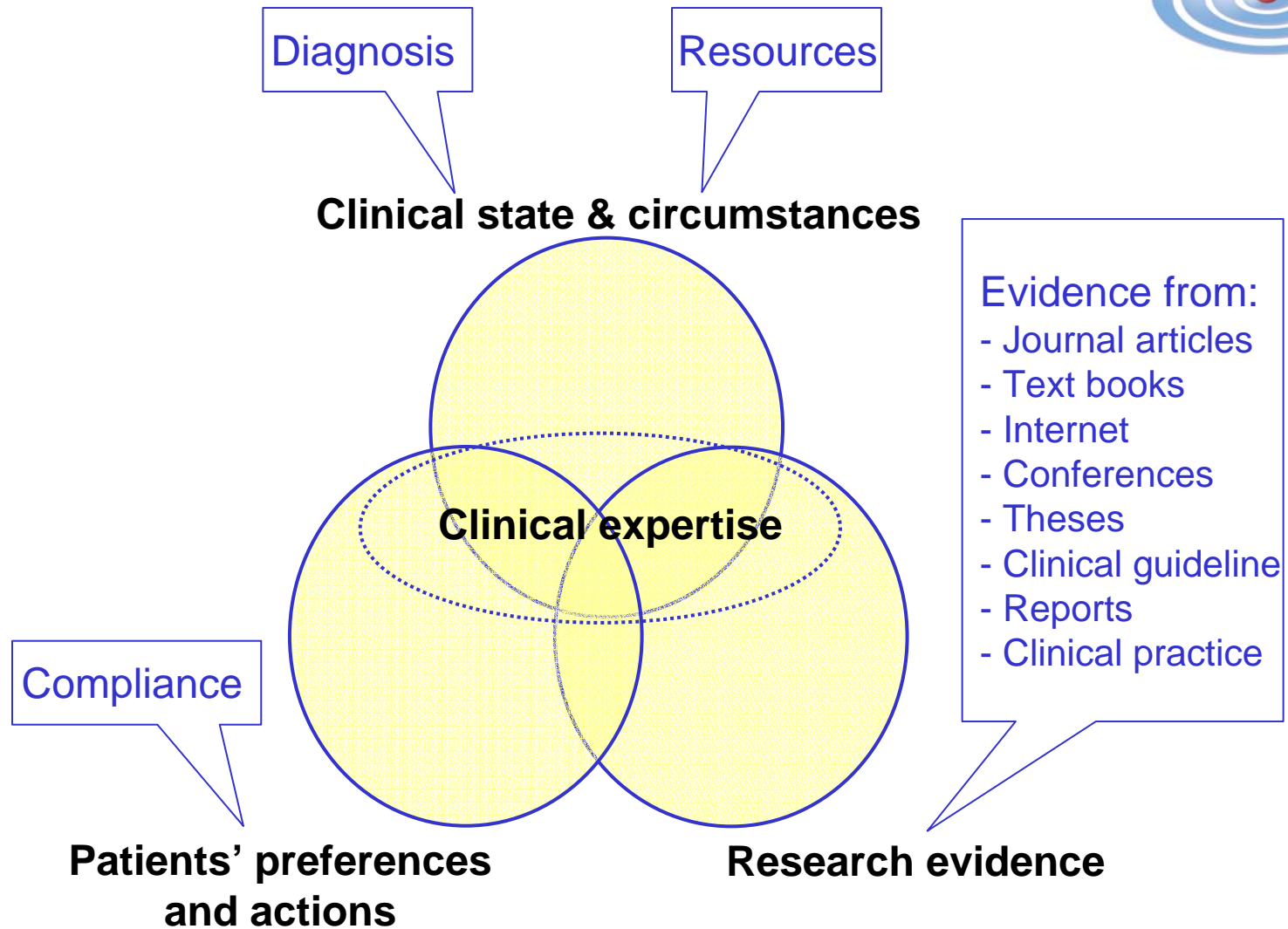
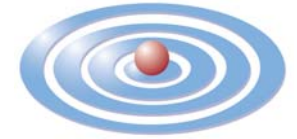
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What is EBP?

“the integration of best research evidence with clinical experience and patient values”

Sackett et al 2000



Haynes et al 2002

Faith Versus Facts

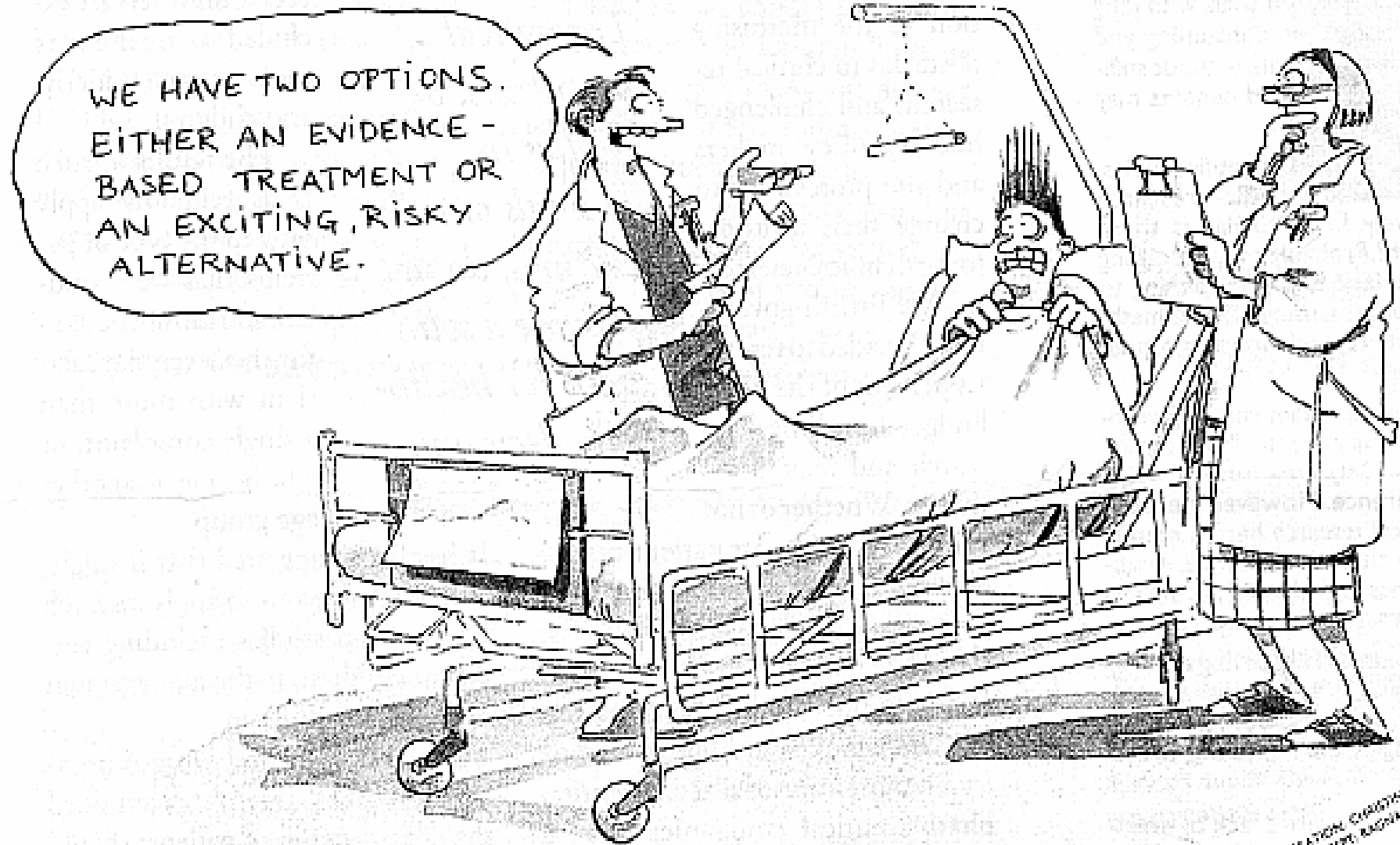
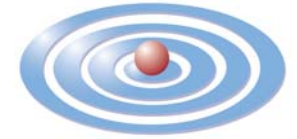
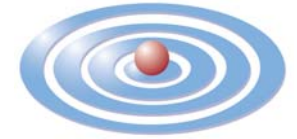


ILLUSTRATION: CHRISTINA ALVOR
CONCEPT: RICHARD LEVY



Key features of EBP

- Patient problem into an answerable question
- Search the literature specific to that question
- Appraise the literature which addresses the question
- Integrate the research findings with clinical expertise and patient preferences in clinical decision making
- Evaluate the outcome of such implementation

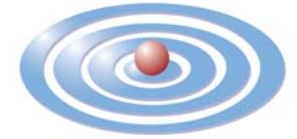


Assumption One

Research evidence *is* the holy grail

How do we find the evidence?





Knowing what to ask

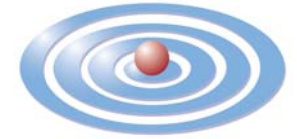
- Use the PICO framework

P participants

I ntervention

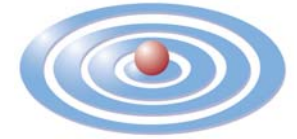
C omparator

O utcomes



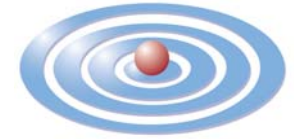
Search strategy

- Specified framework of search parameters
 - Key terms
 - Types of publications
 - Published and/or unpublished
 - Databases to be searched
 - Access to databases
 - Limitations to searching
 - Years, language, subjects investigated



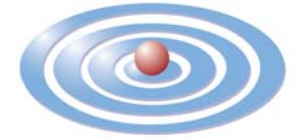
Search strategy

- Content experts
- Hand searching
- Pearling
- Potential issues to consider:
 - Time
 - Resources (human and cost)
 - Timelines for the project
 - Some reviews can take up to two years to complete



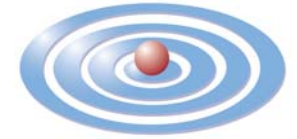
Critical appraisal

- Does published = good?
- No, various reasons why studies are published
- Critical appraisal is a vital cog in the wheel that is EBP
- Critical appraisal helps to “weed” out methodologically poor quality studies
- Numerous tools (the latest count was more than 110 e.g.: PEDro)



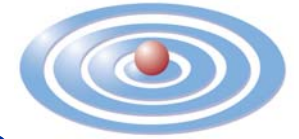
Critical appraisal: *issues to consider*

- Critically appraising the reporting of the methodological quality of the study
- Quality scoring
 - A numerical score for the publication indicating quality of the study
 - What does the score mean?
- Different critical appraisal may have different criteria potentially providing different scores



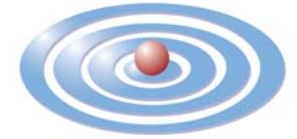
Hierarchy of evidence

- Numerous
 - NH&MRC (1999)
widely recognised
- I Systematic review or meta-analysis
 - II Randomised controlled trial(s)
 - III-1 Pseudo-randomised controlled trial(s)
 - III-2 Cohort studies or case-control studies
 - III-3 Comparative studies (no control)
 - IV Case series



Data extraction & analysis

- Quantitative review
 - Meta-analysis with homogenous data
- Qualitative review
 - Meta-synthesis
- Narrative review
 - Lack of homogenous data



Group work one...

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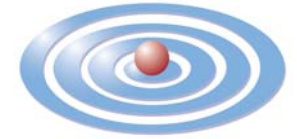
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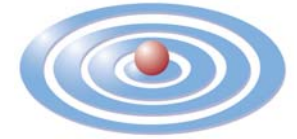


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Group work one

- In the handout provided, develop a search question
- Using the PICO table, consider key terms that you will use to search the literature
- You may also consider alternate terms that will use for searching

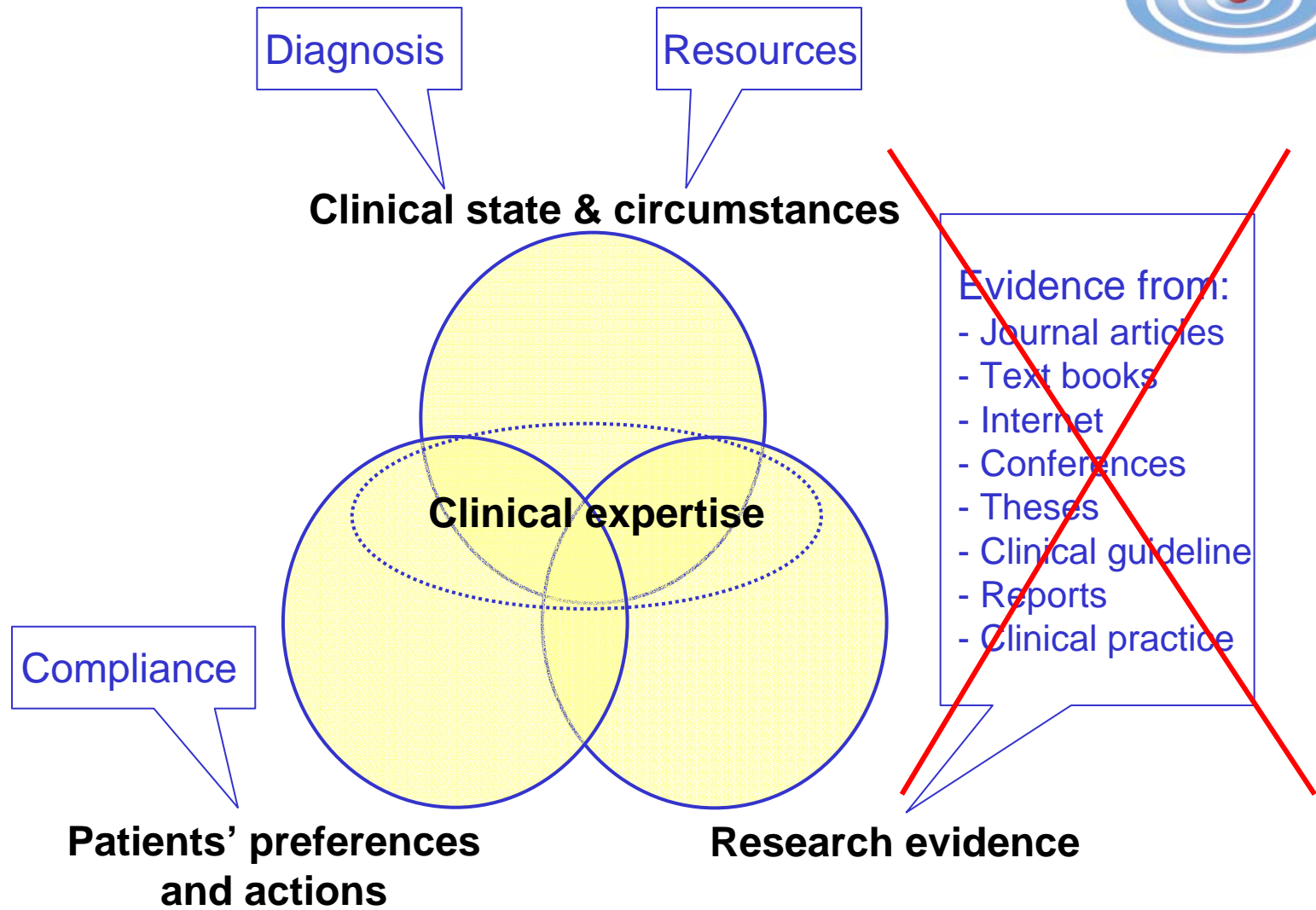
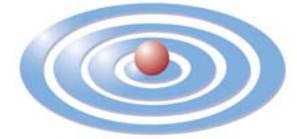


Assumption two

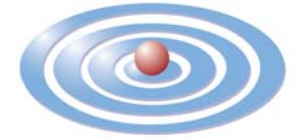
Evidence exists

What do you
do if it doesn't?





Haynes et al 2002



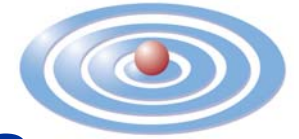
Evidence in Allied Health

- Ever expanding but is limited
- Philosophically different to medicine
 - Mortality vs. Morbidity
- Do we follow the medical model?
 - Are **RCTs** the best?
 - Experimentation may be **unnecessary, inappropriate, impossible or inadequate**
 - What if the critical appraisal tools do not reflect Allied Health concerns?
 - How important is reliability/ validity of measurement?
 - Type of intervention, condition



Research vs clinical evidence

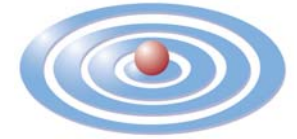
- But this practice has always worked for my patients!!!
- So what if there is no scientific evidence!!!!
 - What is that anyway?
- Why should I change what I do?
 - My patients are happy!!!!
 - What does the administration know about what I do anyway?
- I don't believe the evidence anyway - the science is flawed!!!



Evidence at your fingertips

- **‘Clinical Evidence’**
 - comes from a demonstration that what you did, and what it achieved, was of the highest quality

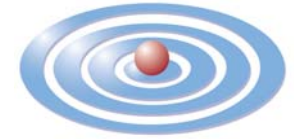
Grimmer 2004



What clinical evidence do you produce?

- **Treatment notes**
 - Do you have standard forms of assessment? (allows comparison over time of one patient, and groups of patients?)
- **Discharge summaries**
- **Quality assurance activities**
 - Clinical indicators (structure, process, outcome)
 - Record audits

Grimmer 2004



See handout on clinical audit

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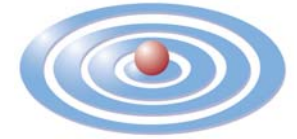
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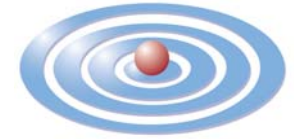
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Assumption three

Research evidence is readily available and implemented in clinical practice





The widening gap

- Does production of evidence mean effective transfer to clinical practice?
- Does access to evidence mean effective translation to clinical practice?





Good intentions not always enough

off the mark

by Mark Parisi

www.offthemark.com



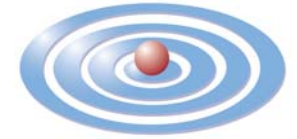
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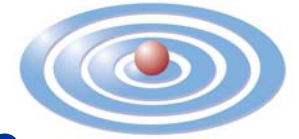
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Implementing evidence

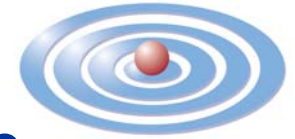
- Behaviour change is difficult to achieve
- Increasing access to simplified, condensed, consumable evidence does not equate to improved clinical practice
- Uptake of evidence is slow and does not take place automatically
- It takes skill, determination, time, money and planning

NH&MRC 2000



Barriers to implementation

- Barriers can occur at various “levels”
 - System
 - Professional
 - Community
 - Individual stakeholders (patients, providers, funders, administrators)
- Need to recognise & address them prior to implementation



Barriers to implementation

Treadmill Technique - Wikipedia, the free encyclopedia - Windows Internet Explorer

W http://en.wikipedia.org/wiki/Treadmill_Technique Live Search

File Edit View Favorites Tools Help

W Treadmill Technique - Wikipedia, the free encyclopedia

article discussion edit this page history move watch

Treadmill Technique

From Wikipedia, the free encyclopedia

Treadmill Technique - A New Treatment Regime for Cervical Headache

(The following is an abstract of a paper to be presented at the 7th National Allied Health Conference 2007)

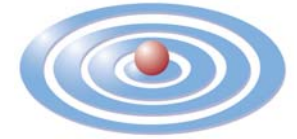
Aim: To test the effect of treadmill running on the effect of cervical headache. **Methods:** Participants (n = 1,000,000, ages 23-81) were recruited from private physiotherapy practices if their main presenting complaint was diagnosed as cervical headache. Subjects completed a treatment regime of 3x/weekly treadmill runs (17.2 kph, 3.0% incline) for 4 weeks, and followed up at the end of that period. **Results:** Significantly less (p<0.001) frequency of headaches were reported, along with significantly improved Neck Pain & Disability Scale scores (p<0.001) at follow up compared to baseline. **Conclusion:** Treadmill running is an effective technique in the management of cervical headache.

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Group work two...

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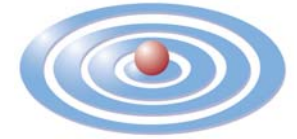
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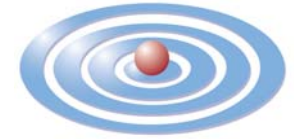
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Within your groups, using the handouts provided discuss barriers to uptake of evidence from your perspective.

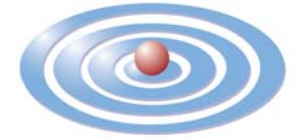
Also discuss what strategies you might use to overcome these potential barriers.





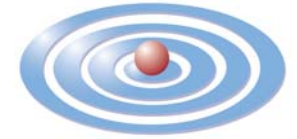
What works?

- Several Cochrane reviews have been undertaken (Grimshaw et al)
 - Consistently effective
 - Educational outreach visits, decision support systems, reminders, interactive educational meetings, multifaceted, mass media
 - Variably effective
 - Audit and feedback, local opinion leaders, local consensus approaches, patient-mediated
 - Little or no effect
 - Educational materials alone, didactic educational meetings
 - Unknown effectiveness
 - *Financial* incentives, administrative interventions



So what?

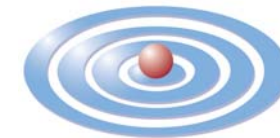
- So what did you achieve by implementing this?
 - Evaluate both process and outcomes of implementation
- Continue to update and seek ongoing support from in-house and external agencies
- What might have worked once, will not always work



EBP in health care

- Evidence based practice underpins the quality and efficiency movement in health care
- EBP will not automatically ensure optimal treatment and outcomes
- However, it ensures patients receive current, consistent, best available management

References



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