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Combination Polypharmacy in Primary Care

Stewart Mercer FRCGP (UK)

Professor of Primary Care Research

The Scottish School of Primary Care

Multimorbidity in Scotland

The Scottish School of Primary Care's Multimorbidity Research Programme.

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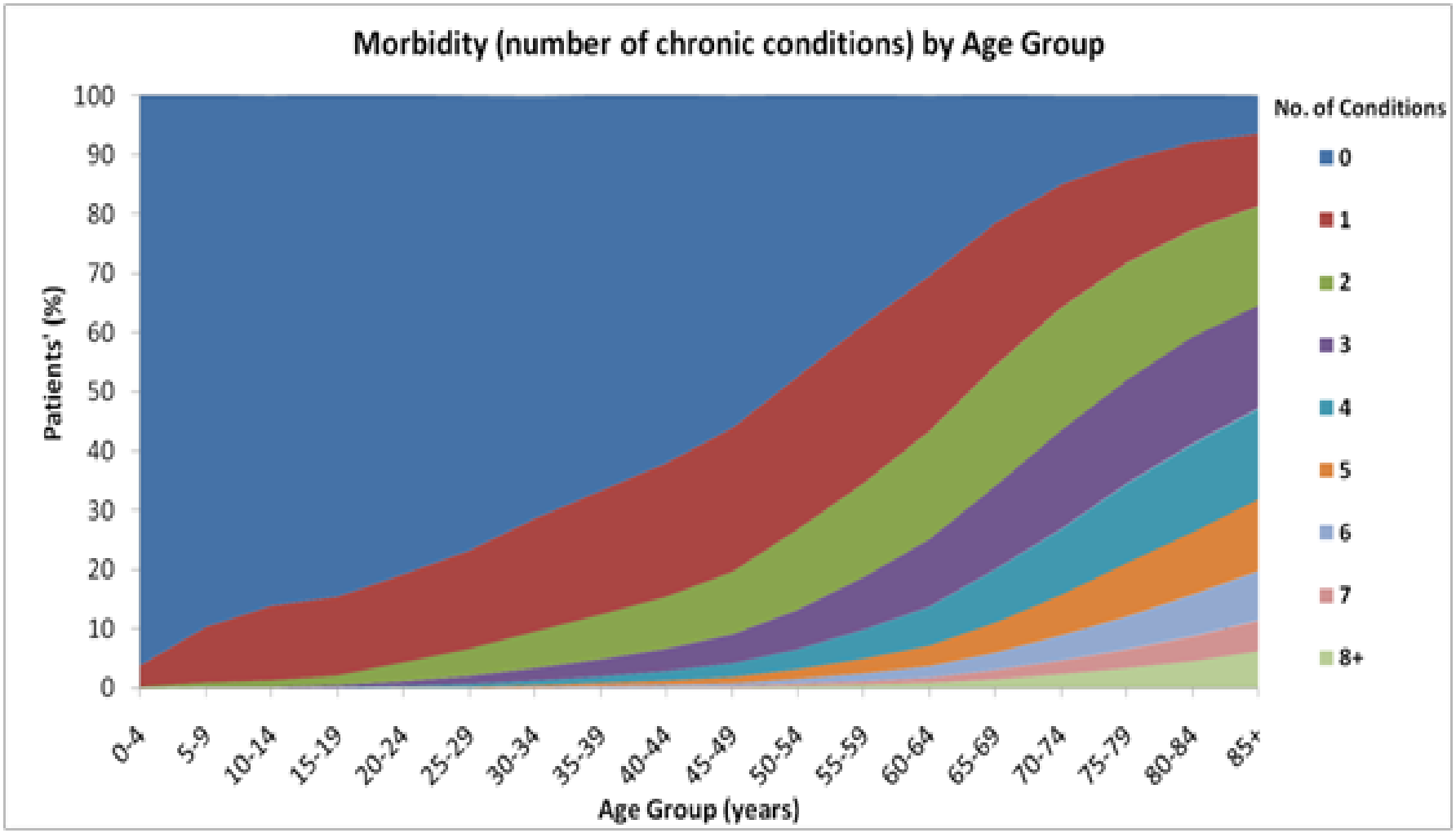
The context of primary care

- Worldwide move towards strengthening primary care (e.g., WHO: Now More than Ever)
- Countries with strong primary care systems have better outcomes at lower cost (Starfield)
- Burgeoning rise in chronic conditions and multimorbidity requires a holistic, generalist response
- In the UK, primary care accounts for 90% of NHS activity

The context of multimorbidity

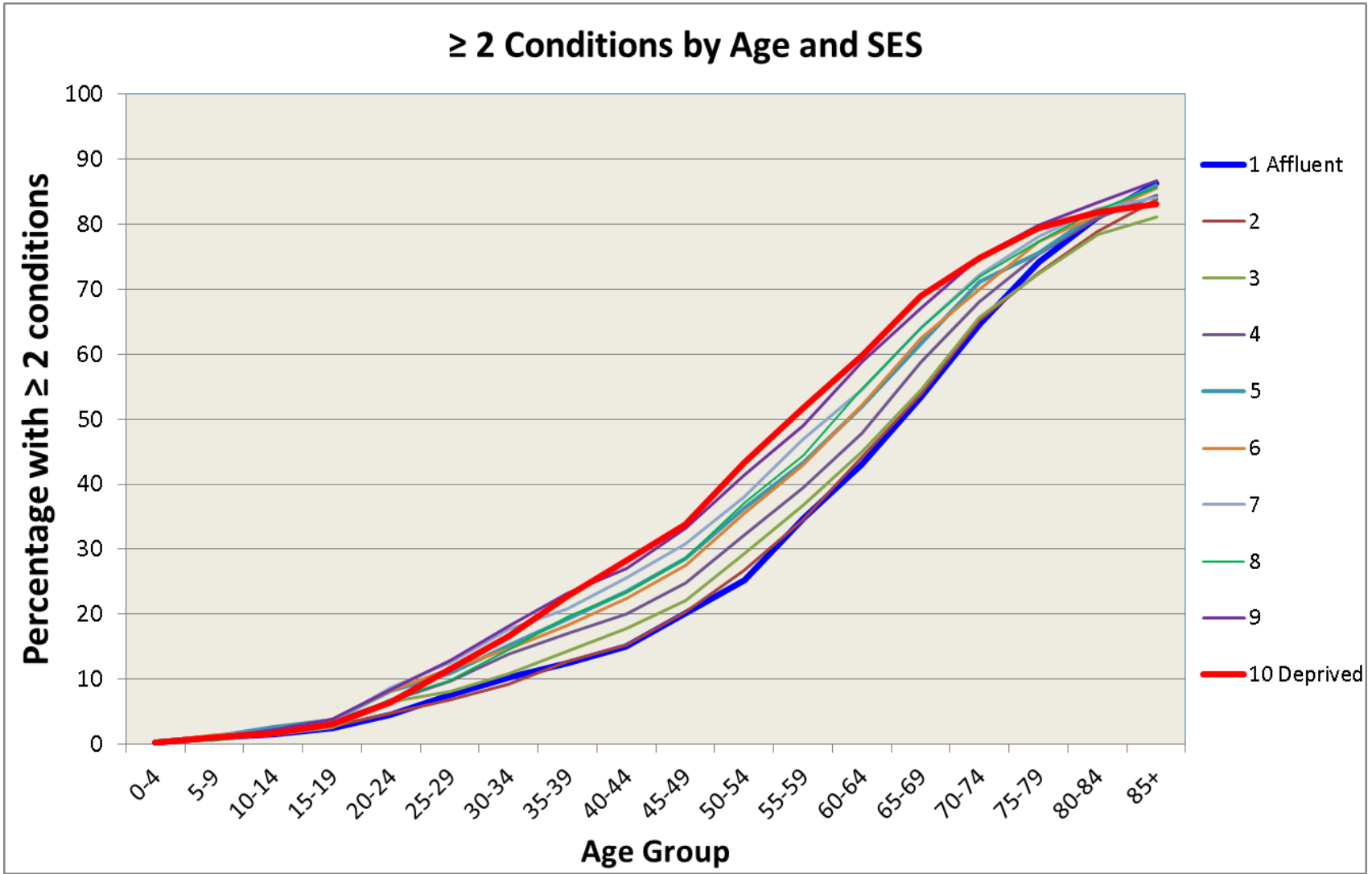
- Two or more long-term conditions
- Varies by country and depends on what conditions are included
- Multimorbidity may include:
  - Concordant conditions (e.g., CHD, diabetes, hypertension)
  - Discordant (e.g., CHD, arthritis, COPD)
  - Physical and mental disorders

Multimorbidity is common in Scotland

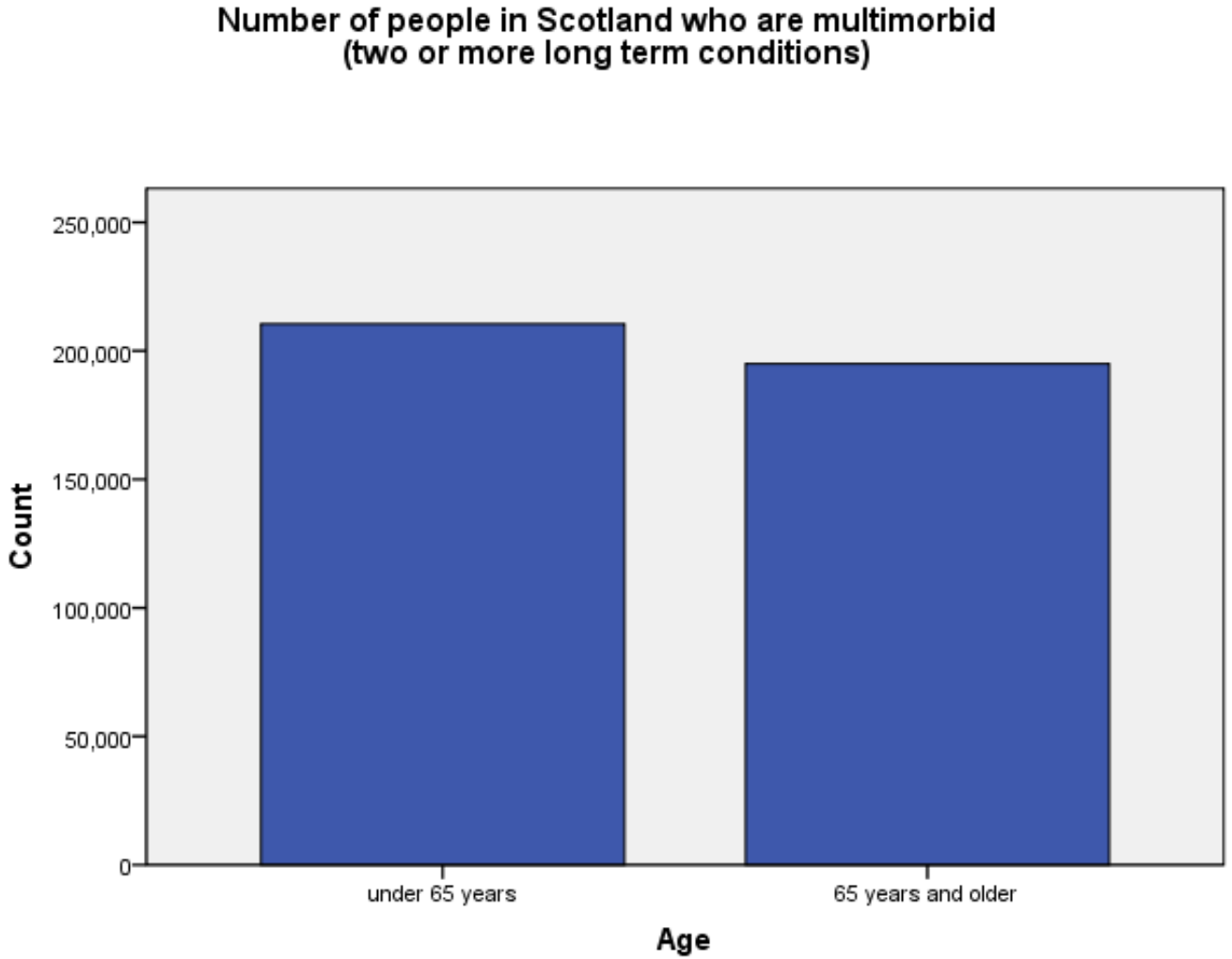


- The majority of over-65s have 2 or more conditions, and the majority of over-75s have 3 or more conditions
- More people have 2 or more conditions than only have 1

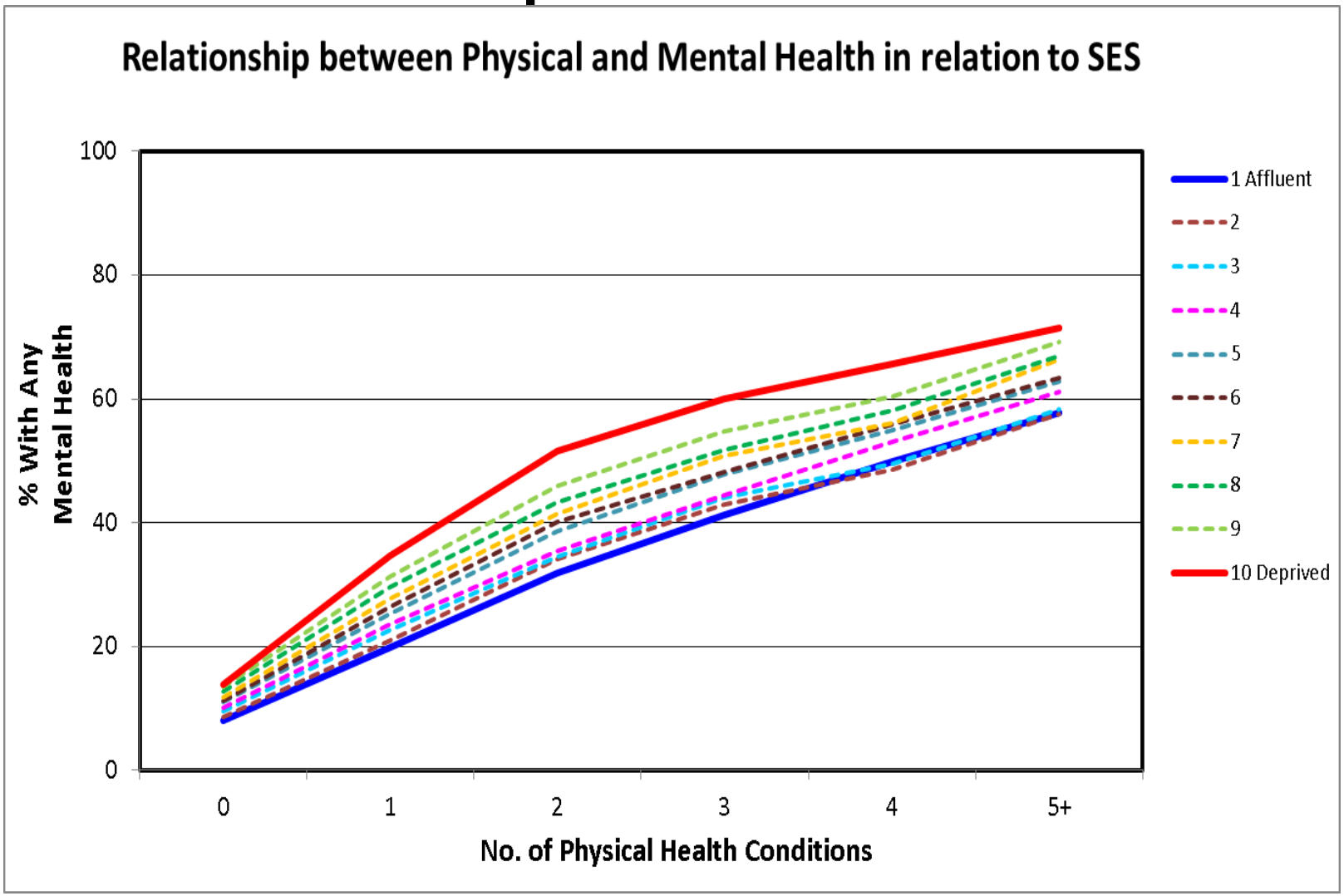
Multimorbidity is associated with age and also socio-economic status



There are more people in Scotland with multimorbidity below 65 years than above



Mental health problems are strongly associated with the number of physical conditions that people have, particularly in deprived areas



Primary care and the polypill

- Primary prevention
  - Implementation would rest with primary care with significant implications for workload and thus costs
  - Controversial, unlikely to be implemented any time soon at national policy level
- Secondary prevention
  - Switch those on 3 or more target drug already onto a polypill
  - Possibly a more attractive option initially

Advantages of switching to a polypill

- Reduce Treatment Burden
- Increase Adherence
- Reduce Costs

- We need evidence of all three of the above and all 3 need to be sustainable

Why do we need to reduce treatment burden?

- Dramatic increase in polypharmacy

Prescription burden reduces adherence

Association between prescription burden and medication adherence in patients initiating antihypertensive and lipid-lowering therapy

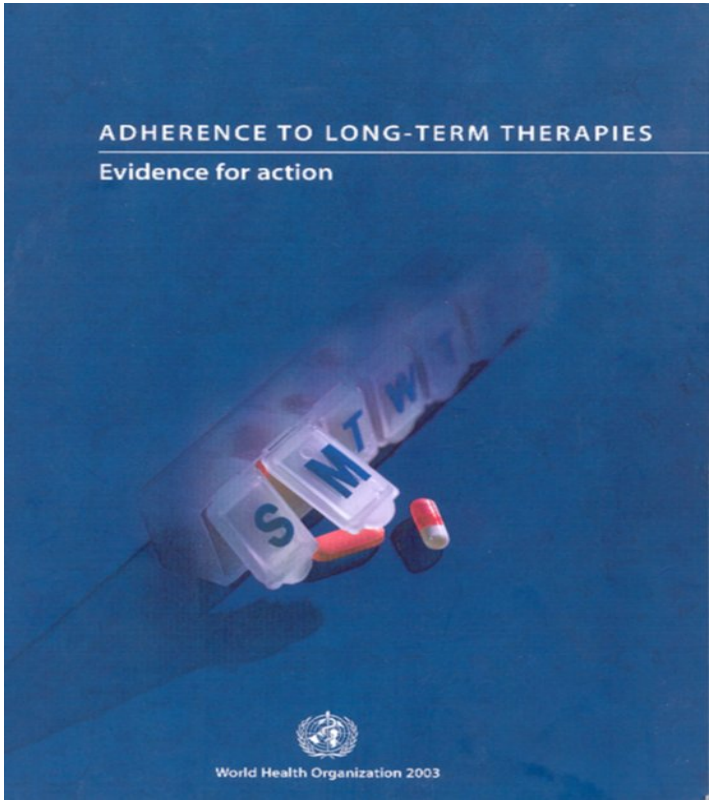
Joshua S. Benner, Richard H. Chapman, Allison A. Petrilla, Simon S. K. Tang, Noah Rosenberg and J. Sanford Schwartz **AJHP 2009; Vol. 66, Issue 16, 1471-1477**

"Among patients in a managed care database taking antihypertensive and lipid-lowering medications, adherence to those regimens became less likely as the number of prescription medications increased. Patients with 0, 1, and 2 prior medications; 41%, 35%, and 30% of patients were adherent, respectively, to antihypertensive and lipid-lowering therapy. Among patients with 10 or more prior medications, 20% were adherent."

Non-adherence to Medicines

- Estimated that between 30 -50% medicines prescribed for long term illnesses are not taken as directed

- Effective interventions are elusive (Haynes, *et al.* 1996, 2003 - series of Cochrane reviews of efficacy of adherence interventions)



[1]World Health Organization Report 2003.

[2]Horne *et al*. Concordance, adherence and compliance in medicine taking. NIHR SDO 2006.

[3]NICE. Medicines concordance & adherence:involving adults and carers in decisions about prescribed medicines 2008/9

Would a cardiovascular polypill reduce treatment burden?

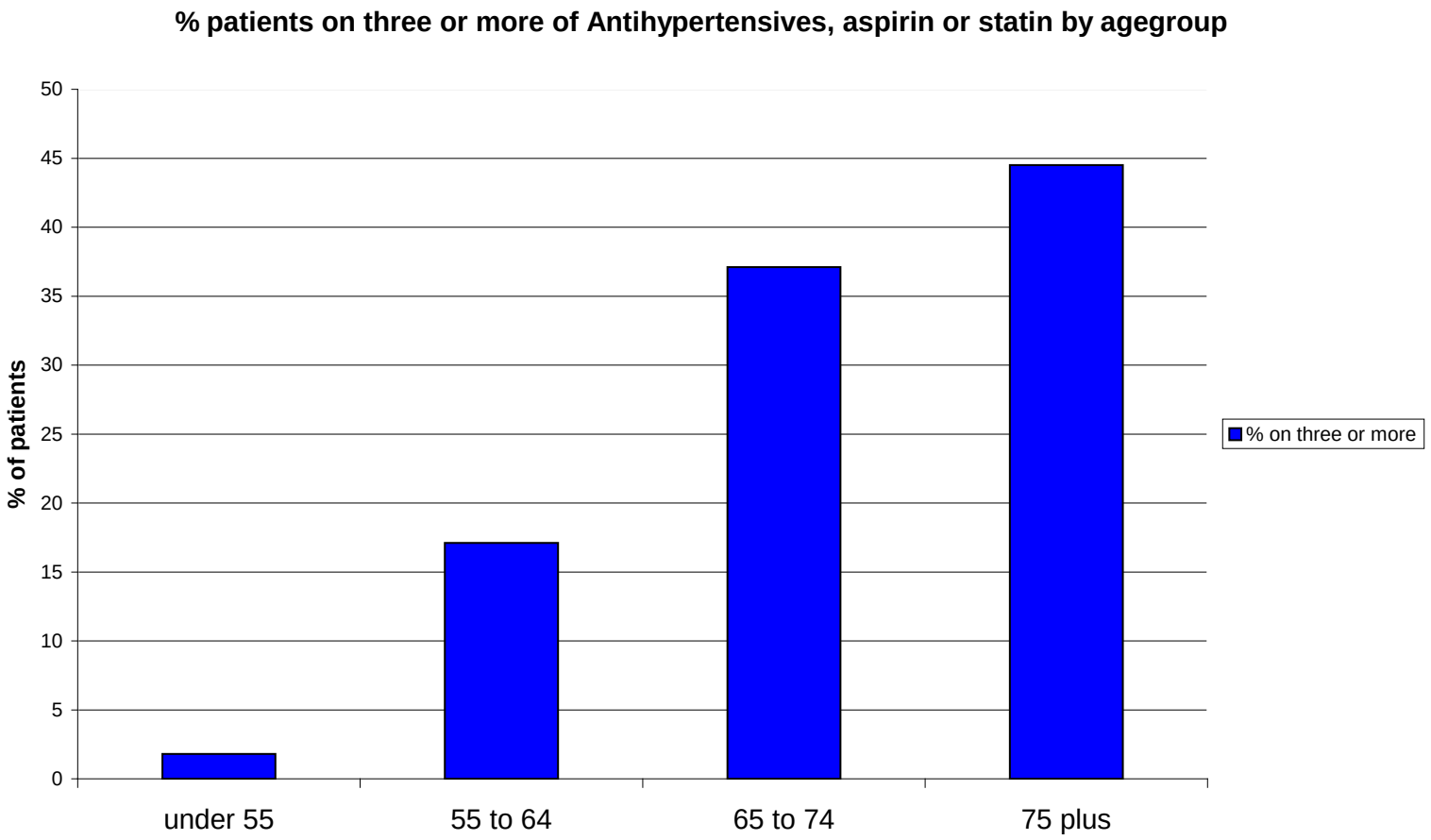
10,000 primary care patients

- All ages
- Distributed evenly by SES
- 40% 1 or more chronic diseases
- 22% 2 or more

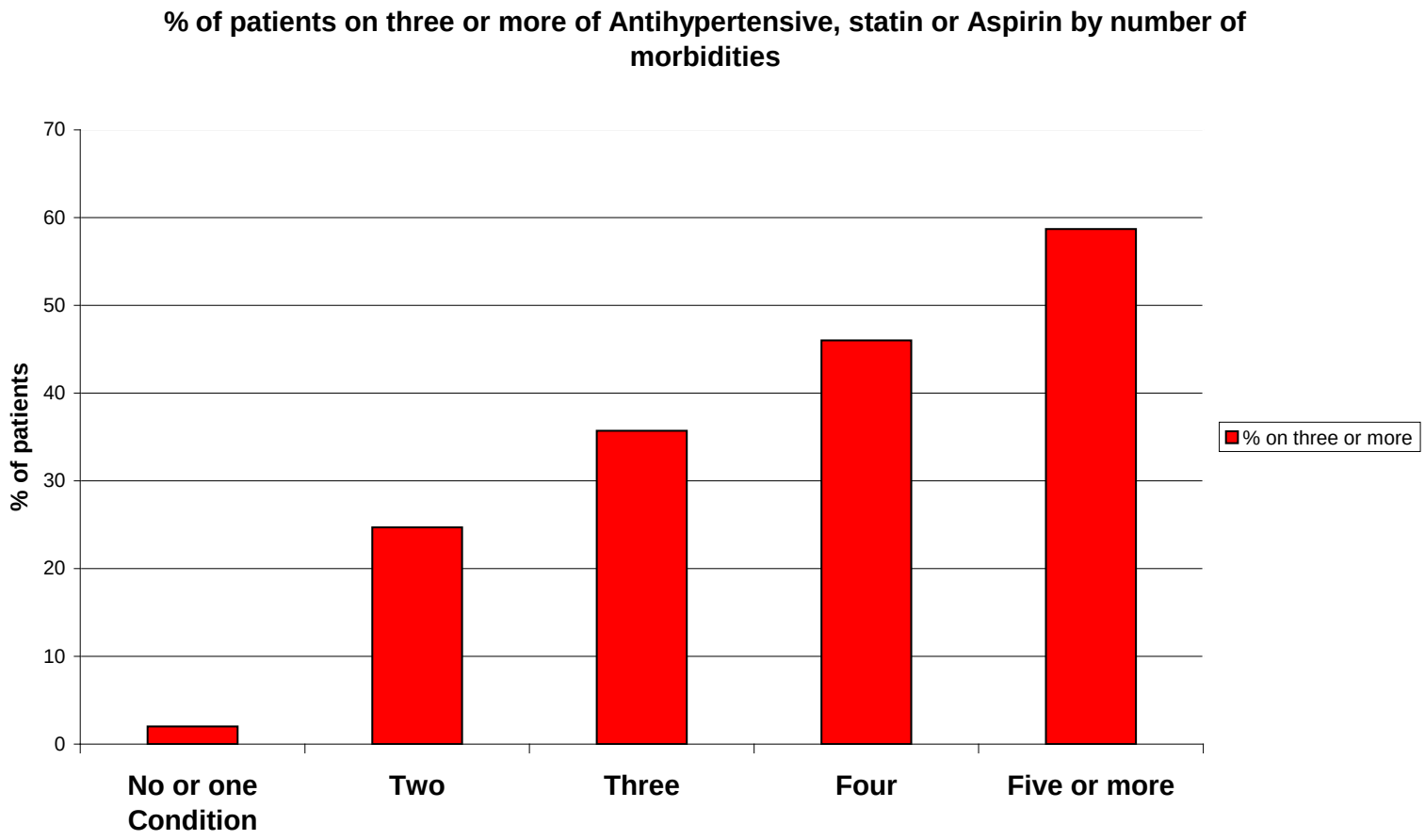
- 10% of total population ‘polypill eligible’

(on 3 or more AHs or 2 AH plus statin or aspirin or 1 AH and statin and aspirin)

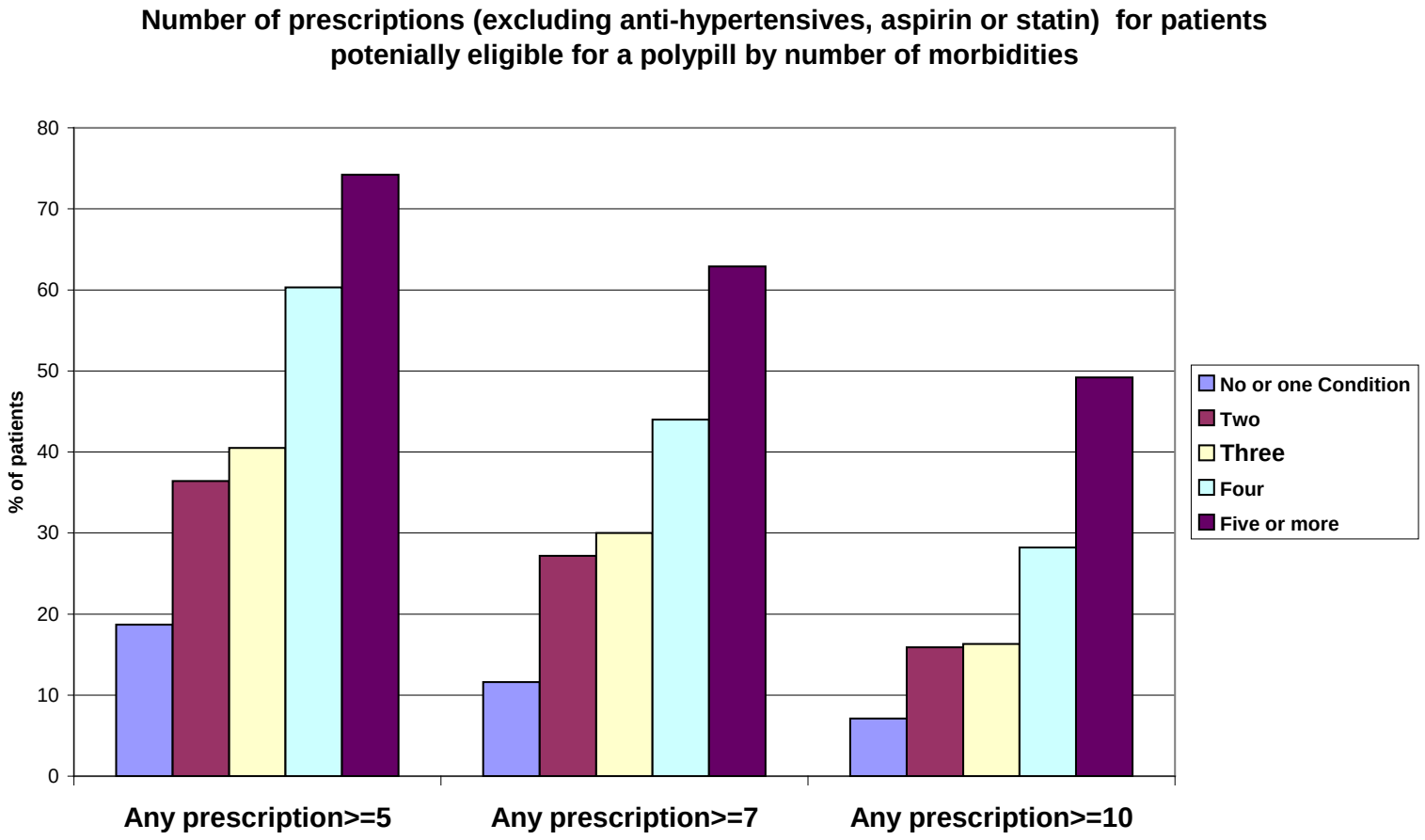
Polypill ‘eligibility’ increases with age



And multimorbidity…



And polypill eligible patients are on lots of other tablets…



Summary and conclusions

- The implementation of cardiovascular polypills needs to be considered in the context of both **multimorbidity** and **primary care**
- Implementation of a polypill for primary or secondary prevention may substantially increase **workload** on primary care staff
- Polypills as a substitute for current prescribing in secondary prevention is an attractive option and could **reduce treatment burden** and increase adherence

- However, in the context of current levels of multimorbidity and polypharmacy (for non-cardiovascular conditions), the **impact is unclear**
- **Acceptability** to patients (outside of RCTs) and GPs is **not known**
- **Primary care-based health service research is required** to evaluate the possible implementation of polypills into routine care