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Using evidence as a tool for change: a new challenge for dental public health

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Manchester University

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Outline

- What is an evidence-based public health approach?
- Challenges for dental public health
  - Dental caries
  - Non-evidence based dental treatment
- How do we expand the evidence base?
- How do we bring about change?

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What is an evidence based public health approach?

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What is evidence based (*clinical*) care?

"the integration of the best research evidence with clinical expertise and patient values"

(Sackett et al. Evidence-based Medicine.New York: Churchill Livingstone; 2000).

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What is an evidence based public health approach?

"the integration of the best research evidence with public health expertise and society's values"

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Challenges for dental public health

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What constitutes a public health problem?

- High mortality rate
- Affects a significant proportion of the population
- Consumes large amounts of health service resources

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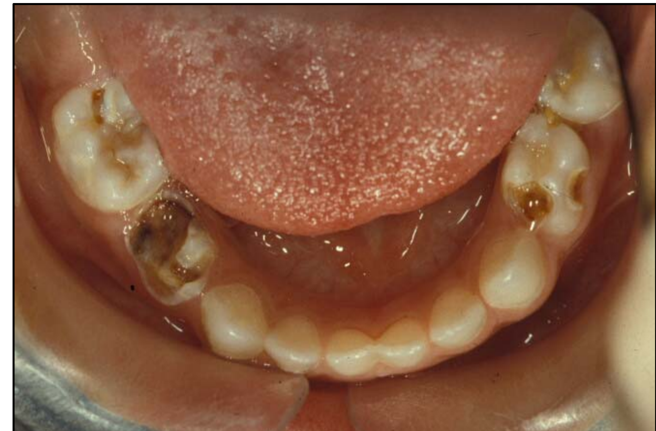
Challenges for dental public health

- Dental Caries
  - Whole population
  - Inequalities



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Challenges for dental public health

- The consequences of non-evidence based dental care
  - Huge numbers of items of treatment are provided each year
  - Many treatments are irreversible – leave a long lasting legacy
  - Costs
    - The individual
    - Society
    - Opportunity costs

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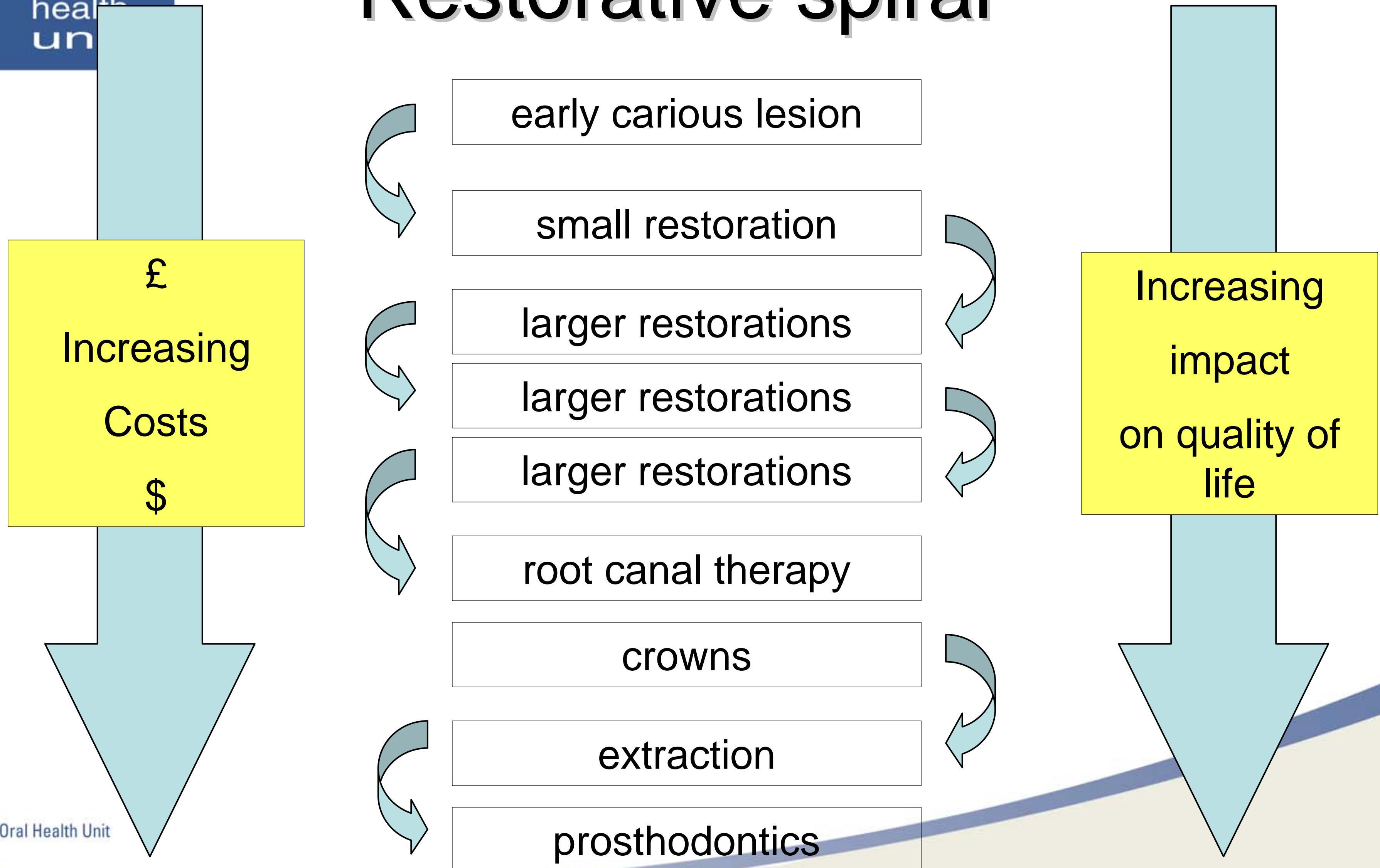
Restorative spiral



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Dental Practice Board

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Common and costly treatments

(England over 18s)

Treatments	Number of items (millions)	Costs (£ millions)
Examination	20	145
Scale & Polish	13	133
Radiographs	8	44
Fillings	15	179
Endodontic therapy	1	48
Crowns\bridges	4.5	196
Dentures	2.5	108

Source: DPB Digest of Statistics 2002/3

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Summary

- National Health Services in England
  - 26 million patients registered (55% of the population)
  - 25 million items of dental treatment are delivered by dentists each year
- How many can be prevented?
- How many are necessary?
- How many can be substituted with simpler, less invasive, less costly treatments?

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The Agenda – delivering evidence based services

- Reviewing the current evidence base
- Obtaining new evidence on common and costly treatments
- Changing practice

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Reviewing and updating the evidence base

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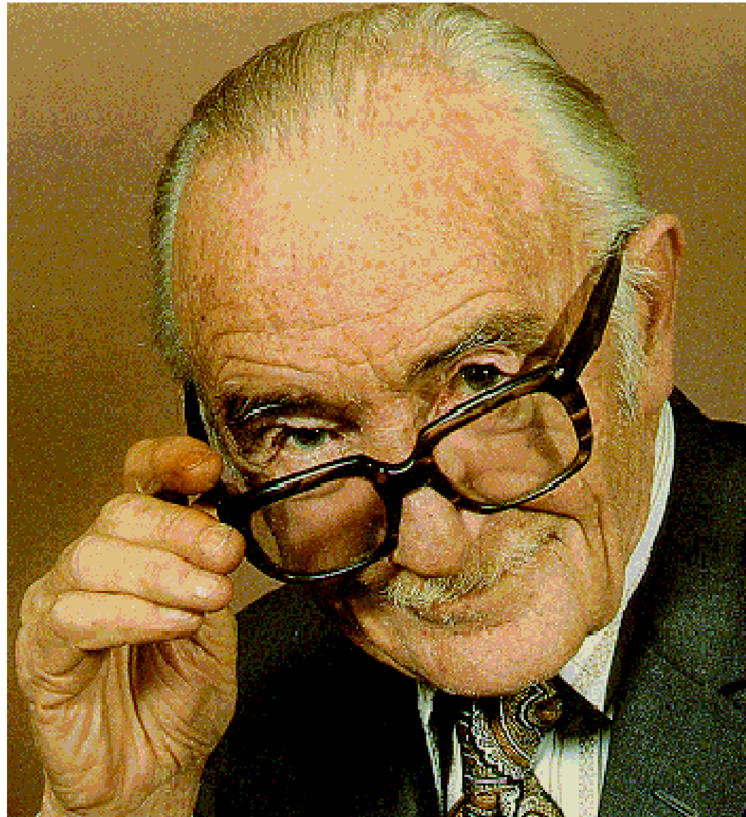
The Importance of the Cochrane Collaboration



Professor Archibald Leman Cochrane, CBE FRCP FFCM, (1909 - 1988)

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Cochrane Oral Health Group

- http://www.cochrane-oral.man.ac.uk/
- International movement – primary source of evidence
- Systematic reviews of randomised control trials
- Systematic reviews must underpin health services research
- Cochrane protocols shape future trial design

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Results of completed Cochrane reviews

- Recall intervals for oral health in primary care patients (Beirne et al.)

  'There is insufficient evidence to support or refute the practice of encouraging patients to attend for dental check-ups at 6-monthly intervals'

- Routine scale and polish for periodontal health in adults (Beirne et al.)

  'The research evidence was of insufficient quality to reach any conclusions regarding the beneficial and adverse effects of routine scaling and polishing'

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Obtaining evidence

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Obtaining evidence

- Well-designed, adequately powered, well-conducted randomized control trials
- Delivered where the majority of care is provided – General Dental Practice
  - Representative clinicians
  - Representative patient populations
  - Attainable results

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How do we produce change?

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Health Services Research

- Research is embedded in the planning and commissioning of services
- The results should inform a decision
- Action to change the service for the better should follow

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NHS dental services in England

- Approximately 70% of dentists earn 70% of their income from the NHS
- 95% of NHS work delivered by generalists
- Old National Contract
  - Fee-for-item
  - Non-cash limited budget
  - More or less complete autonomy

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New arrangements from April 2006

- Funding devolved to local health bodies
- Cash limited budget
- Service commissioned by local health bodies through contracts with local providers
- Loss of autonomy for dentists
- Commissioning according to
  - Need
  - Evidence

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Drivers and Barriers for Change

Drivers

- Improving health
- Costs – effective use of public money

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Drivers and Barriers for Change

Drivers

- Improving health
- Costs – effective use of public money

Barriers

- Details of the contract
- Professional reticence
- Public and (therefore) political expectations and demands

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What is an evidence based public health approach?

"the integration of the best research evidence with public health expertise and society's values"

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How can we make this happen in practice?

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Increase research outputs

- Establish partnerships between service commissioners and academics
- Develop the infrastructure to deliver research
  - Research practices
  - Workforce development
- Resources
- *Best Research for Best Health (Department of Health 2006)*

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Effective methods of public engagement

- Participate in research agenda and commissioning decisions
- Public forums
- Patient panels
- Local government scrutiny committees
- Constructive engagement with the media
- Distinction
  - Dentistry for health
  - Dentistry for appearance

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DPH development

- Develop DPH skills and expertise in managing the process
- High level support from leaders in the NHS
- Commissioners and academics working together
- Leadership within the profession
- Public and media engagement
- Policy makers to take brave decisions

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Implications

- Downsizing of dental services?
- Skillmix – do you need expensively trained and expensive to pay dentists to deliver simpler, less invasive treatments?
- Revisit workforce planning

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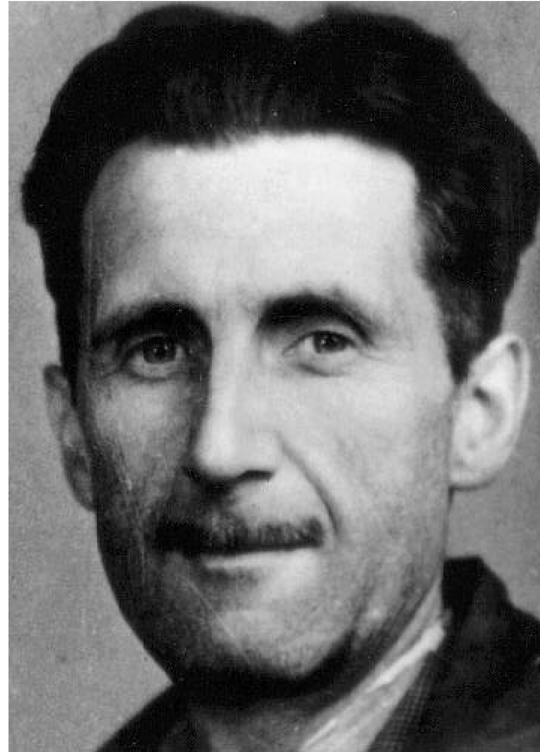

Eric Blair 1903-1950

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Will this happen?

- In England requires strong leadership from dental public health

- What about the US?
  - If there is strong evidence showing common treatments are ineffective will it bring about change?
    - For the affluent population with health insurance?
    - For the poor population without health insurance?

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