Occurrence of Hip Fractures and Socioeconomic Position (Bacon and Haddden) 2000

40% of injury admissions in elderly

- Highlighted racial differences in hip fracture (2-4 times more likely in white population than black)
- Higher fracture rates in females, old age and income
- Risk factors related to social class:
  - Tobacco use
  - Poor diet
  - Lack of exercise
  - Inadequate preventative care

1. **Aims /Objectives of the study**

Aim was very clear: to determine hip fracture incidence in the older U.S. White population as a function of their socioeconomic position

2. **Population / patient group / cell type /animal model**

Well defined population.

Population was all 50+ who were admitted with fracture of hip to main hospital in Nottingham:

- What about patients that don’t consult? – authors suggest 5% don’t consult
  - Access problems
  - Fear of doctors
  - Distrust of medicine

3. **Study design (observational study/clinical trial/lab study/animal experiment)**

- Retrospective study
- Deprivation is a dynamic concept
  - Degree of deprivation may change throughout study
  - Does not duration of deprivation
  - Does not consider past deprivation

Used ZIP codes to assess income. Took average for area.

- Very heterogeneous – huge range

4. **Size of study (number of patients/participants in any each group or size of population)**

5362 – large sample size

Exclusion criteria were reasonable:

- Federal hospitals
- Principal diagnosis not hip fracture – what about multiple trauma, complications of previous fractures?

5. **Intervention (or treatment / test and any comparison or control group)**

Socioeconomic status is difficult to blind for – different responses from doctors

6. **Were any statistical tests used? How were groups or results compared?**
8. Outcome measure

9. Main results

- Decrease in rates of fracture with increasing income
- 31 in 10,000 for high income, 51 per 10,000 for low income
- Linear decline in fracture incidence with increasing class

10. Sources of Bias

11. Comments

- Vague at times – “probably represent less than 5% of total hip fractures”
- Discharges recorded as “not-stated” were considered white – over-representation of white population
- Multiple counts for readmission