Why be an Evidence Based Dentistry Champion?

Jan Clarkson

Co-Editor Cochrane Oral Health Group
Programme Director Dental Health Services Research Unit
Director Scottish Dental Clinical Effectiveness Programme
Director Scottish Dental Practice Based Research Network
Evidence-based Practice

A champion is someone who:
Fights for a cause
Protects or fights for others
Knowledge to Action

Knowledge Synthesis

Knowledge Enquiry

Knowledge Tool

Action Cycle
A PARIS,

TOME PREMIER.

TRAITÉ

DU

SCORBUT,

DIVISÉ EN TROIS PARTIES.

D'après les recherches sur la nature, les causes, et la curaçon de cette Maladie.

MDCCLYI.

Auteur, éditeur, et imprimeur du Traité de la Maladie Scorbutive.

E. D. D. V. A. C.

E. D. D. V. A. C.

Antiquités et Monuments.

E. D. D. V. A. C.

E. D. D. V. A. C.

E. D. D. V. A. C.
The Cochrane Collaboration
Ethos and Vision

• Founded in 1993
• International, non-profit making, independent

Vision
Help clinicians, researchers, and patients worldwide make decisions about healthcare based on up-to-date, reliable and accurate information.
Cochrane Collaboration announces formal support for AllTrials initiative
Cochrane signs up to AllTrials initiative to campaign for registration and reporting of all clinical trials

Read more...
Cochrane signs up to AllTrials initiative to campaign for registration and reporting of all clinical trials

Media contact:
Nancy Owens, Cochrane Web Team
Aus: +61 2 6166 7903
nowens@cochrane.org

Media contact:
Sile Lane, Sense About Science
UK: +44 (0)207 490 9590
slane@senseaboutscience.org

**NEWS RELEASE 19 APRIL 2013**

**London, UK – April 19, 2013** – The Cochrane Collaboration, the international not-for-profit organization that produces systematic reviews of healthcare evidence and the largest database of randomized controlled trials, published online in *The Cochrane Library*, has today formalized its commitment to the AllTrials: All Trials Registered | All Results Reported initiative to campaign for the registration and reporting of all clinical trials.

The AllTrials campaign aims to draw attention to the crisis of unreported trial data. Hundreds of thousands of clinical trials have been conducted from which no or limited data have been made available; data critical to enabling doctors and regulators to make informed decisions about which treatments to use and fund. This is a serious problem for evidence-based healthcare researchers including The Cochrane Collaboration, because all the evidence about a treatment is needed to understand its risks and benefits. Without a complete picture of trial results available, information is lost; bad treatment decisions may be made; financial investment into ineffective treatments are approved by governments and regulators; opportunities for better and more effective treatment are missed; and trials are repeated unnecessarily, duplicating effort and wasting resources.

AllTrials was launched in January 2013 by Ben Goldacre, bestselling author, broadcaster and medical doctor, whose...
Featured Reviews (What's this?):

- Using computers to self-manage type 2 diabetes
- Prebiotics in infants for prevention of allergic disease and food allergy
- Skin treatments for chronic plaque psoriasis
- Human papillomavirus testing versus repeat cytology for triage of minor cytological cervical lesions
- Withdrawal of chronic antipsychotic drugs for behavioural and psychological symptoms in older people with dementia
- Selenium supplements for the prevention of cardiovascular disease

[Most visited] [All summaries] [All podcasts] [See our Methodology Reviews!]
Evidence Aid: Resources for Japanese earthquake and tsunami

- Japanese translation prepared by Kyoto University School of Public Health, with a mental health supplement [Download PDF]
- New! Cochrane Evidence Aid: Resources for post traumatic stress disorder
- New! Radiation: for guidance see the WHO, HPA and NLM websites
- Cochrane Evidence Aid: Resources for earthquakes
- Cochrane Evidence Aid: Resources for flooding and poor water sanitation

The earthquake off the coast of Japan on Friday, 11 March, and the subsequent tsunami have caused tremendous destruction. The Cochrane Collaboration's Evidence Aid resources are available through this website and The Cochrane Library. They provide information on healthcare interventions that are relevant to flooding and treating injuries. We will keep these resources under review and will seek to revise and extend them as the situation develops. Furthermore, in partnership with Wiley-Blackwell, Evidence Aid opened free, one-click access to the whole contents of The Cochrane Library to everyone in Japan at 11.00 GMT (March 11 2011). Any suggestions for improvements to the Evidence Aid resources or offers of help should be sent to EvidenceAid@cochrane.org.
HIGHLIGHTED NEW AND UPDATED COCHRANE REVIEWS

- Selenium supplementation for the primary prevention of cardiovascular disease
- Prebiotics in infants for prevention of allergy
- Human papillomavirus testing versus repeat cytology for triage of minor cytological cervical lesions
- Withdrawal versus continuation of chronic antipsychotic drugs for behavioural and psychological symptoms in older people with dementia
- Vaccines for measles, mumps and rubella in children
- Interventions for promoting reintegration and reducing harmful behaviour and lifestyles in street-connected children and young people
- Computer-based diabetes self-management interventions for adults with type 2 diabetes mellitus
- Training to recognise the early signs of recurrence in schizophrenia

Journal Club Article  Podcast Available
Vitamin pills ‘can increase the risk of dying’

Bad science
Celebs decry evidence on vitamin pills

And so our ongoing project to learn about evidence through nonsense enters its sixth improbable year. This week the assembled celebrity community and vitamin pill industry will walk us through the pitfalls of reading through a systematic review and meta-analysis from the Cochrane Collaboration, an international not-for-profit organisation set up 20 years ago to create transparent, systematic, unbiased reviews of the medical literature on everything from drugs, through surgery, to community interventions.

Last week Cochrane produced a gold-standard review, looking at 67 trials describing the experiences

Review said vitamin pills may increase risk of dying Photograph: Fiona Hanson/PA
Cranberry juice 'offers little protection against cystitis'

It has been recommended for years, but new research suggests cranberry juice offers little protection against cystitis, writes Cherrill Hicks.

By Cherrill Hicks

Women swear by it and doctors recommend it – yet the latest research has found that cranberry juice, used for decades to stave off cystitis, offers little protection against this excruciatingly painful bladder infection.
Cochrane in the News archive

Mashable on Cochrane evidence for computer-based tools for diabetes self-management
Thursday, April 11, 2013 - 12:33

Digital Tools Provide Limited Support for Diabetes

Mashable reports on a recent Cochrane Review investigating the effectiveness of computer-based tools for diabetes self-management.

The New Age reports on new Cochrane evidence connecting housing improvement with improved health
Monday, March 25, 2013 - 09:03

The New Age Online (NZ) reports on new Cochrane evidence concerning housing improvement as an investment to improve health.

Discover Magazine discusses Cochrane evidence on general health checks
Thursday, March 28, 2013 - 13:52

Annual Checkups Are a Waste of Time

In its April issue, Discover Magazine discusses the Cochrane evidence on general health checks for reducing illness and mortality.

Online magazine Salon reports on the work of Doulas in childbirth quoting relevant Cochrane evidence
Monday, March 18, 2013 - 13:19

Doulas can coach low-income women on childbirth

The online magazine Salon describes how Doulas can help during childbirth and quotes the relevant 2011 Cochrane Review on continuous support for women during childbirth.

Sydney Morning Herald on Cochrane Review of Vitamin C for the common cold

Sunday Observer commentary uses Cochrane evidence on prescription habits

Cochrane Collaboration Calendar

Colloquia

Select evidence-based health care events

Workshops
Is **flossing** your teeth a waste of time? An expert says ... - **Daily Mail**
www.dailymail.co.uk/.../is-flossing-teeth-waste-time--An-expert-says...
Nov 22, 2012 – According to a provocative new book, *Kiss Your Dentist Goodbye*, it seems that dedicated followers of **flossing** could actually be wasting their ...

**Flossing** your teeth could save you from a stroke | Mail ... - **Daily Mail**
www.dailymail.co.uk/health/article.../Flossing-teeth-save-stroke.html
Mar 19, 2011 – Tooth loss increases the risk of a stroke many years later, according to a new Japanese study, and underlying gum disease may be to blame.

The tooth about crazy **flossing** techniques | Mail Online - **Daily Mail**
www.dailymail.co.uk/.../The-tooth-crazy-flossing-techniques.html
May 12, 2006 – People are damaging their teeth by picking them with household items such as knives, scissors and even screwdrivers. A dental survey found ...

**Flossing** could save your life | Mail Online - **Daily Mail**
www.dailymail.co.uk/health/article-439697/Flossing-save-life.html
Mar 2, 2007 – Brushing and **flossing** your teeth regularly can help prevent a heart attack, a study has shown. Scientists have long suspected that gum disease ...

**Daily Mail** - Google+ - **Is flossing** your teeth a waste of time ...
https://plus.google.com/+/DailyMail/posts/6xiwzWifJsB
Nov 23, 2012 – **Is flossing** your teeth a waste of time?: Dentists nag us about it. Scientists insist it prevents heart disease. But now an expert says they've all got ...

**Is flossing** your teeth a waste of time? (Features) - **Daily Mail (London)**
Nov 23, 2012 – Byline: by Lucy Elkins VISITS to the dentist are never pleasant. Not only do we have our... | Article from **Daily Mail (London)** November 23, ...
Hierarchy of evidence

- RCT
- Cohort
- Case-control
- Cross-sectional survey
- Case-series/report
- Expert opinion
Cohorts
Male health workers (United States)
Male social insurance workers (Finland)
Female social insurance workers (Finland)
Male chemical workers (Switzerland)
Hyperlipidaemic men (United States)
Nursing home residents (United States)

Trials combined

Trials
Male smokers (Finland)
Patients with skin cancer (United States)
Former smokers, asbestos workers (United States)
Male physicians (United States)

Trials combined

Relative risk (95% CI)
New doubts over Tamiflu
By Channel 4 News

The claim was that Tamiflu could reduce the hospitalising of patients with swine flu by up to 60 per cent. But Channel 4 News can reveal that a key paper upon which this claim was based is being questioned. Email us your experiences of Tamiflu at news@channel4.com.

Scientists attempting to peer review the paper requested vital data, and did not get it. Tonight we report a key plank of the evidence for Tamiflu's effectiveness is being called into question.

As swine flu hit the UK, the anti-viral drug Tamiflu hit the headlines, becoming the de facto first line of defence against the epidemic.

It was lauded for reducing the length and duration of flu-like illnesses and, importantly, for reducing hospitalisations.

Governments around the world stockpiled supplies. In the UK alone the estimated bill for Tamiflu is approaching half a billion pounds.

Tonight Channel 4 News can reveal that serious scientific questions are being raised over the evidence base for Tamiflu.
Tamiflu: Myth and Misconception

SHANNON BROWNLEE & JEANNE LENZER | FEB 19, 2013, 10:04 AM ET |

The people clearly proven to be benefiting from the flu medication are its manufacturers.

Flu season is still here, and Hoffman-LaRoche, the manufacturer of the anti-viral drug Tamiflu (oseltamivir) are still running an ad intended to market directly to patients. "Sometimes what we suffer from is bigger than we think. The flu is a big deal, so don’t treat it like a little cold. Treat it with Tamiflu."

If you didn’t get the message from these ads, the U.S. Centers for Disease Control and Prevention has designed public service announcements to explain how to stay healthy during flu season.
Cochrane Collaboration

- Preparing maintaining and promoting the accessibility of systematic reviews of the effect of healthcare interventions
  - 52 Collaborative Review Groups around the world

- Main product - Systematic Reviews in The Cochrane Library
  - Advanced science of evidence synthesis
  - Changed culture in healthcare systems
  - Advocating evidence informed decision making
Distribution of progress scores for all 23 UK-based CRGs (Inc. those funded by CSO, Scotland and Health and Social Care R&D Northern Ireland)

CRG Progress Past Two Years

Oral Health Group
The Cochrane Oral Health Review Group

Produce systematic reviews of all RCTs of oral health:

- Established in 1996
- 950 members from 40 different countries
- 623 authors
- Activities co-ordinated by its Editorial Base

Published

- 137 systematic reviews
- 69 protocols

- Its performance has ranked it 2nd out of the 24 UK NHS funded groups.
WELCOME TO A WEBSITE FOR EVIDENCE-BASED DENTISTRY

A practical resource for scientific evidence
Looking for answers? We provide systematically assessed evidence as tools and resources to support your clinical decisions: A practical approach to integrating evidence into your patient care!

Systematic Reviews & Summaries
A database of studies on dental and oral health topics along with concise, user-friendly summaries. Read more

- Incomplete Caries Removal: A Systematic Review and...
- Interventions for smoking cessation and reduction...
- Treatments for classic Kaposi sarcoma: a systemati...

ADA Clinical Recommendations
Tools that provide guidance and assist you with clinical decision making. Read more

- Nonfluoride Caries Preventive Agents
- Fluoride Supplements
- Oral Cancer Screening
- Reconstituting Infant Formula
- Sealants
- Topical Fluoride

Resources
Additional support for evidence-based practice. Read more

- ADA Library
- Cochrane Library
- JADA
- PubMed

Highlights
- EBD Champions Conference April 25-27, 2013
- Promote EBD on your own website - click here!
- Listen here - Podcast for the ADA's Clinical Recommendations on Nonfluoride Caries Preventive Agents
- Access Chairside Guides to ADA Clinical Recommendations
- Subscribe to the EBD website for automatic content updates
THE COCHRANE COLLABORATION:
A STRATEGIC REVIEW

RECOMMENDATIONS REPORT
FEBRUARY 16, 2009

"I am a face of the Cochrane Collaboration"
"Jeg er en del af Cochrane-camarheidet"
"تَوَّهِر وتَنَكُّر نَسَبُ مَنْ أَنْصَرَتْ أَهْلَهُ" "Saya adalah mata depan The Cochrane Collaboration" "Sistem twarzą Cochrane Collaboration" "Eu sou a cara da colaboração Cochrane" "ئَمَّا جَزَاكَمُ اللهُ بِمَفَادٍ" "Можете ли вы быть координации Cochrane Collaboration" "Ek is 'n gesig van die Cochrane Collaboration"
"Ich bin ein Gesicht der Cochrane Collaboration"

"나는 코크레인 협회의 얼굴입니다"

"我是 Cochrane 合作网的一员"

" Io sono un faccia della Cochrane Collaboration"

"Io sono una delle facce della Cochrane Collaboration"

"Jeg er et av ansiktene til cochrane-camarheidet"

"А я лицо на координации Кохраново сотрудничество"

"Soy la cara de la Collaboración Cochrane"

"Sóc la cara de la Col·laboració Cochrane"

"Ik ben één van de gezichten van The cochrane collaboration"

"Je suis l'un des visages de la collaboration Cochrane."

"Оляро я Cochrane-йынчылык топуунун бир нерсеси"
<table>
<thead>
<tr>
<th>Year</th>
<th>Trials</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>14</td>
<td>945</td>
</tr>
<tr>
<td>2002</td>
<td>52</td>
<td>3,594</td>
</tr>
<tr>
<td>2004</td>
<td>69</td>
<td>4,905</td>
</tr>
<tr>
<td>2006</td>
<td>71</td>
<td>5,217</td>
</tr>
<tr>
<td>2007</td>
<td>89</td>
<td>7,523</td>
</tr>
<tr>
<td>2010</td>
<td>120+</td>
<td>10,200+</td>
</tr>
</tbody>
</table>
Delivering priority reviews in a timely manner by strategically working with international experts.
Mum did you know...?

“Dirty teeth can kill you!” preventdisease.com
“Bad diseases can start in your mouth?” abnews.com
“Gum diseases can be an early pointer to Alzheimer’s?” scotsman.com

Ja-a-ames... don’t worry,
we use active 10 the new ultimate toothpaste with 10 health promoting agents!
In 2003, an independent review by the Cochrane Collaboration ‘Manual vs power brushing for oral health’ reported the superiority of oscillating-rotating technology vs manual brushing.

In 2005, the latest update of the Cochrane Review has confirmed:

‘Brushes with a rotation-oscillation action removed plaque and reduced gingivitis more effectively than manual toothbrushes in the short term, and reduced gingivitis scores in studies over 3 months.’ No other powered designs were as consistently superior to manual toothbrushes.”

Main results

“Brushes with a rotation-oscillation action removed plaque and reduced gingivitis more effectively than manual toothbrushes in the short term, and reduced gingivitis scores in studies over 3 months.” No other powered designs were as consistently superior to manual toothbrushes.”

When compared to manual brushes, oscillating rotating technology:

- Removes significantly more plaque in the short term.
- Provides up to 17% greater reduction in bleeding in the long term.
- Is safe on gums.

About The Cochrane Collaboration

- Non-profit, independent organisation that makes up-to-date healthcare information available worldwide.
- Over 90 international review groups produce systematic reviews of healthcare interventions — from cancer to caries.
- Over 2000 current systematic reviews in the Cochrane database — more than 1500 new reviews in progress.
- To visit the Cochrane newcomers guide and view the abstract, go to www.thecochranelibrary.com

To learn more about Oral-B — pioneers of oscillating rotating technology — visit www.oralphoros.com
Braun tops electric toothbrush test
Last Updated Tue, 14 Jan 2003 16:41:36

WASHINGTON - A study of electric toothbrushes has found one brand cleans teeth better than manual brushes.

The Cochrane Collaboration, a non-profit group based in England, has evaluated the results of five major electric brushes. The group evaluates medical practices.

The organization discovered that electric brushes with bristles that spin in both directions have the advantage over regular brushes. It says the "rotational oscillation" of the Braun Oral-B brush was more effective than manual brushes.

"The others were not worse, but they were just not any better (than regular brushes)," said William Chow, author of the report.

The Braun brush... removed 11 per cent more plaque than regular brushes

Manual brushes are just as good

Most electric toothbrushes are no better for your teeth and gums than the traditional type powered only by elbow grease, researchers have found.

Scientists from the Universities of Birmingham, Edinburgh, Manchester and Sheffield found that only one type of electric toothbrush produced better results despite being many times more expensive.
How to Influence Patient Oral Hygiene Behavior Effectively

ABSTRACT
Considerable research has been undertaken with dental practitioners on the importance of oral hygiene. This study applied evidence-based principles of psychological theory and evidence of the importance of oral hygiene behavior. The study was a randomized controlled trial (RCT) involving 37 dentists and 478 patients. The mean difference in plaque and gingival bleeding was statistically significant, with p < 0.01 for plaque and p < 0.04 for gingival bleeding. The findings suggest that dental practitioners can improve patient oral hygiene behavior.

KEY WORDS:
oral hygiene, RCT, patient behavior, psychological theory, plaque, gingival bleeding
Fissure Sealants
Scottish Consortium for development and education in Dental Primary Care

University of St Andrews

NHS Education for Scotland

University of Aberdeen

Dental Health Services Research Unit

University of Glasgow

Erupt
Evidence from Research Used in Preventive Treatment

Edinburgh Postgraduate Dental Institute

University of Dundee

Scottish Funding Council
Promoting further and higher education

Scottish Executive

EastRen

National Services Scotland

Scottish Dental PBRN

The Scottish School of Primary Care
Is fee & education more effective than either strategy alone?

- 908 GDP Population
  - 337 Sampled
    - 130 refused/no response
    - 58 ineligible
  - 149 Recruited
    - Randomised
      - Control: 25%
      - Fee: 35%
      - Education: 31%
      - Both: 27%
This research led to a change in policy 1st April 2006

2008/09
40,000 claims for preventive fissure sealants
120,000 sealants placed  cost £930,000

No change in restorative fissure sealants
NHS dentists accused of unnecessary check-ups

David Rose

Dentists are calling patients back for routine appointments far sooner than they need to, in an effort to maximise profits, according to the Government's chief dental officer.

NHS dentists earn significantly more since new contracts were introduced in England two years ago but officials believe this could be because some are "playing the system".

The National Institute for Health and Clinical Excellence (NICE) suggests that most healthy patients do not need a check-up more than once every two years. But Barry Cockcroft, the Chief Dental Officer, believes that many patients are being called back for unnecessary appointments as often as every six months, or paying extra for repeat visits for fillings, crowns or other treatments that could be given in one go.

Evidence compiled by the Department of Health suggests that as many as 800,000 appointments - one in ten - could be freed up for more needy patients.

NHS dentists saw 27 million patients in England during the past two years - 1.1 million fewer than in the two years before the new contracts. In the first year of the new system dentists' average annual income rose from £87,000 to £96,000. For dentists who own their practice, earnings jumped 35 per cent to an average of £172,000.

Treatment costs are now divided into three bands: £16.20 for a check-up or minor treatment; £44.60 for fillings, root canal work or if your dentist needs to take out one or more of your teeth; and £198 for crowns, dentures or bridges.

Children and some adults are exempt from the charges and patients should have to pay only once, even if they need several appointments during one course of treatment. But dentists could abuse this by postponing additional treatments until after a subsequent check-up.

Recently, officials have compared NHS returns by dentists, which give each individual patient a code to see how many people are attending repeat appointments. Mr Cockcroft is now discussing with local health authorities how to amend the contract so that patients are not overcharged.

A Department of Health source said: "Many patients have been seeing their dentist at six-month intervals for years, but there is no evidence to support this as clinically necessary."

Abuse of the system is believed to be more prevalent in the South, where access to NHS dentists is more difficult.

"These dentists are seeing the same healthy patients a lot. Instead of recalling them every year or two years they are coming back every three or four months."
Nine trials, 200 participants

Evidence of insufficient quality to reach any conclusion
For optimum, cost effective maintenance of oral health in adult patients, what is the best recall interval?

What is the clinical and cost effectiveness of filling caries in primary teeth, compared to no treatment?

What is the clinical and cost effectiveness of oral hygiene advice and scale and polish in dental primary care?
• Do oral health advice or S&P, or both, lead to improvements in periodontal health and patient self care?

• 2001  Cochrane review & pilot trials

• 2003  Outline application

• 2004  Full application £3M

• 2005  Good question, good methodology, good team,

• But
  ▪ Not the most important intervention to prevent periodontal disease
  ▪ Change of contract in England
  ▪ Answered by extensive review of past 30 year literature

• 2006  Resubmission

• 2009  Resubmission to HTA

• 2010  Conditional award

• 2011  Start trial
Trial Design

Dentists Randomised

Routine OHA
(30 dentists/hygienists)

Personalised OHA
(30 dentists/hygienists)

Patients Randomised
No PI 6mth PI 12mth PI

(31 patients per dentist/hygienist)

(310)  (310)  (310)

(310)  (310)  (310)
• Months 1-4: initiation of study, recruit & train staff including OA team, NHS approvals; 04/11 – 07/11; Actual: 04/11 – 08/12
• Months 5-12: recruitment of dentists; 08/11 - 03/12, Actual: 10/11 – 05/13
• Month 19 patient recruitment complete; 10/12, Actual: 06/13
• Months 43-55: participant follow up at 3 year; 10/14 – 11/15
• Months 56-60: trial close out, analysis and dissemination; 12/15 – 03/16
Problem in practice

- Interventions adopted despite evidence against their use
- Costly interventions adopted at the expense of cheaper equally effective ones
- Interventions are not adopted despite evidence for net clinical benefit
- Interventions adopted in the absence of quality evidence
Published Guidance

- Conscious Sedation
- Decontamination - Cleaning of Dental Instruments
- Decontamination - Sterilization of Dental Instruments
- Dental Caries in Children
- Drug Prescribing (Second Edition)
- Emergency Dental Care
- Oral Health Assessment and Review
- Oral Health Management of Patients Prescribed Bisphosphonates
- Practice Support Manual (8 topics)

In Development

- Management of Acute Dental Problems (consultation ended 6 June 2012)
- Practice Support Manual
- Other proposed guidance topics

Events

- Conference: Improving Quality in Health Care: Translating Evidence Into Practice
  7th November 2012, John McIntyre Conference Centre, Edinburgh, UK.
  Full day delegate £70; Student/Early Bird until 31st August £60.

Have your say

- We are currently redesigning our website. If you complete the short survey, you will be entered into a prize draw for a £10 Amazon voucher.
Guidance Development

‘supporting the dental team to provide quality patient care’

- Provides user-friendly, evidence-based guidance
- Priority topics for oral health
- Relevant to other healthcare disciplines
- Used within Scotland and beyond
- Underpins education and informs policy
The TRiaDS Framework

STUDY PROTOCOL Open Access

The translation research in a dental setting (TRiaDS) programme protocol

Jan E Clarkson1, Craig R Ramsay2, Martin P Eccles3, Sandra Eldridge4, Jeremy M Grimshaw5, Marie Johnston6, Susan Michie7, Shaun Treweek8, Alan Walker9, Linda Young10, Irene Black9, Debbie Bonetti1, Heather Cassie1, Jill Francis2, Gillian MacKenzie10, Lorna MacPherson11, Lorna McKee2, Nigel Pitts1, Jim Rennie12, Doug Stirling10, Colin Tilley13, Carole Torgerson14, Luke Vale2

---

SDCEP Guidance – Define Scope

TRiaDS – Inform Scope

Measure stakeholders attitudes towards proposed guidance topic + Measure variation in professional behaviour using routine or bespoke data

SDCEP Guidance – Develop Consultation Draft

TRiaDS – Define Professional Behaviour Outcomes

SDCEP Guidance Development Group identify and prioritise professional behaviour outcomes to assess best practice

SDCEP Guidance – Consultation Period

TRiaDS – Diagnostic Analysis

Identify barriers and enablers to best practice using questionnaires and interviews with GDPs/DCPs + Measure variation in professional behaviour using routine or bespoke data

Identify criteria to determine if knowledge translation strategy is required
Identify theoretical domains and possible knowledge translation interventions

SDCEP Guidance – Publication and Dissemination Period

TRiaDS – Determine the Need for and Design of Knowledge Translation Intervention

Identify trend and step changes following publication of guidance

TRiaDS – Evaluation

Intervention Required
Develop and test guidance knowledge translation intervention

Intervention Not Required
Monitor professional behaviour outcomes

TRiaDS – Collect Data from Steps Above and Collate With Each Guidance Experience to Synthesise What is Known About Changing Each Set of Behaviours
## Implementing the TRiaDS framework

<table>
<thead>
<tr>
<th>Guidance Topic</th>
<th>Inform Scope</th>
<th>Define Professional Behaviour Outcomes</th>
<th>Diagnostic Analysis</th>
<th>KT Intervention Decision</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decontamination I – Cleaning</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Emergency Dental Care</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Drug Prescribing</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Caries Prevention and Management in Children</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice Support Manual</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Health Assessment</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decontamination I – Instrument Sterilization</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisphosphonates</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Management of Acute Dental Problems</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decontamination III – Management</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Periodontal Management</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dental antibiotic prescribing by drug

<table>
<thead>
<tr>
<th>Quarter</th>
<th>AMOXICILLIN</th>
<th>METRONIDAZOLE</th>
<th>PHENOXYMETHYL-PENICILL</th>
<th>ERYTHROMYCIN</th>
<th>OTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr-Jun 07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul-Sep 07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct-Dec 07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-Mar 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr-Jun 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul-Sep 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct-Dec 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-Mar 09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr-Jun 09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul-Sep 09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct-Dec 09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-Mar 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr-Jun 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul-Sep 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct-Dec 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-Mar 11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr-Jun 11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul-Sep 11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct-Dec 11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-Mar 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SDCEP Ed 1
70% reduction in prescribing of amoxicillin 3g following publication of national guidance
RAPiD – Reducing Antibiotic Prescribing in Dentistry

General Dental Practices
Randomised

Control Group

Current Practice
No A&F

Intervention

Audit & Feedback

Audit & Feedback + Persuasive Message

Report with comparison

Report only

Report with comparison

Report only
Scottish Dental Clinical Effectiveness Programme

Oral Health Management of Patients Prescribed Bisphosphonates
Dental Clinical Guidance

April 2011
## Oral Health Management of Patients Prescribed Bisphosphonates – Summary Guidance

### All patients prescribed bisphosphonates
- As soon as possible, aim to get the patient as dentally fit as feasible:
  - prioritise remedial work, reduce sources of dental infection, adjust poorly fitting dentures.
- Maximise preventive regimes to minimise risk of subsequent extractions and bone trauma.
- Give preventive advice, emphasizing the importance of:
  - maintaining good oral hygiene, a healthy diet (reducing sugary snacks and drinks), stopping smoking, limiting alcohol intake, regular dental checks;
  - reporting any symptoms such as loose teeth, pain, or swelling, as soon as possible.
- Refer to an oral surgery/oral and maxillofacial surgery (OS/OMFS) specialist if there is spontaneous or chronic bone exposure.
- Treat routinely for scale and polish, simple restorations, recall and radiological review.
- Avoid extractions or any oral surgery or procedures that may impact on bone (i.e. dento-alveolar, periodontal, periradical, deep root planing, complex restoration, implants) if there is an alternative.

### If any extraction or any oral surgery or procedure which may impact on bone is necessary:
- advise the patient that they may be BONI risk to enable informed consent, but ensure they understand it is an extremely rare condition so that they are not discouraged from taking medication or undergoing treatment. Record that this advice has been given.
- allocate the patient to a risk group (as below) and follow the recommended management strategy.

### Risk Assessment

<table>
<thead>
<tr>
<th>Low Risk</th>
<th>Higher Risk</th>
</tr>
</thead>
</table>
| Patient is about to start bisphosphonate therapy for any condition  
  or  
Patient is taking a bisphosphonate to prevent or manage osteoporosis (without higher risk factors) | If any of the following is present:  
  - Previous diagnosis of BONI  
  - On bisphosphonates to manage a malignant condition  
  - Other non-malignant systemic condition affecting bone (e.g. Paget’s disease)  
  - Under the care of a specialist for a rare medical condition (e.g. osteogenesis imperfecta)  
  - Concurrent use of systemic corticosteroids or other immunosuppressants  
  - Coagulopathy, chemotherapy or radiotherapy |

| Perform extractions/oral surgery/procedures that may impact on bone in primary care as ‘atraumatically’ as possible; avoid raising flaps; achieve good haemostasis.  
Review healing at 4 weeks after carrying out any invasive treatment.  
If surgery sites fail to heal within 4 to 6 weeks, refer to an OS/OMFS specialist. | Seek advice from an OS/OMFS specialist (preferably by letter) about whether to treat the patient in primary care for any extraction, oral surgery or procedure which may impact on bone, or whether to refer. |
## Results

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Pre-guidance</th>
<th>Post-guidance</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ask about</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>past bisphos use</td>
<td>Always/usually % (median)</td>
<td>Always/usually % (median)</td>
<td>NS (0.05)</td>
</tr>
<tr>
<td>current bisphos use</td>
<td>39% (3)</td>
<td>45% (3)</td>
<td></td>
</tr>
<tr>
<td>related health conditions</td>
<td>64% (4)</td>
<td>79% (5)</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>70% (4)</td>
<td>72% (4)</td>
<td>NS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Beliefs</th>
<th>Pre-guidance</th>
<th>Post-guidance</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ask about</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>past bisphos use</td>
<td>important - 67% (4)</td>
<td>important - 78% (4)</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>not difficult - 65% (4)</td>
<td>not difficult - 65% (4)</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>motivated - 58% (4)</td>
<td>motivated - 69% (4)</td>
<td>NS (0.09)</td>
</tr>
<tr>
<td>current bisphos use</td>
<td>important - 81% (5)</td>
<td>important - 94% (5)</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>not difficult - 81% (5)</td>
<td>not difficult - 86% (5)</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>motivated - 75% (4)</td>
<td>motivated - 90% (5)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>related health conditions</td>
<td>important - 78% (5)</td>
<td>important - 88% (5)</td>
<td>NS (0.05)</td>
</tr>
<tr>
<td></td>
<td>not difficult - 72% (4)</td>
<td>not difficult - 80% (4)</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>motivated - 64% (4)</td>
<td>motivated - 85% (4)</td>
<td>0.02</td>
</tr>
</tbody>
</table>
## Results – Patients with Osteoporosis

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Pre-guidance</th>
<th>Post-guidance</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>undertake remedial work</td>
<td>Always/usually % (median)</td>
<td>Always/usually % (median)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>provide preventive OHA</td>
<td>90% (5)</td>
<td>97% (5)</td>
<td>NS</td>
</tr>
<tr>
<td>treat routinely for procedures not impacting on bone</td>
<td>99% (5)</td>
<td>100% (5)</td>
<td>NS</td>
</tr>
<tr>
<td>assess risk of BONJ for bone impacting treatments</td>
<td>96% (5)</td>
<td>98% (5)</td>
<td>NS</td>
</tr>
<tr>
<td>perform extractions in primary care</td>
<td>59% (4)</td>
<td>70% (4)</td>
<td>NS (0.05)</td>
</tr>
<tr>
<td>ask for specialist advice for extractions</td>
<td>44% (3)</td>
<td>23% (3)</td>
<td>0.01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Beliefs</th>
<th>Pre-guidance</th>
<th>Post-guidance</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>undertake remedial work</td>
<td>important - 84% (5)</td>
<td>important - 95% (5)</td>
<td>0.04</td>
</tr>
<tr>
<td>perform extractions in primary care</td>
<td>important - 61% (4)</td>
<td>important - 76% (4)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>ask for specialist advice for extractions</td>
<td>important - 53% (4)</td>
<td>important - 44% (3)</td>
<td>0.02</td>
</tr>
</tbody>
</table>

NS: Not significant
Knowledge to Action

Knowledge Synthesis

Knowledge Enquiry

Knowledge Tool

Action Cycle
Vision

- Sustainable funding
- Main provider synthesised evidence
- Independent, high quality, relevant, timely

- Minimise waste
  - Research funding
  - Guideline groups
  - International initiatives
Should I be a Champion?

A champion is someone who:
Fights for a cause
Protects or fights for others