Promoting Evidence-based Health Care: the role of the Cochrane Collaboration?

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Outline

• What is evidence-based health care?
• What is the Cochrane Collaboration and what does it do?
• How does the Collaboration get its message over to information users?
What is evidence-based health care?

“the conscientious, explicit and judicious use of the current best evidence in making (health care) decisions.”


“The notion that right-minded people will naturally make decisions on the basis of the best available scientific evidence is a misleading and dangerous idea.”

Erve Chambers, 1985
“Know-do gap”

MIND THE GAP

Evidence  Practice
EBHC: The case for systematic reviews

- Information overload is a barrier to research utilization
- Poor quality of reviews of the medical literature
- Problem characterized as a “double-standard” with potentially dire consequences for patients and other consumers of health care
  - “advice on some life-saving therapies has been delayed for more than a decade, while other treatments have been recommended long after controlled research has shown them to be harmful.”

Antman et al. JAMA 1992; 268: 240-8
A systematic review defined as…. 

“A review in which bias has been reduced by the systematic identification, appraisal, synthesis, and, if relevant statistical aggregation of all relevant studies on a specific topic, according to a predetermined and explicit method”

Moher et.al. Lancet 1999
Steps involved in conducting a systematic review

1. State the objectives of the review
2. Define eligibility criteria for studies to be included
3. Identify (all) potentially eligible studies
4. Apply eligibility criteria
5. Assess study quality
6. Assemble the most complete dataset feasible
7. Analyse this dataset, using statistical synthesis and sensitivity analyses, if appropriate and possible
8. Prepare a structured report of the research
Benefits of systematic reviews

- Reduce large quantities of information to useful form
- Provide reliable information
- Increased power and precision
- Investigate conflicting findings
- Establish generalizability of findings
- Shorten time from discovery to implementation
The Cochrane Collaboration is an international organisation that aims to help people make well-informed decisions about healthcare by preparing, maintaining and promoting the accessibility of systematic reviews of the effects of healthcare interventions.
Cochrane Collaboration

- Established in 1993 now has:
- 15,000 contributors
- from more than 100 countries
- over 1,000 individuals from developing countries
- 13 Centres with associated networks
- 51 Cochrane Review Groups
Cochrane Centres and Branches

Legend:
- National boundary
SACC: Main focus areas

- Reviews relating to the MDGs
  - HIV, TB, malaria
  - MCH
  - Nutrition
  - Health systems
- Promoting EBHC
- Developing the science of research synthesis
SACC key collaborators

- Liverpool School of Tropical Medicine
- UK Cochrane Centre
- Norwegian Knowledge Centre for the Health Services
- Institute of Global Health at the University of San Francisco
- University of Calabar
- University of Nairobi
African Cochrane contributors meeting 2007
Current developments

• SU Food Security initiative
• Collaboration with Nutrition Information Centre of University of Stellenbosch (NICUS)
• Centre for Evidence-based Nutrition
Antioxidant supplements for prevention of mortality in healthy participants and patients with various diseases

O Bjelakovic, D Nikolova, LL Ghuud, RG Simonetti, C Ghuud

Cochrane Database of Systematic Reviews 2008 Issue 3 (Status: Unchanged)
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Abstract

Background

Animal and physiological research as well as observational studies suggest that antioxidant supplements may improve survival.

IMPACT FACTOR OF 5.2 in 2009
Ranked 12th out of 107 in the ISI category Medicine, General & Internal.
Cochrane Library Issue 3, 2009

Reviews and protocols for reviews on the
Cochrane Database of Systematic Reviews

3916 complete reviews
1905 reviews in progress
(protocols)
586,829 clinical trials
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India obtains national subscription to the Cochrane Library in 2007.

Full text downloads of Cochrane reviews in India reaches 66,303 in 2008
Towards ‘actionable messages’

Studies
(primary research)

Systematic Reviews

Summaries
How the Cochrane Collaboration Is Responding to the Asian Tsunami

Prathap Tharyan*, Mike Clarke, Sally Green

PloS Medicine, 2005

- Tsunami 26 December 2004
- “the greatest natural disaster in living memory”
  - killed >280,000 people
  - displaced > 1 million
  - affected the lives of five million more
- Evidence Aid launched to ensure that most reliable and relevant information available to enable survivors to receive the best care
Brief ‘debriefing’ for trauma

- Indian National Institute of Mental Health and Neurological Sciences strongly promoted mass single session de-briefing for people in tsunami affected villages
  - to reduce immediate psychological distress
  - to prevent the subsequent development of psychological disorders, in particular PTSD
- Cochrane review identified that concluded, contrary to popular belief, that single session debriefing was unlikely to be helpful and possibly harmful (increase in PTSD)
- Message incorporated into the content of counsellor training workshops
Evidence Update

Mental Health Series

January 2006

Does brief psychological debriefing help manage psychological distress after trauma and prevent post traumatic stress disorder?

There is no evidence that single session individual psychological debriefing prevents post traumatic stress disorder after traumatic events.
Researchers Are From Mars,
Policymakers Are From Venus
A Practical Guide for Improving Communication and Getting What You Want in Your Relationships
Support Summary

Do nurse practitioners working in primary care provide equivalent care to doctors?

Key messages for lower and middle income countries (LMIC):

- Nurse practitioners have been in use in North America for many years, and an increasing number of such nurses are being employed in the United Kingdom in general practice, emergency departments, and other primary care settings.
- There is systematic evidence that patients are more satisfied with care from a nurse practitioner than from a doctor, with no difference in health outcomes. In addition, nurse practitioners provide longer consultations and carry out more investigations than doctors.
- All the studies included in the review were conducted in high-income countries and they did not provide good quality evidence of the economic impact of substituting nurse practitioners for doctors.

Background

Nearly all LMIC face a chronic shortage of health workers in the public health sector. This is especially the case in rural areas and for medical doctors. Growing financial pressures to improve the efficiency of health systems is also leading to an increased focus on expanding the scope of practice of nurses. One aspect of this is using nurse practitioners providing care in primary care settings and in emergency departments. This can strengthen the effectiveness of doctors with other health workers.

Nurse practitioners have been more widely used in the United States where they have been working in a variety of settings, though mainly in primary care, for many decades. Nurse practitioners are nurses who have undergone further training, often at graduate level, to work independently, making independent diagnoses and treatment decisions. It is important to understand whether the evidence supports the notion that nurse practitioners are safe, effective, and economical compared to the management of patients.

The review focused upon evidence of the effects of substituting doctors that are essential in the provision of care provided by nurse practitioners compared with doctors, working in primary care and a form of care for any patient with usual forms of health problems.

Summary of findings

This review found that nurse practitioners were more equivalent to doctors by a nurse practitioner (unadjusted mean difference 0.81, 95% confidence interval 0.24 to 1.38) than by a doctor. Nurse practitioners had longer consultations (weighted mean difference 2.69 minutes, 95% CI 1.62 to 3.75) and made more referrals for doctors (unadjusted mean difference 1.88, 95% confidence interval 0.97 to 2.79) than did doctors. No differences were found in terms of nurse practitioners, nurse consultations, or referrals. Quality of care varies in many ways, but factors nurse practitioners are likely to lead to high levels of patient satisfaction and high quality care.
Joint effort of SACC and PGWC
• 300 page, peer reviewed report
• 3 main sections
  • Physiology and pathophysiology of nutrition, immunity and infection
  • Clinical evidence of effects
  • Conclusions and recommendations
• Released August 2007 in full and condensed versions; press/media launch; govt.departments; dissemination of 3000 copies
Male circumcision for prevention of heterosexual acquisition of HIV in men – a Cochrane review

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Introduction

Male circumcision is defined as surgical removal of all or part of the foreskin of the penis, practiced as part of a religious ritual usually conducted shortly after birth or circumcision, as a medical procedure related to infections, injury or other male of the foreskin, or as part of a traditional ritual as an initiation rite method. For over a decade observational studies have suggested an association between male circumcision and HIV infection in men, raising the question of whether male circumcision is an effective prevention against HIV infection in men.

Methods

Search strategy

We searched databases including the Cochrane Library (Issue 2, 2002), MEDLINE (April 2002), EMBASE (February 2002) and AIDS Rev (August 2001). We also searched databases using conference abstracts, search reference lists of articles, and contacted authors of included studies and researchers working in the field to locate unpublished studies. The search was not limited by language.

Selection criteria

We searched for randomized and quasi-randomized controlled trials of male circumcision in men, including observational studies that compared rates of HIV-1 and HIV-2 infection in circumcised and uncircumcised heterosexual men.

Data collection and analysis

Independent reviewers selected studies, assessed study quality and extracted data. We classified studies based on study design and whether they included participants from the general populaton or high-risk groups (such as patients treated for sexually transmitted infections). We used random-effects meta-analysis when appropriate. Each review underwent two stages of peer review and compiled reviews are published by the Cochrane Collaboration in an electronic database, The Cochrane Library, updated quarterly.
Male circumcision for prevention of heterosexual acquisition of HIV in men

- Intense interest in results of review – covered in:
- Print media – 90 articles in 20 countries
- SA radio – 6 stations
- TV - SABC 2 and SABC 2 international
Evidence in Action Game
Summary of evolving Cochrane communication strategy

1. Disseminate tailored research syntheses ("push")
   - increase awareness of research synthesis among policy makers, providers and researchers; tailor materials to specific audiences and needs.

2. Increase dialogue ("exchange")
   - seek dialogue with policy makers e.g. WHO, governments, etc. around the use of reviews

3. Increase demand for evidence ("pull")
   - create and increase demand for evidence from different target groups and ensure evidence-informed thinking and decision making is embedded in national and regional health structures