

The Challenge of Multimorbidity

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“Hearts and Minds” January 25th 2013



Overview

- Why multimorbidity is important
- Definitions
- Impact
- Current evidence and research
- Policy link

Clinical case

- 59 year old woman
- Living alone
- IHD; Depression; Neurological condition; Arthritis
- Multiple medications including warfarin

- Presents with pain in her right shoulder

“Just remember Dr Marshall, my life is like a swimming pool full of sewage and your job is to push me up into the shallow end.”

Martin Marshall,
McKenzie Lecture, 2010

Multimorbidity: Definitions

- Several approaches possible
 - Coded conditions, specific scoring systems, medication related
 - Record vs patient report
 - Setting dependent
- Concept severity
- Overlap with frailty
- Link with socioeconomic deprivation

Multimorbidity: Prevalence

- Two or more chronic conditions
- In absolute terms: more middle aged people with MM than elderly
- Rates vary from 40% to 98%
- Ireland:
 - 66%, aged > 50, in GP setting
 - MM x3 aged 45-64, GMS eligible: mean 7.5 meds; mean 11 GP visits per year

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Deprivation and mental health

- Occurs 10-15 years earlier in most deprived areas
- Deprivation is associated with MM that includes mental health disorders (prevalence 11% vs 6%)
- Prevalence mental health disorder increases with increasing numbers physical health conditions
 - Barnett et al. Lancet May 2012
- Prevalence of probable depression increases with increasing numbers of chronic conditions
 - 1 condition 23% vs 5 or more conditions 41%
 - Gunn et al. Soc Psychiatry Epidemiol 2012

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“ When the mix of conditions experienced includes both physical and mental health problems, the poorly stitched seams of professional care are at their most threadbare” Mercer et al. BMJ 3 Sept 2012

Examples of interventions that work for diabetes/
CHD/ Arthritis and co-morbid depression

Stepped care programmes in USA, Katon et al

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Impact: Patients

- Premature mortality and morbidity
- Poorer QoL
- Challenging
 - Medications, physical functioning

- Concept of ‘Treatment Burden’
 - Minimally Disruptive Medicine

May et al. BMJ 12 Aug 2009

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Impact: System

- Higher rates polypharmacy with associated adverse effects
- Increased health service use, admissions and ED visits
- Costs: reducing avoidable complications for people with chronic disease by 10% could save \$40 billion
- Challenging for healthcare providers also

Multimorbidity: Measuring outcomes

- Physical health
- Mental health
- Psychosocial

- Patient-centred

- Responsive to change

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Multimorbidity: key issues

- Vulnerable patients within this group
 - Polypharmacy
 - Deprivation
 - Mental illness
 - High risk emergency admission
 - High service use and costs
- Need cost effective intervention to improve outcomes
- How to identify those in need of intervention (before it is too late)?

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Multimorbidity: What is needed?

- Care coordination
 - ‘Ordering the Chaos’
 - Who is responsible?
- Continuity of care
 - Information, management and relationship
- Extended consultation times
- Care at primary specialty care interface
 - Medicines management
 - Care transitions

Current evidence and research

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MM: HRB Centre for Primary Care Research

- Cochrane review
- Qualitative study with GPs and pharmacists
- Impact of multimorbidity:
 - Chronic respiratory disease
 - Diabetes
- Chronic ills of ageing
- Systematic review of risk score

- Exploratory trial 1
- Exploratory trial 2
- Cohort study
- RCT

Preclinical phase:
Theory

Phase I:
Modelling

Phase II:
Exploratory trial

Phase III:
Definitive RCT

Continuum of increasing evidence

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- **Cochrane review**
- Qualitative study with GPs and pharmacists
- Impact of multimorbidity:
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- Exploratory trial 1
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- Proposed cohort study and RCT

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Cochrane review of interventions to improve outcomes for patients with multimorbidity

- Ten studies; all RCTs (3407 patients)
- Eight included patients with a broad range of conditions though elderly; two focused on co-morbid conditions
- All recent studies and low risk bias
- Pooling and comparing outcomes a problem
- Identified types of interventions being tested

Intervention element	Study
1. Professional	
Health Educator	Eakin
Care manager (non-clinical)	Bognor
Clinical nurse managers	Boult, Katon, Lin, Sommers
Pharmacists	Krska
Social workers	Sommers
2. Financial	
No study	
3. Organisational	
Structured visits and/or care plans	Eakin, Bognor, Boult, Katon, Krska
Structured telephone contact	Eakin
Enhanced multidisciplinary team	Boult, Katon, Lin, Sommers
4. Patient oriented	
Self management support	Eakin, Boult, Lorig
Individual patient programme	Bognor, Boult
Patient education	Katon
Problem solving therapy	Lin
Peer support	Lorig

Cochrane review conclusions

- Limited research to date
- Focus on co-morbid conditions or multimorbidity in older patients
- Results suggest may be more effective to target interventions towards risk factors or specific functional difficulties. Organisational models such as Guided Care disappointing
- Need for clear definitions and appropriate outcomes

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- ~~Cochrane review~~
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Qualitative study of experiences' of GPs and pharmacists managing multimorbidity

- Focus groups with GPs and pharmacists
- Themes
 - Link to polypharmacy and ageing
 - Health systems issues relating to lack to time, interprofessional communication difficulties, and fragmentation of care
 - Individual issues from clinicians relating to professional roles, clinical uncertainty, and avoidance
 - Patient issues: ‘Not all need intervention’
 - Potential management solutions

Qualitative study of experiences' of GPs and pharmacists managing multimorbidity

- Idea of 'Pandora's box'
- “Like eating an elephant, bite off one chunk at a time”
- Hot Topics recommendation for GPs
 - Ask patient to prioritise

- Cochrane review
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RCT: Occupation based, self management programme for people with multimorbidity

- Participants (recruitment ongoing)
 - MM plus polypharmacy
- Intervention:
 - OT-led groups, physio and pharmacy input
 - Six weeks, 3 hour sessions
 - Goal setting
- Outcomes
 - ADL, Self-Efficacy, QoL, HADS

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Current HSE policy and multimorbidity?

- Chronic disease management
 - Integrated care
 - Multidisciplinary care
 - Support for self-care
- HSE MET working group report on training doctors to manage patient with multimorbidity

Single
conditions

Policy choices

- Support generalist approach
 - Medicines management
 - Focus on relevant interventions and outcomes
- Target high risk individuals
- Identify and intervene for vulnerable groups

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Summary

- Multimorbidity important
- Challenges
 - Defining and identifying individuals
 - Delivering effective interventions
 - Measuring outcomes
- International relevance
- Link to quality of care and cost agenda

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Questions

<http://www.hrbcentreprimarycare.ie/>

BMJ 2012 editorials

Refs

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C Teljieur, Smith SM, Paul G, Kelly A, O'Dowd T. Impact of multimorbidity in type 2 diabetes. (Submitted Diabetes Educator Nov 2011).

S O'Kelly, Smith SM, Connolly D, Wallace E, Lane S, O'Dowd T. Designing interventions for patients with multimorbidity: a feasibility study of a complex intervention with structured patient assessments and occupational therapy." (Submission pending – OT journal)

L O'Toole, D Connolly and S Smith. OT led group based intervention for patients with multimorbidity (Submission pending – OT journal)

E Wallace, SM Smith, B Dimitrov, T hinchey, K Bennett, T Fahey. A systematic review of the Probability of Repeated Admission (Pra) score in community dwelling adults.

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Additional slides

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- Cochrane review
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Impact on chronic disease: Diabetes

- Cohort of 424 patients with type 2 diabetes from RCT
- Chart review and self-report
- Results
 - 90% two or more conditions
 - 25% had five or more chronic conditions
 - 189 conditions
- Mismatch between self-report and chart review
- GP visits and medication numbers related to multimorbidity but not diabetes control

Cohort study: Adults > 70

- Approx 900 patients; 2 year follow up
- Focus on admissions and PIP
 - Identifying patients with multimorbidity at increased risk hospital admission
 - Validation of modified risk score [Pra score]
 - Qualitative work with patients and their families who have experienced recent admission exploring triggers and potential preventable measures

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