



Department of Family Practice

The need for Primary Care Research to Provide the Evidence Base for Future Practice

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UBC



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Why a few hours work may change the lives of hundreds of thousands of people





Key Points

- GP's can do research
 - GP's can do really important research
1. GP's can publish their research in the Lancet, BMJ and NEJM
 2. GP's have to be really smart
 3. Do the right study to answer the question



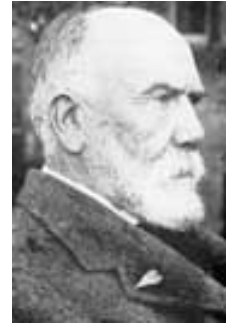


The Impact of Primary Care Research

- Our patients are different
 - Undifferentiated symptoms at an early stage of disease “UNCERTAIN”
 - No diagnostic label
 - In the community



Sir James Mackenzie



- At the end of the 19th century Mackenzie,
- Working class general practice in Burnley,
 1. Discovered heart block,
 2. He invented the polygraph, forerunner of the electrocardiograph,
 3. He established a GP research unit at St Andrew's - in 1919'



Why I went into General Practice

- 1913 MacKenzie was appointed Physician in Charge of the first cardiac department in the UK at the London Hospital.





Doing First

- Obesity causes problems
- Questionnaire and weighing
- Hand delivered the envelopes
- Examined all patients myself
- Enthusiasm much greater than knowledge
- Many missed opportunities
- But good training for marathons



Sore throat and antibiotics

- Antibiotics shorten the duration of symptoms of sore throat
- by about sixteen hours overall.
- (Chris Del Mar [Med J Aust.](#) 1992 May 4;156(9):644-9.



What research should we be doing?

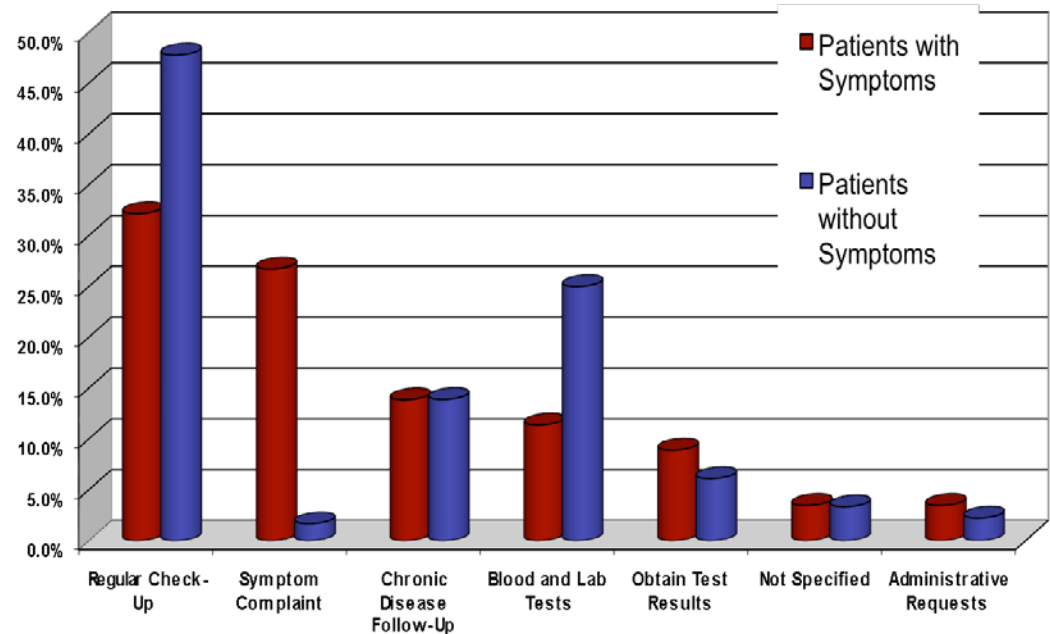
- Commonest Questions We ask ourselves in clinic
 - The most frequent were related to diagnosis (53%) and treatment (26%).
 - What is the cause of this symptom?
 - What is the cause of this sign?
 - Is this therapy more effective than that?





Symptoms

- 410 patients over 3 months.
- 202 patients (52.9%) reported 790 symptoms.
- Patients with symptoms had 3.9 symptoms/patient (sd 3.5)





University of Southampton

United Kingdom

- In acute otitis media in children <10 years:
- Immediate antibiotics provided benefits compared with delayed prescribing
- A wait and see approach is feasible, acceptable to parents, and should substantially reduce use of antibiotics

Paul Little et al **BMJ** 2001;322:336-342(10 February)



Why use chlormaphenicol

- Rose P, et al “Chloramphenicol treatment for acute infective conjunctivitis in children in primary care compared with placebo showed no difference.”
- **The Lancet** (2005) 366:9479.



The “best” evidence depends on the type of clinical question

1. What is the experience e.g. of illness?
 - Qualitative
2. What is frequency or prevalence of a problem?
 - Cross sectional study
3. What are the causes, what is the prognosis?
 - Cohort study
4. How can the problem be alleviated/treated?
 - Randomised controlled trial (RCT) or Systematic review of RCTS
5. How well does the diagnostic test identify/exclude people with the disease?
 - Cohort or cross-sectional study



Observe in Your Practice

- See patients and question what is happening
- Prevalence, incidence, pathology
- Look for a case series in your practice
 - it may be important
- Talk to colleagues
- Keep a notebook





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Faculty of Medical and Health Sciences

The University of Auckland

New Zealand

Two brief questions can screen for depression in primary care.

Bruce Arroll, et al

BMJ 2003;327:1144-1146 (15 November), doi:10.1136/bmj.327.7424.1144

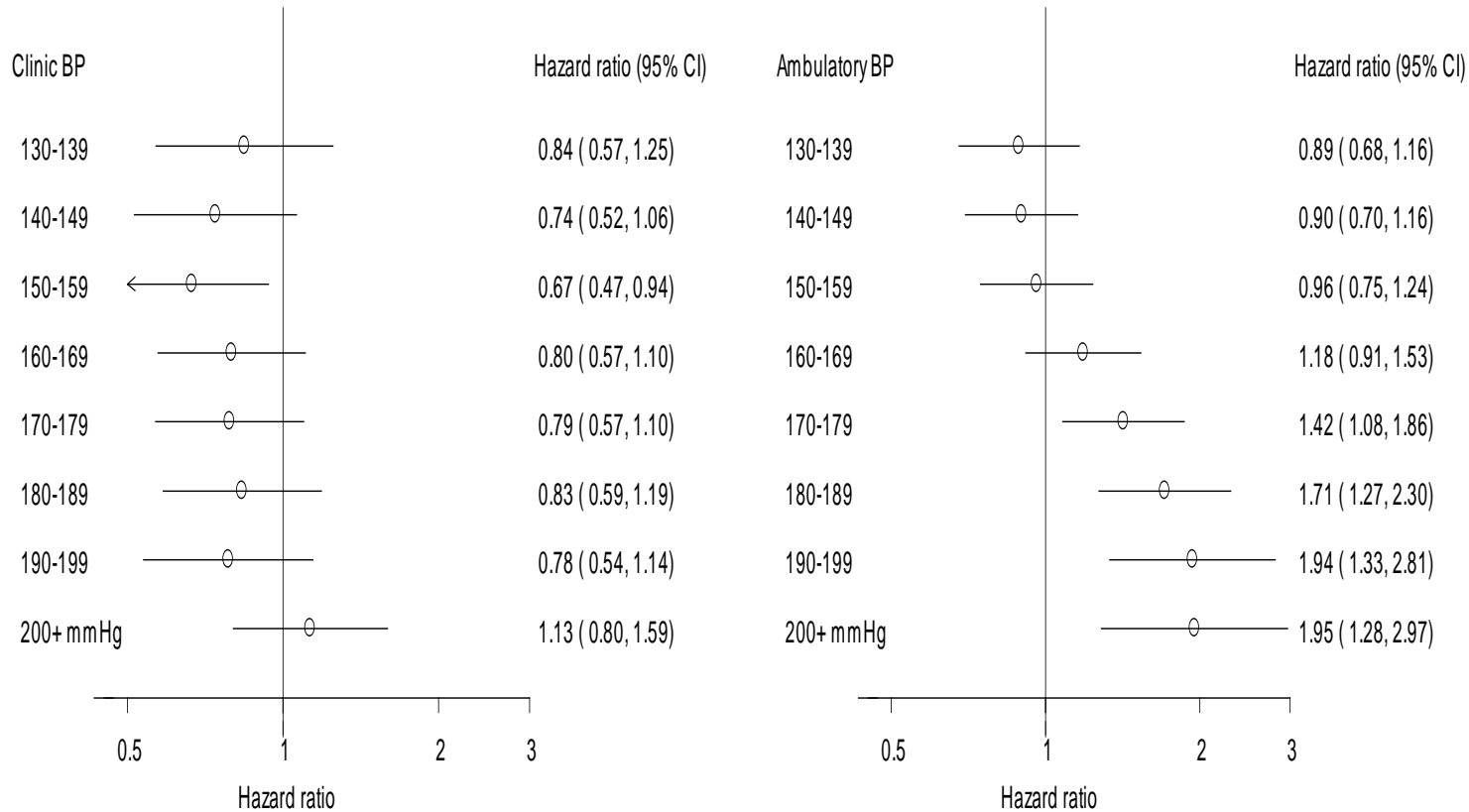


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Hazard ratios (95%ci) for mortality by systolic blood pressure adjusted for age and gender





Translation: Canadian Hypertension Guidelines

- Ambulatory blood pressure monitoring is a better predictor of risk for outcomes such as cardiovascular and all cause mortality
- section seven of the NICE Hypertension Guideline 2011.





Inclusion criteria don't match my patients

- Our Patients
- Multimorbidity
- Polypharmacy
- Older
- Non-adherence
- Trials
- Single disease
- Not many drugs
- <75 years
- Compliant



Databases

- Use EMR data to answer the questions where we need real patients
- Prevalence
- Incidence
- Outcomes





GPRD -> CPRD

- It contains records from over 12 million patients contributing 64 million person years of prospectively recorded high-quality primary healthcare data.
 - NSAIDs and MI PMID: 18624902
 - Discontinuation of Plavix and poor outcome PMID: 21875855





James Cook University
Australia

Sutures can get wet!

Prospective randomized controlled trial of wound management in general practice.

Clare Heal et al

BMJ 2006;332:1053-1056 (6 May), doi:10.1136/bmj.38800.628704.AE (published 24 April 2006)



The Scottish School of Primary Care

2008 BMJ Research Paper of the Year :

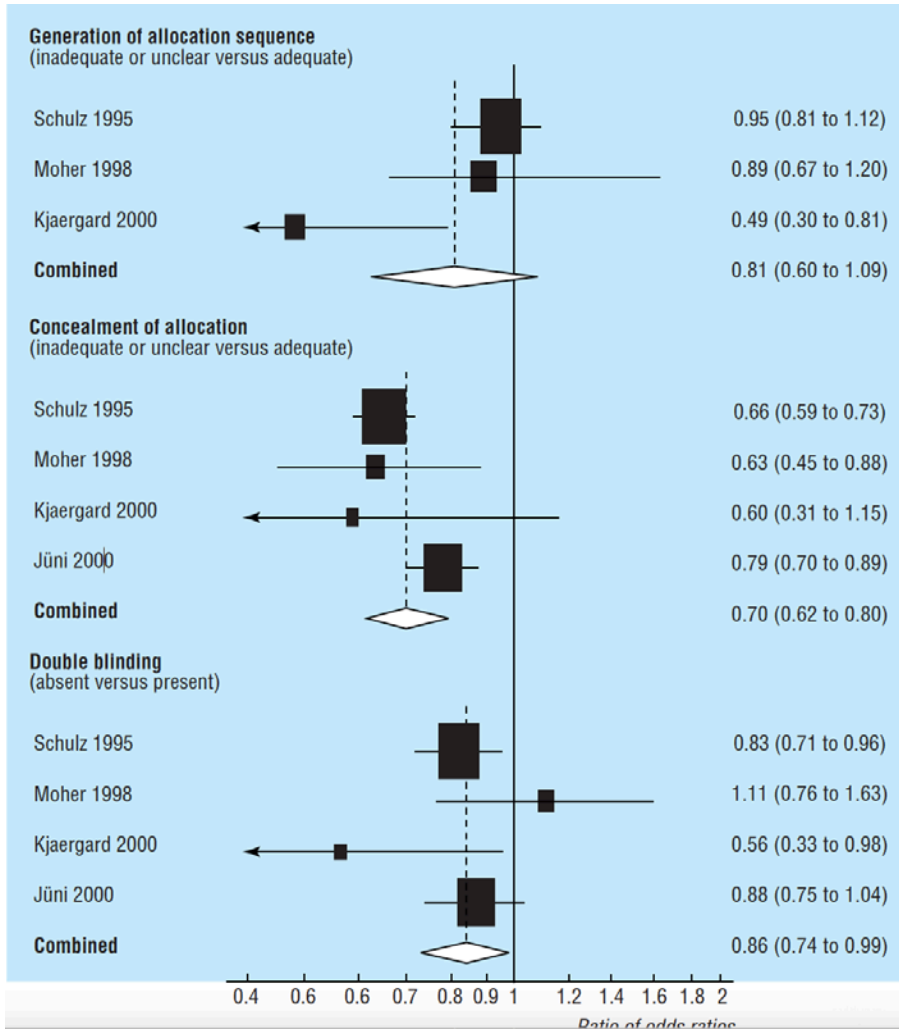
In Bell's palsy
steroids work as
well as antivirals.
85% of Scottish GP's helped recruit patients

Frank Sullivan et al

New England Journal Medicine 2007 Volume 357:1598-1607



Does the way the trial is performed matter?





University research

- We need to discover
- do we need to treat mild fever in children?
- we need primary care research
- we need career paths for clinician researchers & educators - explicit and mentored





Research

- What do you need to know in practice?
- Generate the research agenda
- Discuss it locally, within local groups, regionally, and across the province
- Create Research networks -> Big Data
 - machine learning & possibly neural networks
- Create Research training - MSc & PhD





UBC – what do you think is our list?

- Activity
- Women's health
- Chronic Disease
- Rural Health
- Genetics





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Thank You

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