Multimorbidity: an NIHR SPCR funded research programme

Professor Chris Salisbury

**Bristol:** Chris Salisbury, Sandra Hollinghurst, Alyson Huntley, Sam Brilleman, Sunita Procter

**Manchester:** Peter Bower, Gavin Daker White
Why multimorbidity?

• Increasingly elderly population
• Living with multiple long term conditions
• Increasingly standardised care on single disease lines
Epidemiology of multimorbidity in England

Salisbury C et al. Brit J Gen Pract 2011

- General Practice Research Database (GPRD)
- 100,000 adults aged >18, sample stratified by practice, age, sex, from 182 practices with deprivation scores
- Multimorbidity at index date 1 March 2005, followed up 3 years
- Multimorbidity:
  - 17 QOF diseases
  - 114 ACG diagnostic clusters
Percentage with > 1 QOF condition by age and sex

16% have multimorbidity (17 QOF diseases)
57% have multimorbidity (115 ACG diseases)
Percentage of population with QOF multimorbidity by deprivation quintile

![Bar chart showing percentage of population with QOF multimorbidity by deprivation quintile. The quintiles are labeled 1 through 5, with quintile 5 being the most deprived. The percentages range from 0% to 20%. The chart shows an increase in percentage from quintile 1 to quintile 5.](chart.png)
People with multimorbidity account for 16% of the population but 33% of all consultations.
Predicting primary care costs
Brilleman S et. J Health Economics 2014

Primary care costs in relation to number of chronic disease diagnostic clusters

% patients
Cost ratio

No. of chronic diseases
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18+
Complex consultations
Salisbury C et Brit J Gen Pract 2013

• Cross-sectional study of 229 video-taped general practice consultations

• Developed method to code number and type of problems discussed Procter S et al BMC Family Practice 2014
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- Mean of 2.5 (95% CI 2.3- 2.6) problems per consultation
- 76% of consultations involved more than one problem
- 42% of consultations involved at least 3 problems
- 72% included multiple disease areas
Measures of Multimorbidity and Morbidity Burden for Use in Primary Care and Community Settings: A Systematic Review and Guide

Alyson L. Huntley, BSc, PhD
Rachel Johnson, MRCGP
Sarah Purdy, MPH, MD, FRCGP
Jose M. Valdenas, MD, PhD, MPH
Chris Salisbury, MSc, MD, FRCGP

1Academic Unit of Primary Health Care, School of Social and Community Medicine, Bristol University, Bristol, England
2Health Services and Policy Research Group, Department of Primary Health Care, Oxford, England

ABSTRACT

PURPOSE Many patients consulting in primary care have multiple conditions (multimorbidity). Aims of this review were to identify measures of multimorbidity and morbidity burden suitable for use in research in primary care and community populations, and to investigate their validity in relation to anticipated associations with patient characteristics, process measures, and health outcomes.

METHODS Studies were identified using searches in MEDLINE and EMBASE from inception to December 2009 and bibliographies.

RESULTS Included were 194 articles describing 17 different measures. Commonly used measures included disease counts (n = 98), Chronic Disease Score (CDS)/RxRisk (n = 17), Adjusted Clinical Groups (ACG) System (n = 25), the Charlson index (n = 38), the Cumulative Index Illness Rating Scale (CIRS; n = 10) and the Duke Severity of Illness Checklist (DUSOI; n = 6). Studies that compared measures suggest their predictive validity for the same outcome differs only slightly. Evidence is stronger for the ACG System, Charlson index, or disease counts in relation to care utilization; for the ACG System in relation to costs; for Charlson index in relation to mortality; and for disease counts or Charlson index in relation to quality of life. Simple counts of diseases or medications perform almost as well as complex measures in predicting most outcomes. Combining measures can improve validity.

CONCLUSIONS The measures most commonly used in primary care and community settings are disease counts, Charlson index, ACG System, CIRS, CDS, and DUSOI. Different measures are most appropriate according to the outcome of interest. Choice of measure will also depend on the type of data available. More research is needed to directly compare performance of different measures.


202 citations in 4 years
Complex care


School for Primary Care Research

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3D Trial: improving management of multimorbidity in general practice

- **Design:** Cluster RCT; process and economic evaluation
- **Collaboration** between Bristol (PI Salisbury), Manchester (PI Bower), Scottish School Primary Care Research (PIs Mercer, Guthrie), RCGP
- **Funded** NIHR HS&DR programme £1.8M
3D Intervention

Access to hospital general physician

Identification & Prioritisation

Search software
Flagged records
3D Card

Improving Integration

Co-ordinated, patient centred reviews

Improving continuity of care

Named GP/nurse
Longer appt times

‘3Ds’: Dimensions of health, Depression, Drugs

The 3D Study: Improving whole person care
3D Trial: improving management of multimorbidity in general practice

- **Participants:** Adults with 3 or more LTCs
- **Setting:** 33 practices in England and Scotland
- **Intervention:** 3D approach
- **Control:** Usual care
- **Primary outcome:** Health related quality of life
Conclusions

• A coherent programme of research
• Addressing aspects of an important problem
• Advantages of focused funding
• Building collaboration
• Impacting on guidance
• Will hopefully benefit patients