

Multimorbidity: hype *and* hope for preventive activities in patient centred General Practice

Jose M Valderas

Professor of Health Services & Policy Research

General Practitioner

Acknowledgements and interests

- **Barbara Starfield**



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- Barbara Starfield
- Threads and yarns

Institut für
Allgemein-
medizin
Johann Wolfgang Goethe-Universität, Frankfurt am Main

Menü

- Aktuelles
- Lehre
- Doktorarbeiten
- Forschung
 - Chron. Krankheit
 - » Klin. Entscheidung
 - Patientensicherheit
 - Qualitätsförderung
 - Forschungsmethodik
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THREADS AND YARNs, AN INTERNATIONAL MULTI-MORBIDITY RESEARCH NETWORK

ORIGIN

Threads and yarns is a research network which pulls together primary care researchers across several European countries with a common interest in research for informing the provision of best health care for people with complex clinical status. The origin of the network lies in the International Primary Care Research Leadership programme hosted by the University of Oxford, and which originated as part of the Brisbane Initiative, an international collaboration of universities which aim to foster and develop future leaders in primary care research. The international programme put in contact researchers with a common interest, stimulated discussions and fostered a collaboration that has resulted in this network.

"Threads and yarns" is the image that Prof. Barbara Starfield proposed for the study of multi-morbidity (Starfield B, Ann Fam Med, 2006):

"As any weaver knows, the elegance of a fabric lies in the yarns, not the threads. The whole is lots more than the sum of its parts. In health services, the threads are the diagnoses on which interventions are based. How these threads are spun into yarn (the underlying biodynamic of the tapestry of health) is poorly understood, to the detriment of efforts to understand the genesis of health problems and the interventions associated with them."

Central to this metaphor is the fact that while each individual clinical diagnosis is relevant for determining the health care needs of a person, the presence of multi-morbidity makes necessary to consider an additional level of complexity.

Acknowledgements and interests

- Barbara Starfield
- Threads and yarns
- **University of Exeter**



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- **National Institute for Health Research (UK),
Fondo de Investigaciones Sanitarias**



NHS
National Institute for
Health Research
Clinical Research Network

ISC
Instituto
de Salud
Carlos III

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- **Jordi Gol IDIAP**



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- **IMIM-Hospital del Mar, Johns Hopkins University, University of Manchester, University of Oxford**

Acknowledgements and interests



Key Messages

- **Multimorbidity is the norm in General Practice**

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Key Messages

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- ... but we still know very little about it
- The burden of care of multimorbidity is substantially made up of preventive activities
- Multimorbidity is not itself a problem, it is a powerful stress test for patient centredness of health systems, research evidence and clinical practice alike
- **The patient has the answer to this (their) problem**

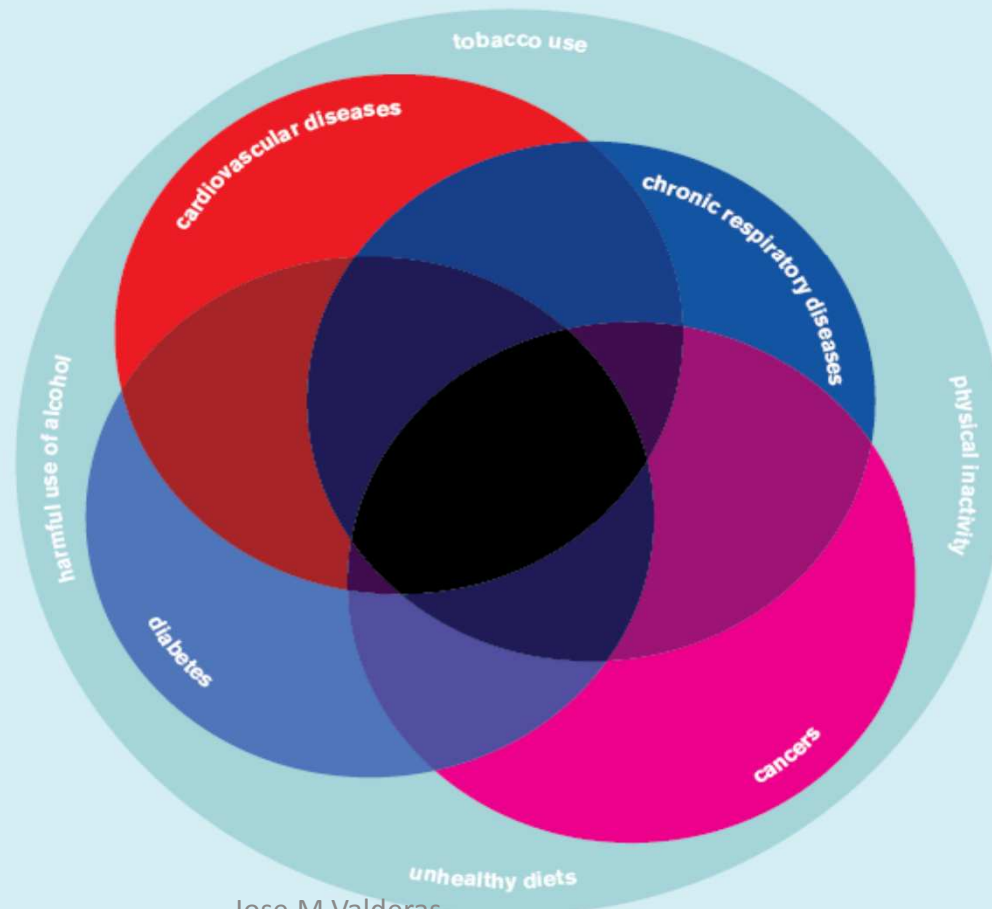
Outline

- Why is multimorbidity a problem?
- Key contributions on multimorbidity: a biography of multimorbidity
- Patient centred care is (again) a likely answer
- What we still do not know
- Further steps

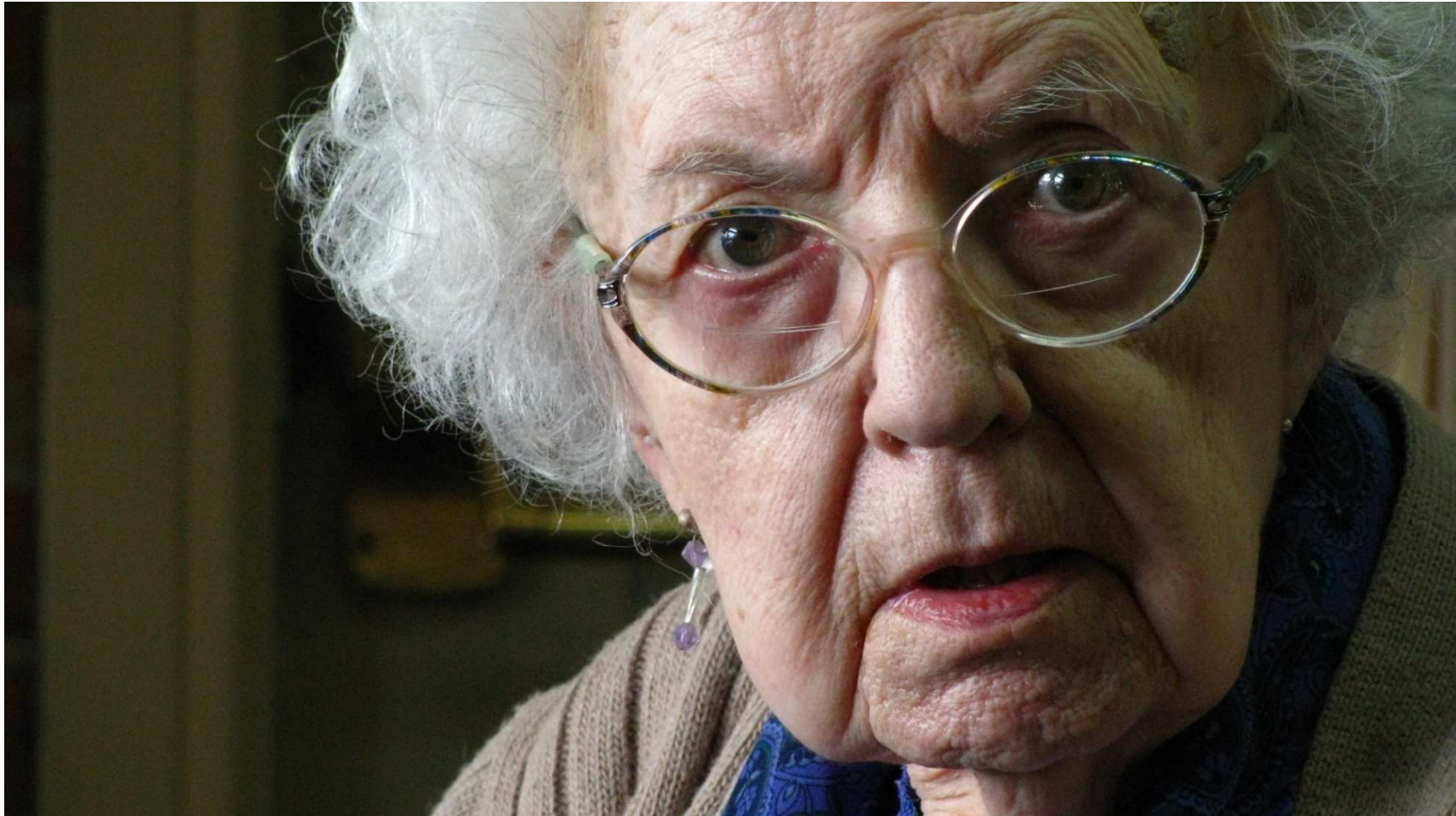
Working in partnership to prevent and control the 4 noncommunicable diseases – cardiovascular diseases, diabetes, cancers and chronic respiratory diseases and the 4 shared risk factors – tobacco use, physical inactivity, unhealthy diets and the harmful use of alcohol.



2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases



Multimorbidity



Mrs. Jones

- Female
- Aged 68
- Living with partner, small pension, rented flat, moved recently
- Obese: IMC 31
- Smoker: 10 cigarettes/d (recent relapse)
- Type 2 Diabetes: irregular control with insulin
- Ischemic heart disease: asymptomatic and well controlled with medical treatment
- Osteoarthritis both knees: has been already referred for surgery (left)
- Insomnia: long term and reason for consultation

Who can be interested in the fate of Mrs. Jones?

- The General Practitioner

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- The health policy maker

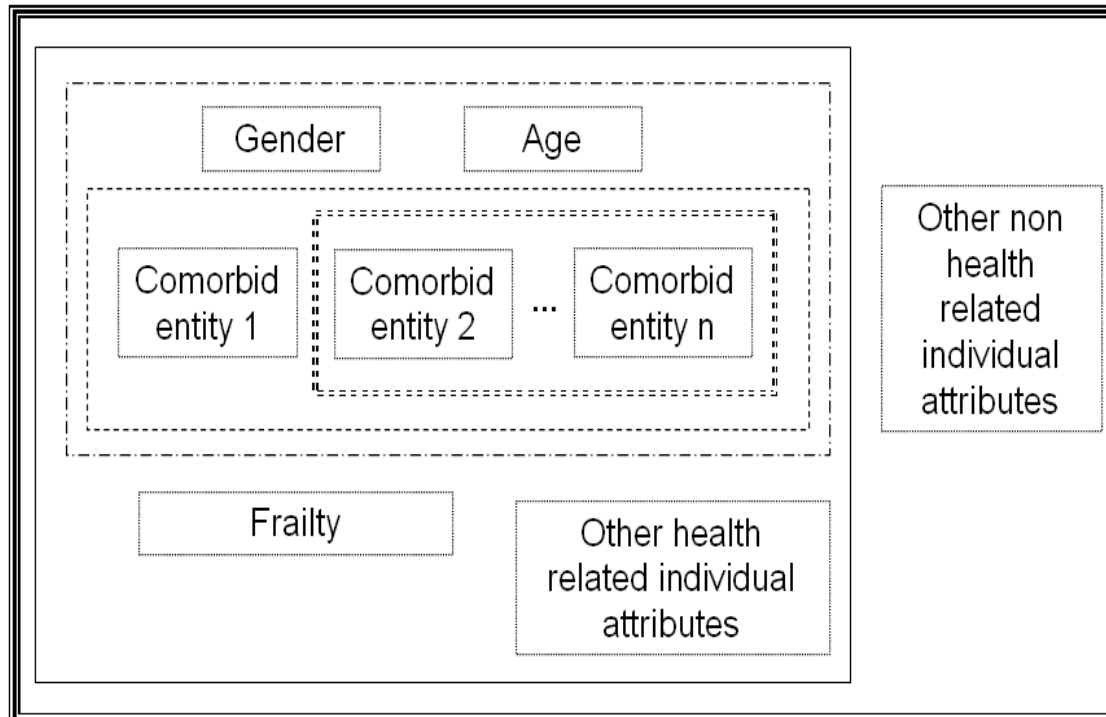
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- The health policy maker
- ...

Who can be interested in the fate of Mrs. Jones?

- The General Practitioner
- The orthopedic surgeon
- The manager of the hospital (A&E)
- The National Health Service
- The PI of the research project that uses her medical records
- The health policy maker
- ...
- And Mrs. Jones herself, and relevant ones

Morbidity constructs



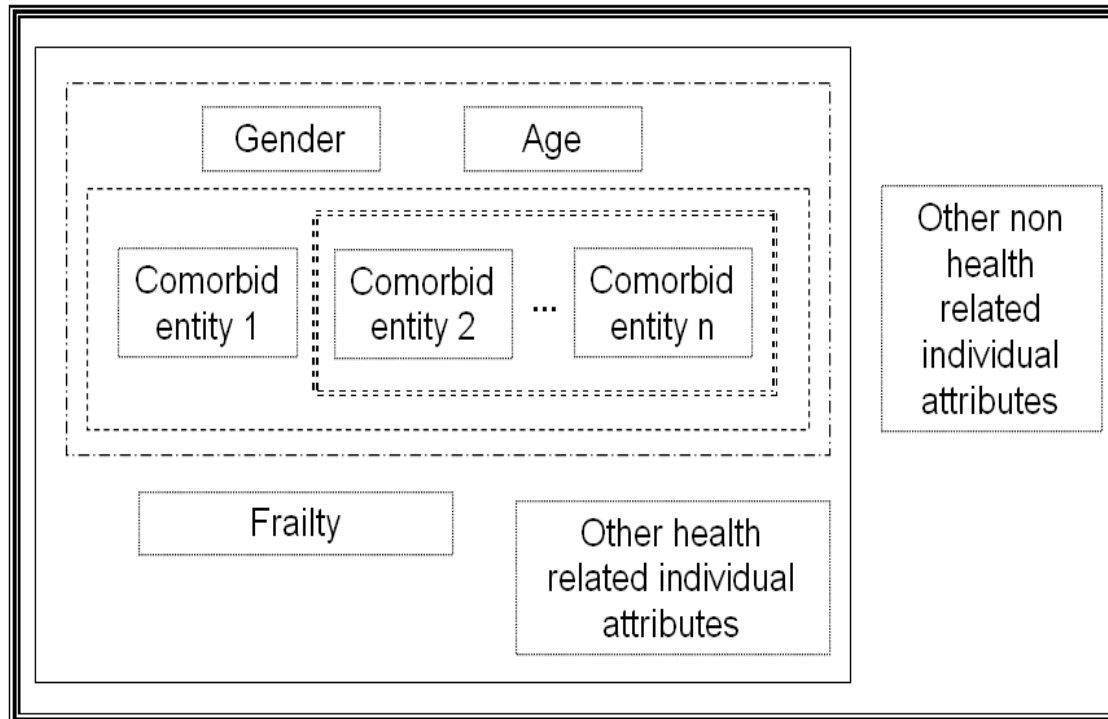
- Comorbidity as referred to an index entity (classical definition). = = =
- Comorbidity as the combination of all entities (=multimorbidity). - - - - -
- Comorbidity as a particular type of patient when compared to other patients (=case-mix) - · - · - ·
- Comorbidity as the overall health status of the individual (=burden of illness). _ _ _ _ _
- Comorbidity as the individual's complexity. = = = = =

Morbidity constructs: comorbidity

A focus on the **presence of diseases**, in particular **in addition to a specific one (index)**

- Diabetes: *tobacco, obesity, ischaemic heart disease, osteoarthritis, insomnia*
- Osteoarthritis: *tobacco, obesity, ischaemic heart disease, diabetes, insomnia*
- ...

Morbidity constructs



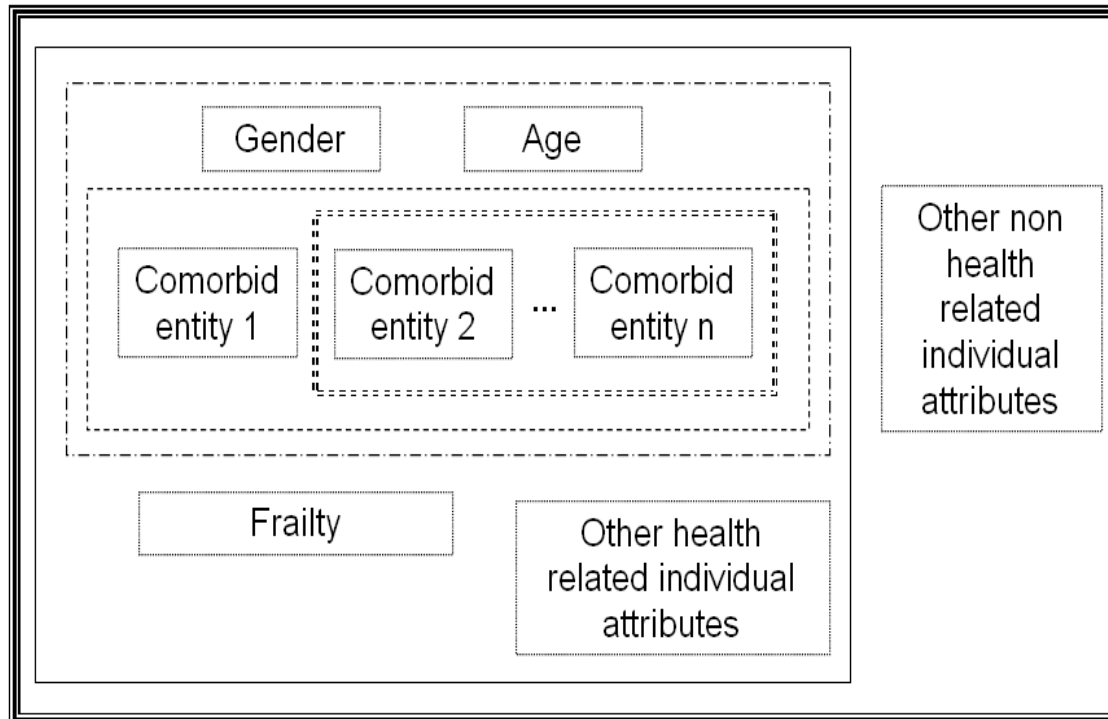
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Morbidity constructs: multimorbidity

A focus on the **presence of diseases**, but a particular **emphasis on multiplicity**

- *Tobacco, obesity, ischaemic heart disease, osteoarthritis, insomnia; diabetes; ischaemic heart disease; osteoarthritis; insomnia*

Morbidity constructs

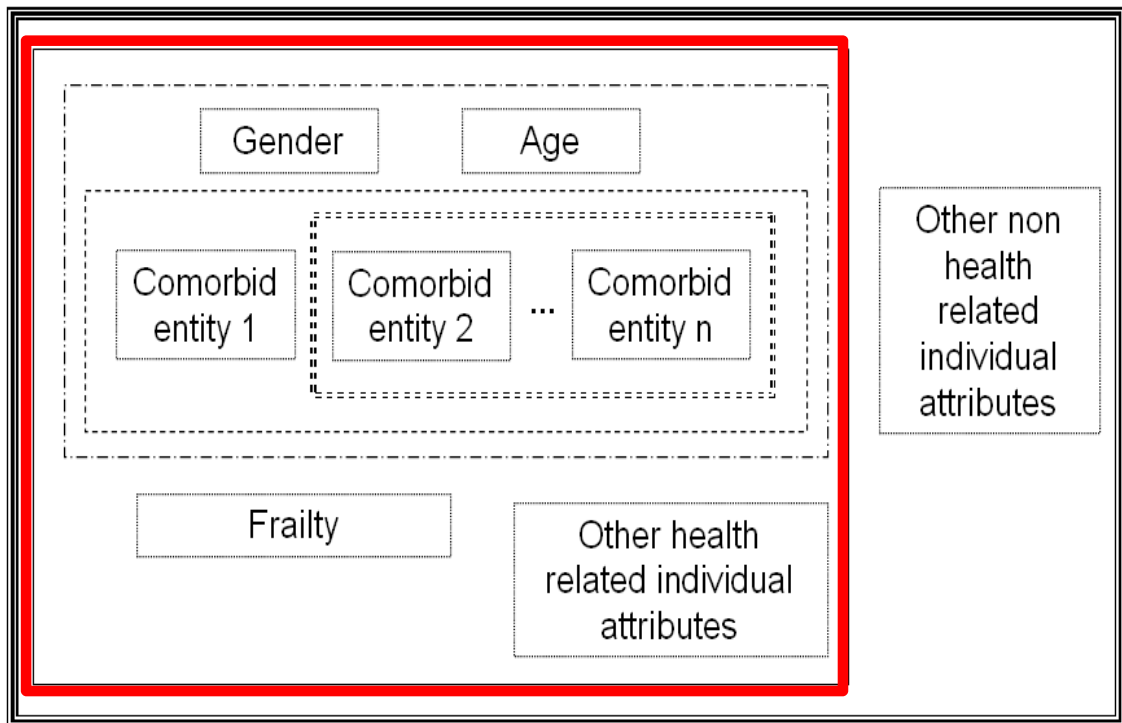


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- Comorbidity as the individual's complexity. =====

Morbidity constructs

A focus on the **presence and the severity of diseases**

- Tobacco: Faegerstrom: low
- Obesity; BMI=31
- Ischemic heart disease: asymptomatic and well controlled with medical treatment
- Type 2 Diabetes: irregular control with insulin
- Smoker: 10 cigarettes/d (recent relapse)
- Osteoarthritis both knees: has been already referred for surgery (left)
- Insomnia: long term and reason for consultation



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- Comorbidity as the individual's complexity. =====

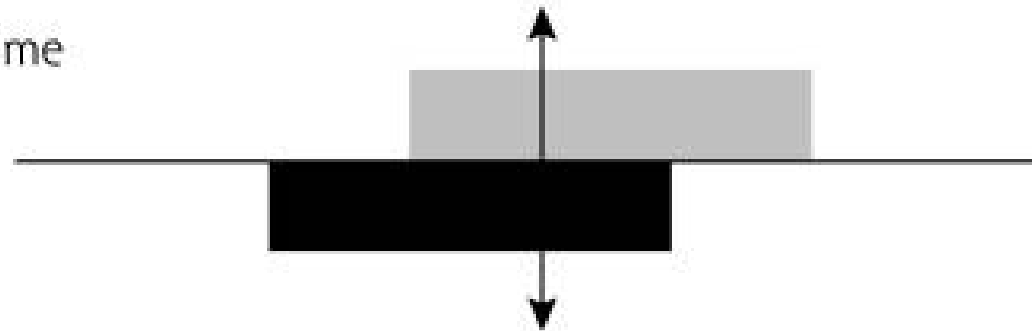
Morbidity constructs

- **Comorbidity:** presence of diseases, in particular in addition to a specific one (index disease)
 - *Current CPG approach*
 - *Specialist orientation*
- **Multimorbidity:** presence of diseases, but a particular emphasis on multiplicity
 - *General Practice and Primary Care*
 - *Consistent with constantly changing priorities*
- **Morbidity burden:** presence and severity of diseases
 - *For comparing groups of patients and for adjustment*
 - *Implicitly used in clinical practice for fine tuning management*

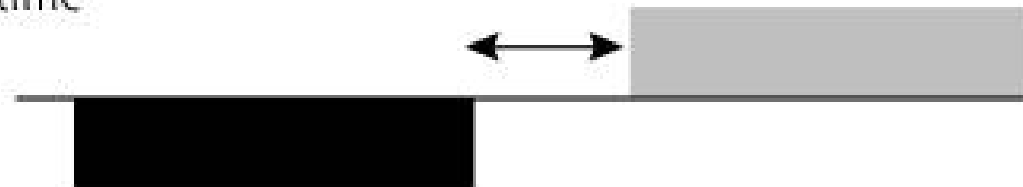
Morbidity constructs

Time span

Point in time

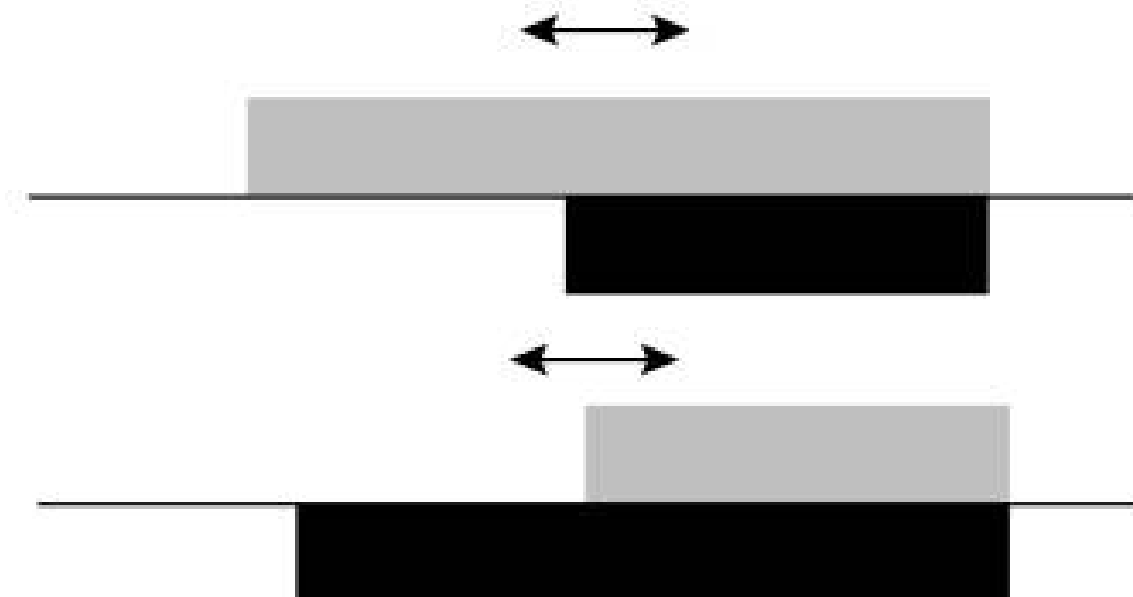


Period of time



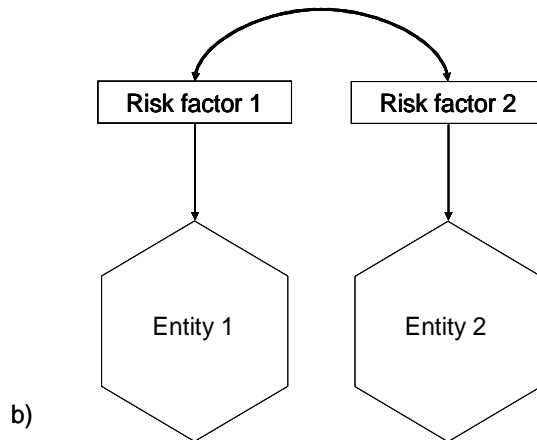
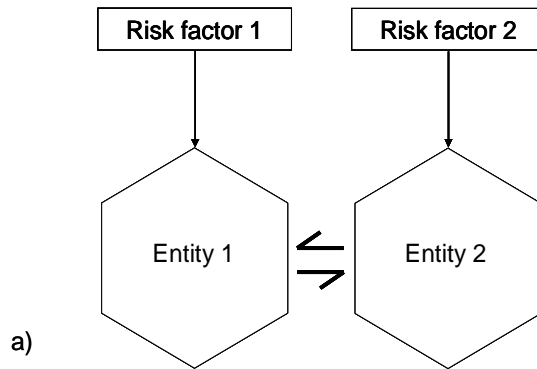
Morbidity constructs

Sequence



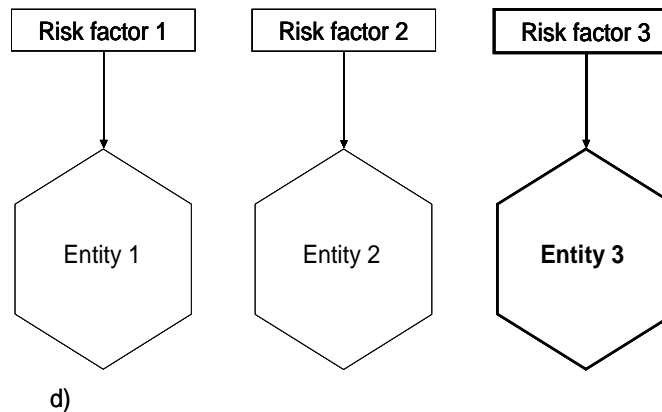
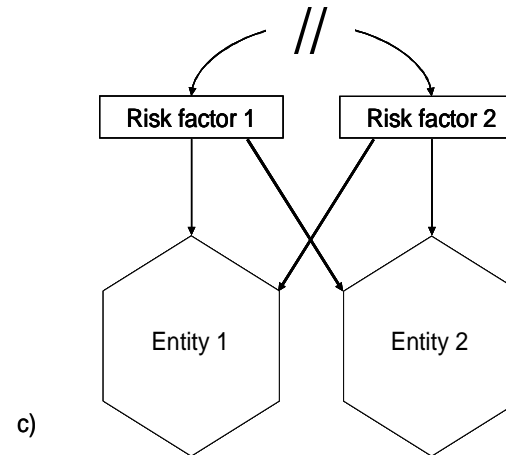
Morbidity constructs

Direct causation



Associated risk factors

Heterogeneity



Independence

4 key papers

- 2005 Boyd JAMA: Guidelines
- 2007 Higashi NEJM: Quality of care
- 2012 Smith Cochrane: Interventions
- 2012 Barnett Lancet: Epidemiology

Multimorbidity and guidelines

SPECIAL COMMUNICATION

Clinical Practice Guidelines and Quality of Care for Older Patients With Multiple Comorbid Diseases Implications for Pay for Performance

Cynthia M. Boyd, MD, MPH
Jonathan Darer, MD, MPH
Chad Boulton, MD, MPH, MBA
Linda P. Fried, MD, MPH
Lisa Boulton, MD, MPH, MA
Albert W. Wu, MD, MPH

THE AGING OF THE POPULATION and the increasing prevalence of chronic diseases pose challenges to the development and application of clinical practice guidelines (CPGs). In 1999, 48% of Medicare beneficiaries aged 65 years or older had at least 3 chronic medical conditions and 21% had 5 or more.¹ Health care costs for individuals with at least 3 chronic conditions accounted for 89% of Medicare's annual budget.¹ Comorbidity is associated with poor quality of life, physical disability, high health care use, multiple medications, and increased risk for adverse drug events and mortality.²⁻⁴ Optimizing care for this population is a high priority.⁵

Clinical practice guidelines are based on clinical evidence and expert consensus to help decision making about treating specific diseases.⁶ Clinical practice guidelines help to define standards of care and focus efforts to improve quality.^{7,8} Most CPGs address single diseases in accordance with modern medicine's focus on disease and pathophysiology.⁹ However, physi-

Context Clinical practice guidelines (CPGs) have been developed to improve the quality of health care for many chronic conditions. Pay-for-performance initiatives assess physician adherence to interventions that may reflect CPG recommendations.

Objective To evaluate the applicability of CPGs to the care of older individuals with several comorbid diseases.

Data Sources The National Health Interview Survey and a nationally representative sample of Medicare beneficiaries (to identify the most prevalent chronic diseases in this population); the National Guideline Clearinghouse (for locating evidence-based CPGs for each chronic disease).

Study Selection Of the 15 most common chronic diseases, we selected hypertension, chronic heart failure, stable angina, atrial fibrillation, hypercholesterolemia, diabetes mellitus, osteoarthritis, chronic obstructive pulmonary disease, and osteoporosis, which are usually managed in primary care, choosing CPGs promulgated by national and international medical organizations for each.

Data Extraction Two investigators independently assessed whether each CPG addressed older patients with multiple comorbid diseases, goals of treatment, interactions between recommendations, burden to patients and caregivers, patient preferences, life expectancy, and quality of life. Differences were resolved by consensus. For a hypothetical 79-year-old woman with chronic obstructive pulmonary disease, type 2 diabetes, osteoporosis, hypertension, and osteoarthritis, we aggregated the recommendations from the relevant CPGs.

Data Synthesis Most CPGs did not modify or discuss the applicability of their recommendations for older patients with multiple comorbidities. Most also did not comment on burden, short- and long-term goals, and the quality of the underlying scientific evidence, nor give guidance for incorporating patient preferences into treatment plans. If the relevant CPGs were followed, the hypothetical patient would be prescribed 12 medications (costing her \$406 per month) and a complicated nonpharmacological regimen. Adverse interactions between drugs and diseases could result.

Conclusions This review suggests that adhering to current CPGs in caring for an older person with several comorbidities may have undesirable effects. Basing standards for quality of care and pay for performance on existing CPGs could lead to inappropriate judgment of the care provided to older individuals with complex comorbidities and could create perverse incentives that emphasize the wrong aspects of care for this population and diminish the quality of their care. Developing measures of the quality of the care needed by older patients with complex comorbidities is critical to improving their care.

JAMA. 2005;294:716-724

www.jama.com

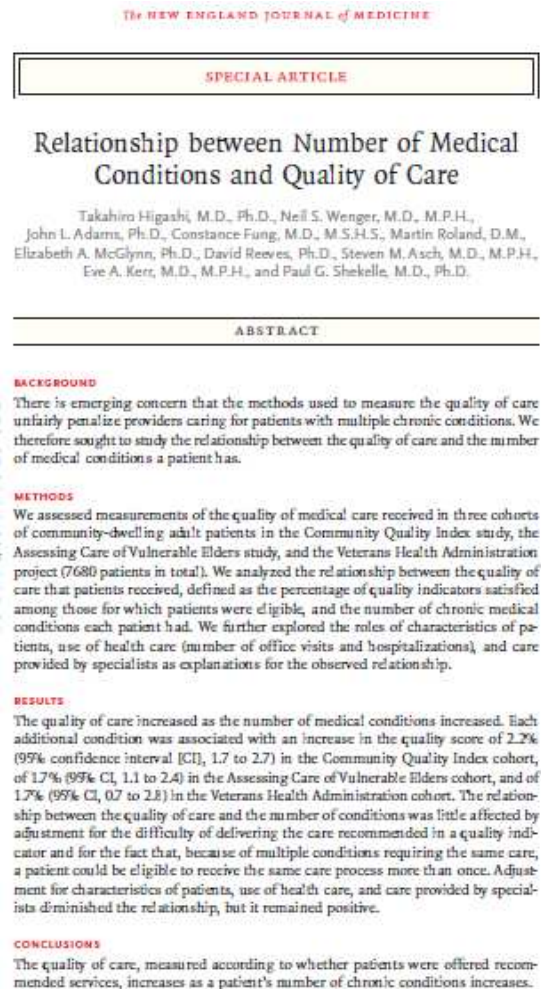
- Boyd CM, et al. JAMA 2005
- Hypothetical example: female, 79, hypertension, OA, OP, DM, COPD
- Complex regime (12)
- Best care?

Table 3. Treatment Regimen Based on Clinical Practice Guidelines for a Hypothetical 79-Year-Old Woman With Hypertension, Diabetes Mellitus, Osteoporosis, Osteoarthritis, and COPD*

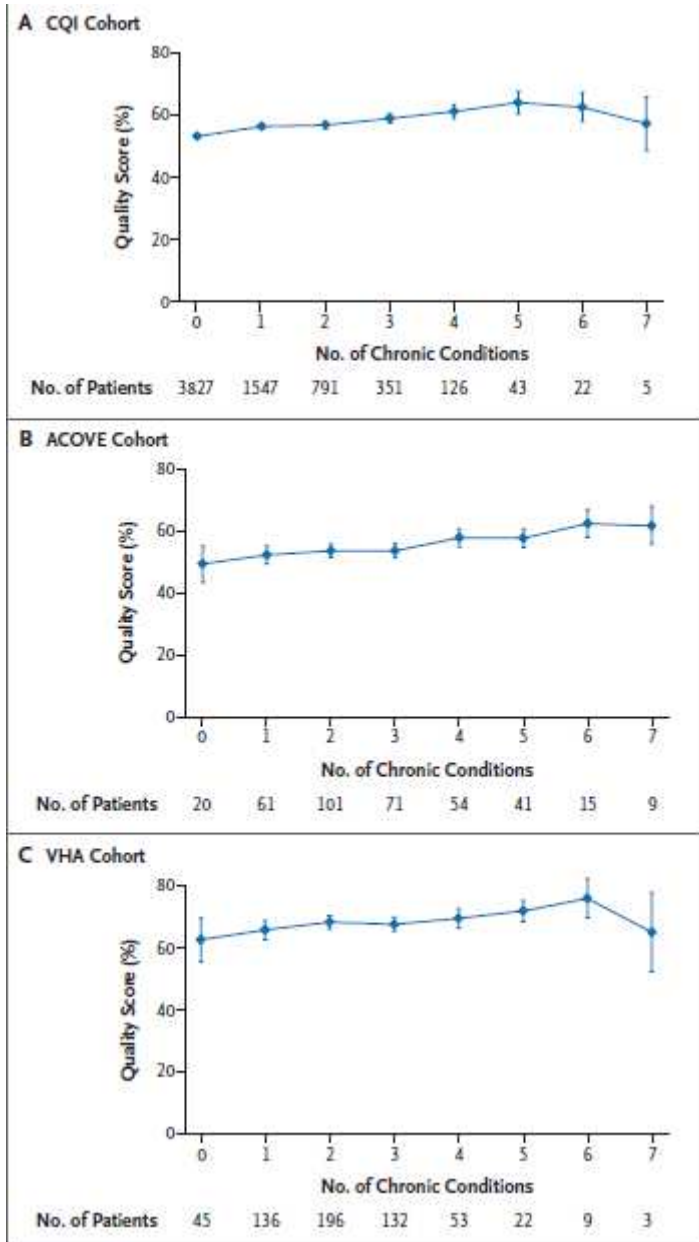
Time	Medications†	Other
7:00 AM	Ipratropium metered dose inhaler 70 mg/wk of alendronate	Check feet Sit upright for 30 min on day when alendronate is taken Check blood sugar
8:00 AM	500 mg of calcium and 200 IU of vitamin D 12.5 mg of hydrochlorothiazide 40 mg of lisinopril 10 mg of glyburide 81 mg of aspirin 850 mg of metformin 250 mg of naproxen 20 mg of omeprazole	Eat breakfast 2.4 g/d of sodium 90 mmol/d of potassium Low intake of dietary saturated fat and cholesterol Adequate intake of magnesium and calcium Medical nutrition therapy for diabetes‡ DASH‡
12:00 PM		Eat lunch 2.4 g/d of sodium 90 mmol/d of potassium Low intake of dietary saturated fat and cholesterol Adequate intake of magnesium and calcium Medical nutrition therapy for diabetes‡ DASH‡
1:00 PM	Ipratropium metered dose inhaler 500 mg of calcium and 200 IU of vitamin D	
7:00 PM	Ipratropium metered dose inhaler 850 mg of metformin 500 mg of calcium and 200 IU of vitamin D 40 mg of lovastatin 250 mg of naproxen	Eat dinner 2.4 g/d of sodium 90 mmol/d of potassium Low intake of dietary saturated fat and cholesterol Adequate intake of magnesium and calcium Medical nutrition therapy for diabetes‡ DASH‡
11:00 PM	Ipratropium metered dose inhaler	
As needed	Albuterol metered dose inhaler	

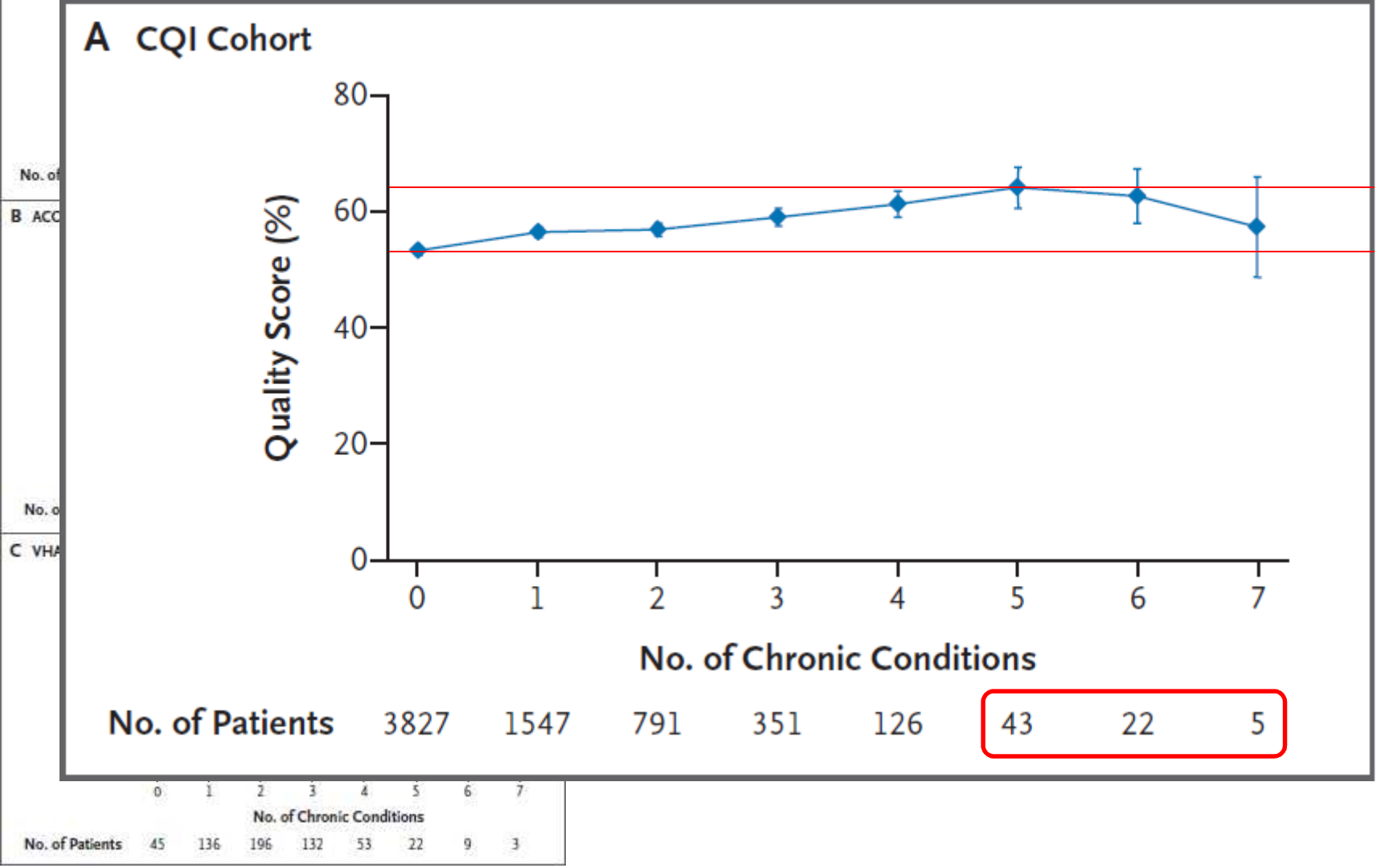
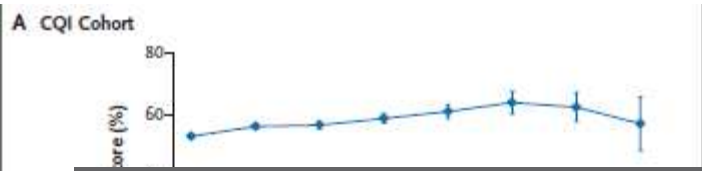
	Diabetes Sub-sample (N=427)	COPD Sub-sample (N=681)	NSA Sub-sample (N=1,432)
<i>Median Times reported in hours per month (95% CI)</i>			
<i>Respondents who spent no time on HRA are included</i>			
Total time	11.1 (9.0-13.2)	16.5 (14.7-18.3)	5.2 (4.7-5.6)
<i>Number of chronic conditions ever diagnosed</i>			
0	NA**	NA**	1.4 (0.8-2.0)
1	5.8 (0.7-10.8)	13.3 (8.6-18.1)	3.0 (2.7-3.3)
2	6.6 (4.3-8.9)	12.8 (7.5-18.0)	4.9 (4.3-5.5)
3	11.4 (9.2-13.7)	13.8 (10.6-17.1)	10.2 (8.9-11.4)
4	16.0 (9.5-22.5)	15.7 (12.0-19.3)	9.5 (6.6-12.4)
5+	16.5 (9.9-23.1)	26.7 (20.4-32.9)	21.5 (17.5-25.5)
<i>Test for trend (p-value)</i>	<i><0.001</i>	<i><0.001</i>	<i><0.001</i>
<i>Number of medications taken regularly</i>			
0	0.5 (0-8.0)	3.2 (0-11.0)	1.0 (0.7-1.3)
1	4.1 (0-10.1)	8.5 (2.9-14.1)	3.3 (2.7-4.0)
2	4.4 (2.5-6.4)	5.0 (0.5-9.5)	4.8 (3.7-5.8)
3	9.5 (1.7-17.3)	11.5 (4.8-18.3)	5.9 (4.8-7.0)
4	8.1 (3.8-12.4)	11.5 (6.8-16.2)	7.8 (6.2-9.5)
5	12.6 (9.1-16.1)	14.7 (8.7-20.7)	10.8 (9.6-11.9)
6+	15.6 (12.0-19.2)	21.0 (18.5-23.5)	18.8 (15.3-22.3)
<i>Test for trend (p-value)</i>	<i><0.001</i>	<i><0.001</i>	<i><0.001</i>
<i>Conditions ever diagnosed</i>			
Cancer	17.0 (11.1-22.9)	17.2 (13.1-21.2)	7.6 (6.0-9.2)
Heart disease	15.0 (10.3-19.7)	19.5 (13.3-25.7)	10.8 (9.8-11.8)
Hypertension	12.3 (10.2-14.3)	17.6 (14.1-21.1)	7.7 (6.8-8.6)
Stroke	15.6 (8.7-22.4)	21.0 (11.5-30.5)	8.6 (4.7-12.5)
Diabetes Mellitus	11.4 (9.2-13.6)	32.8 (22.9-42.8)	12.2 (9.9-14.5)
Kidney disease	19.7 (3.3-36.1)	34.7 (21.6-47.8)	12.0 (2.3-21.7)
Asthma or hay fever	10.3 (4.9-15.6)	22.4 (19.1-25.7)	8.8 (7.1-10.6)
Chronic Obstructive Pulmonary Disease	19.9 (8.8-30.9)	17.4 (15.3-19.5)	20.3 (15.8-24.7)
Arthritis	14.3 (11.7-16.9)	17.5 (14.9-20.1)	7.8 (6.7-8.8)
Osteoporosis	22.8 (11.5-34.0)	19.5 (16.0-23.0)	10.5 (8.3-12.7)
Chronic pain, including back pain	13.8 (9.6-17.9)	19.5 (14.8-24.2)	11.7 (9.9-22.7)
Depression or anxiety	16.3 (10.0-22.7)	23.0 (16.1-29.9)	10.8 (7.8-13.9)
Other mental health condition	17.5 (0-38.4)	18.9 (5.8-32.0)	28.5 (3.9-53.1)

Multimorbidity and quality



- Higashi T, et al. NEJM 2007
- Three cohorts of elderly people
- Quality indicators related to care processes
- The quality of care increased as the number of medical conditions increased.

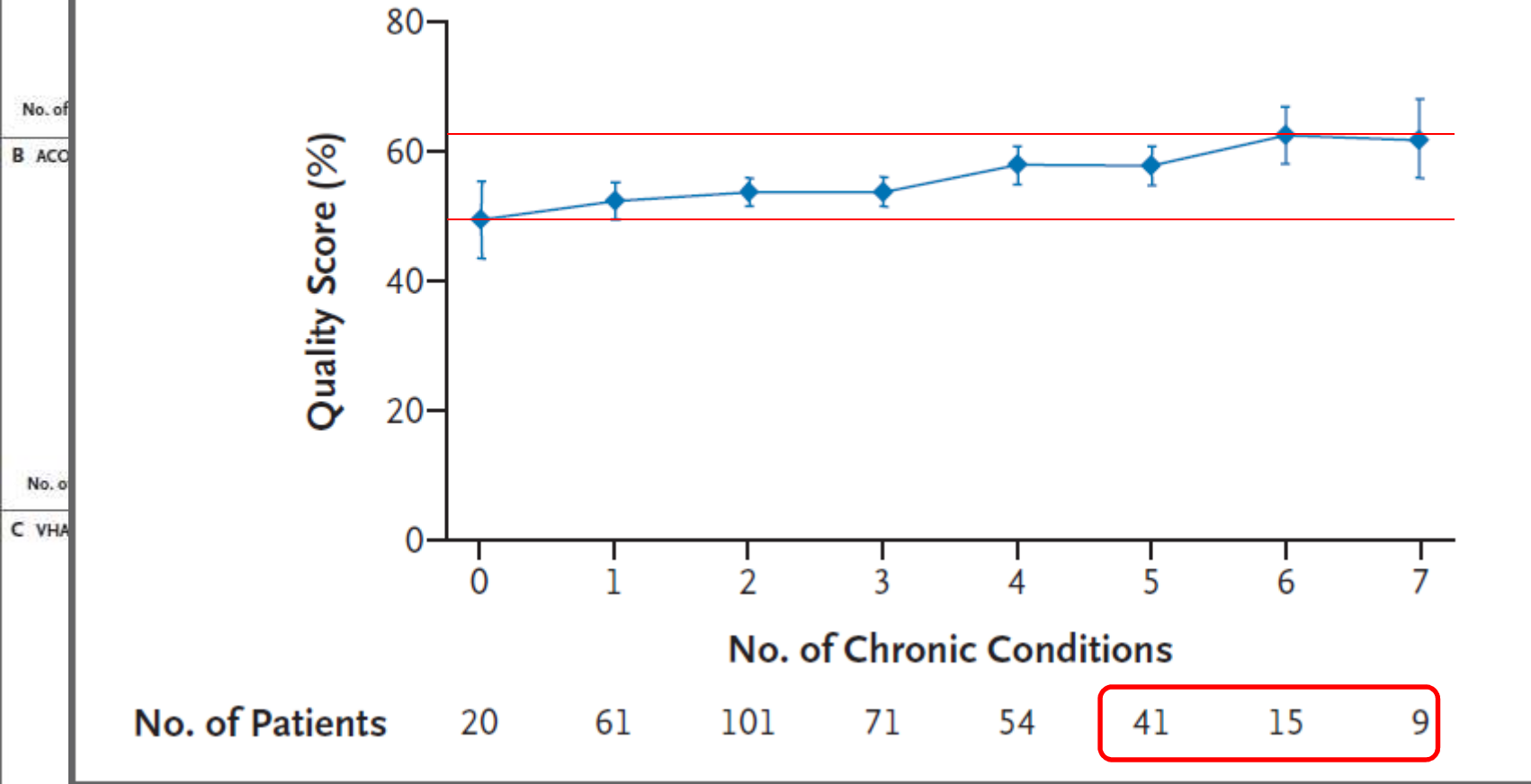




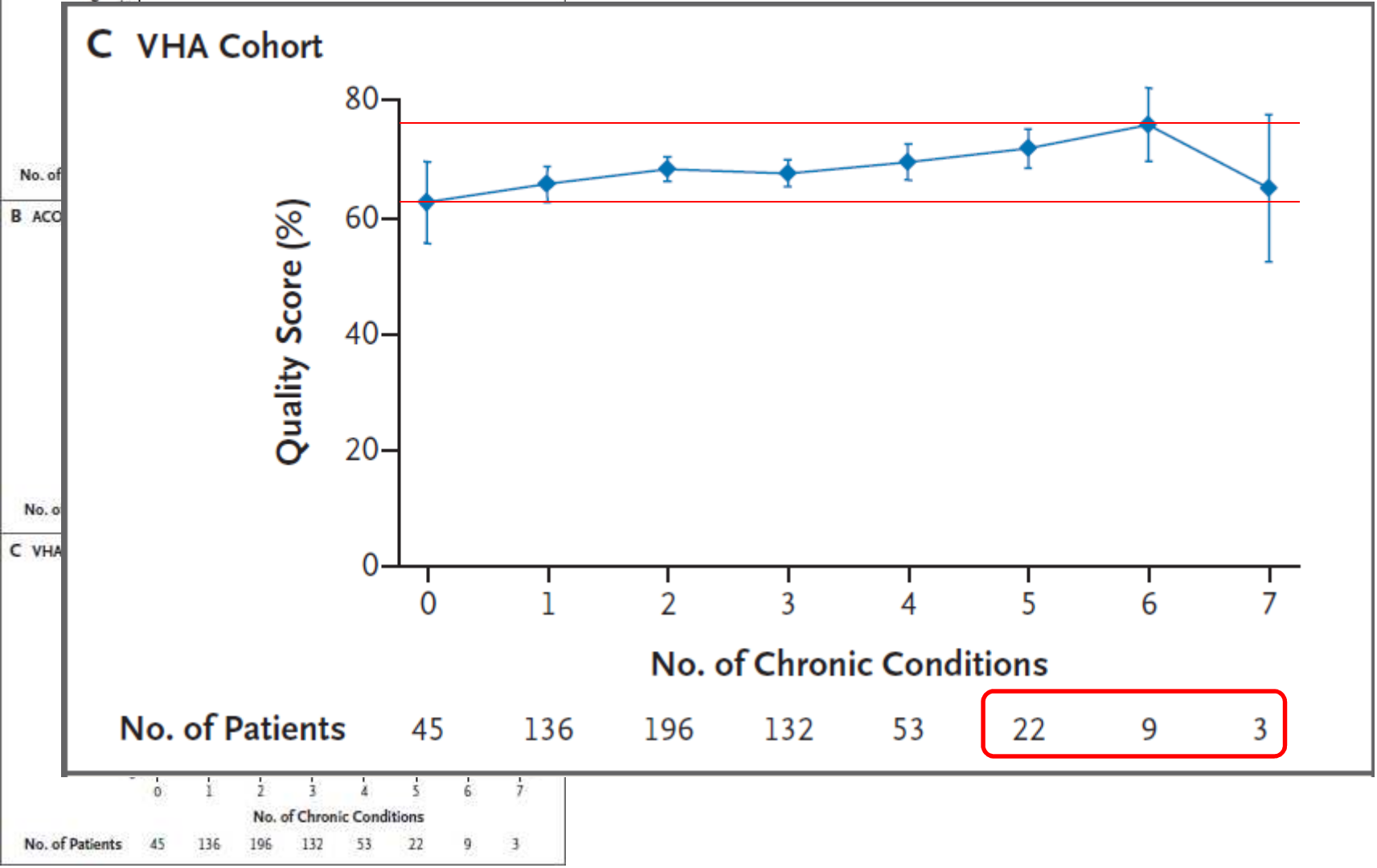
A CQI Cohort



B ACOVE Cohort



No. of Patients	45	136	196	132	53	22	9	3
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Multimorbidity and quality

- **Pathogenetic** (Kaplan, 1974) [vs. Diagnostic vs. prognostic (cogent vs. non cogent)]

“...certain diseases (particularly in the cardiovascular-renal system) are commonly regarded as ‘related’ ..., whereas other diseases are regarded as ‘unrelated’”

- **Homotypic vs. heterotypic** (Angold, 1999):

“similar [vs. dissimilar] diagnostic groupings”

- **Concordant vs. non concordant** (Piette, 2006):

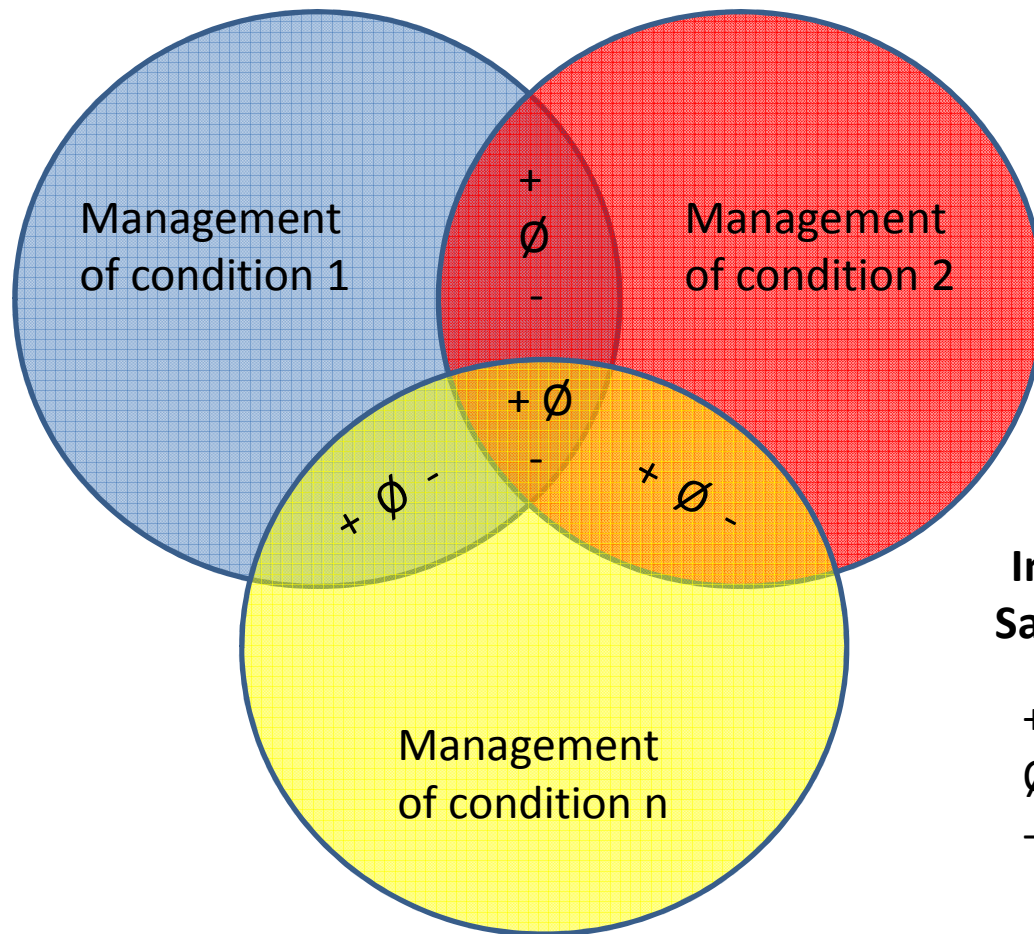
“[comorbid entites are] parts of the same pathophysiologic risk profile and more likely to share the same management”

Multimorbidity and quality

Effect of comorbidity interactions on the medical process: Type 2 Diabetes Mellitus

Medical process	Effect	Clinical entity (process)
Diagnosis and monitoring	Easier (+)	Age related macular retinopathy (based on fundus)
	More difficult (-)	Acute myocardial infarction (based on pain)
	Neutral (0)	Helicobacter pylori infection (based on HbA1C)
Treatment and management	Agonistic (+)	Chronic Obstructive Pulmonary Disease (based on regular exercise)
	Antagonistic (-)	Crohn's Disease (based on corticosteroids)
	Neutral (0)	Depression (based on dietary advice)
Prognosis and outcomes	Better (+)	Sickle Cell Disease (based on HbA1C)
	Worse (-)	Periferal vascular disease (based on mortality)
	Neutral (0)	Osteoarthritis (based on hypoglycemia)

Multimorbidity and quality



Impact on Quality and Safety processes of care

+ : Synergistic
∅ : Neutral
- : Antagonistic

Epidemiology of Multimorbidity

Articles

Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study

Karen Barnett, Stewart W Mercer, Michael Norbury, Graham Watt, Sally Wyke, Bruce Guthrie

Summary

Background Long-term disorders are the main challenge facing health-care systems worldwide, but health systems are largely configured for individual diseases rather than multimorbidity. We examined the distribution of multimorbidity, and of comorbidity of physical and mental health disorders, in relation to age and socioeconomic deprivation.

Methods In a cross-sectional study we extracted data on 40 morbidities from a database of 1 751 841 people registered with 314 medical practices in Scotland as of March, 2007. We analysed the data according to the number of morbidities, disorder type (physical or mental), sex, age, and socioeconomic status. We defined multimorbidity as the presence of two or more disorders.

Findings 42.2% (95% CI 42.1–42.3) of all patients had one or more morbidities, and 23.2% (23.08–23.21) were multimorbid. Although the prevalence of multimorbidity increased substantially with age and was present in most people aged 65 years and older, the absolute number of people with multimorbidity was higher in those younger than 65 years (210 500 vs 194 996). Onset of multimorbidity occurred 10–15 years earlier in people living in the most deprived areas compared with the most affluent, with socioeconomic deprivation particularly associated with multimorbidity that included mental health disorders (prevalence of both physical and mental health disorder 11.0%, 95% CI 10.9–11.2% in most deprived area vs 5.9%, 5.8%–6.0% in least deprived). The presence of a mental health disorder increased as the number of physical morbidities increased (adjusted odds ratio 6.74, 95% CI 6.59–6.90 for five or more disorders vs 1.95, 1.93–1.98 for one disorder), and was much greater in more deprived than in less deprived people (2.28, 2.21–2.32 vs 1.08, 1.05–1.11).

Interpretation Our findings challenge the single-disease framework by which most health care, medical research, and medical education is configured. A complementary strategy is needed, supporting generalist clinicians to provide personalised, comprehensive continuity of care, especially in socioeconomically deprived areas.

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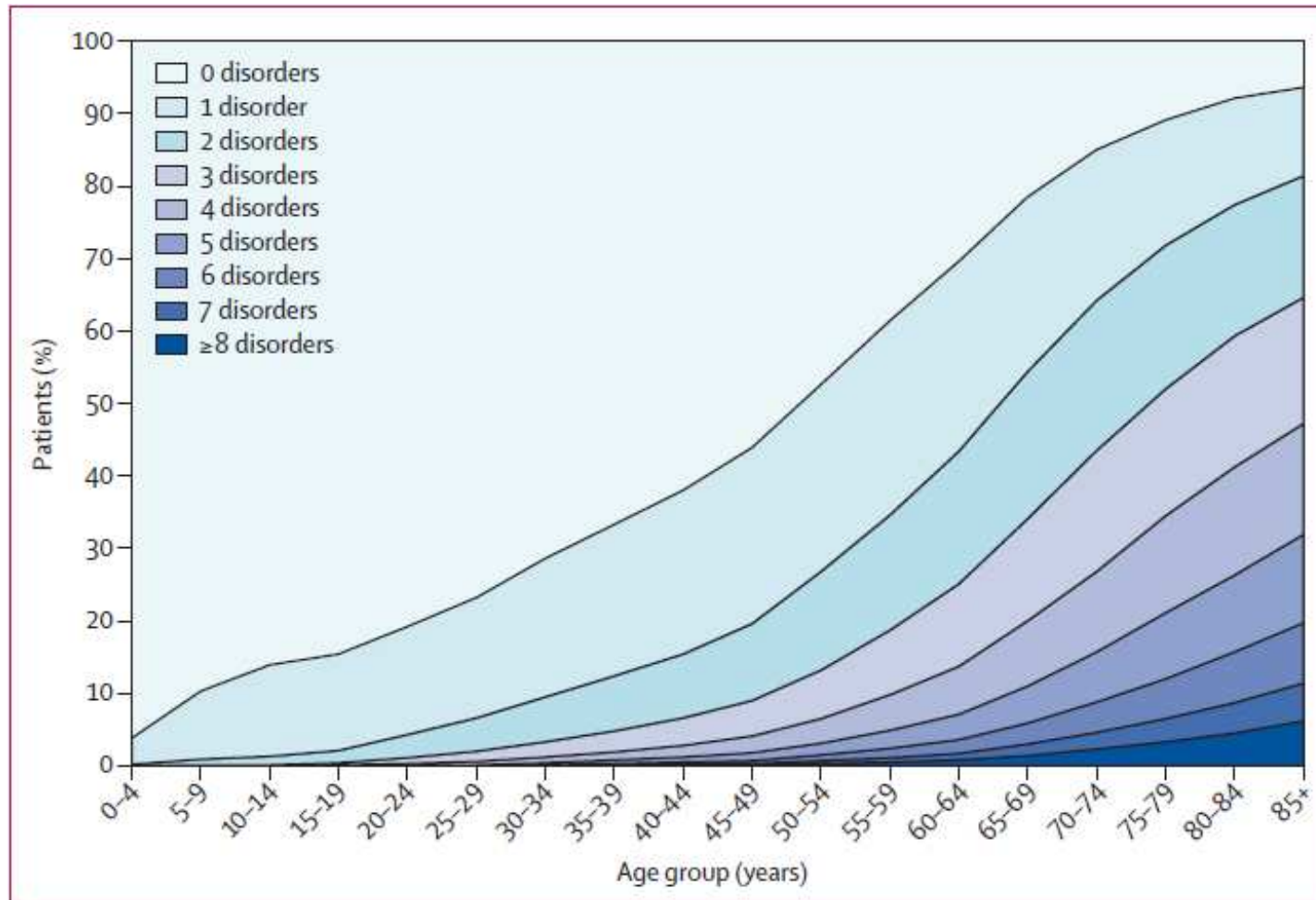
See Online/Comment
DOI:10.1016/S0140-6736(12)60482-6

Quality, Safety and Informatics Research Group, Population Health Sciences Division, University of Dundee, Dundee, UK (K Barnett PhD, M Norbury MRChD, Prof B Guthrie PhD), Institute of Health and Wellbeing, General Practice and Primary Care (Prof S W Mercer PhD, Prof G Watt MD), and Institute of Health and Wellbeing, College of Social Sciences (Prof S Wyke PhD), University of Glasgow, Glasgow, UK.

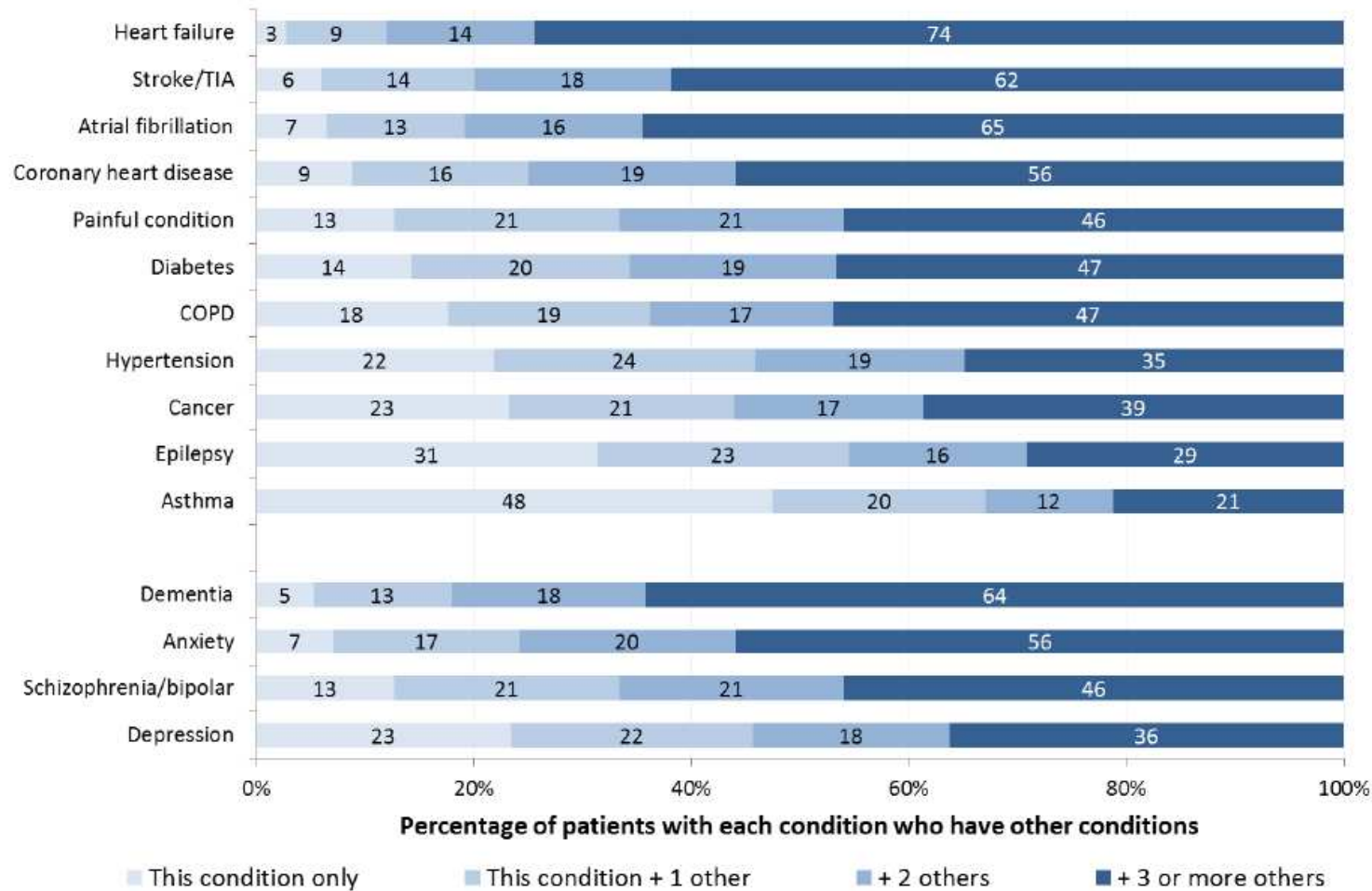
Correspondence to: Prof Bruce Guthrie, Quality, Safety and Informatics Research Group, Population Health Sciences Division, University of Dundee, Dundee DD2 4BE UK (b.guthrie@dundee.ac.uk)

- Barnett K, et al. Lancet 2012
- General Practice health care records (1,8 M, 134 GP practices), 40 conditions
- 23.2% MM
- Onset of MM 10-15 years earlier in most deprived areas

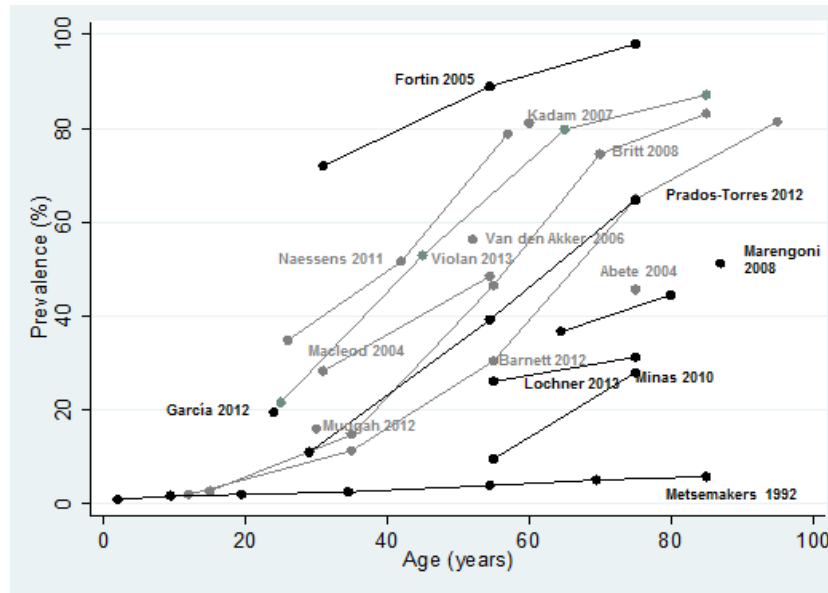
Epidemiology of Multimorbidity



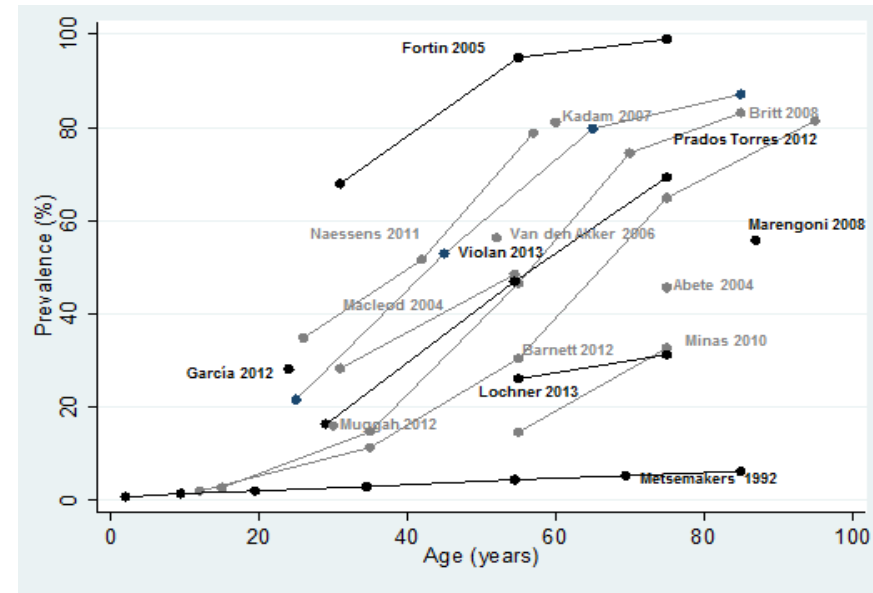
Epidemiology of Multimorbidity



Epidemiology of Multimorbidity



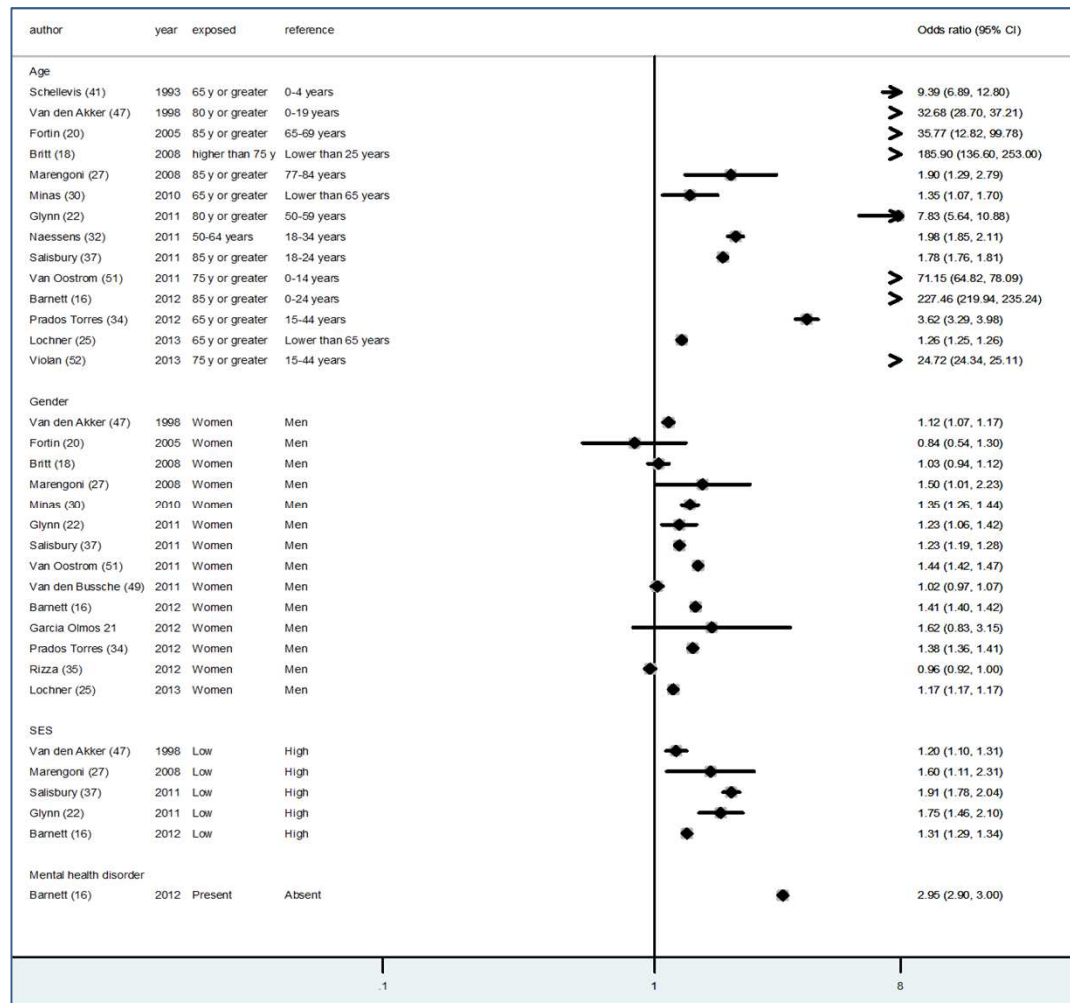
- Studies reporting specific estimates for men
- Studies reporting specific estimates including both genders



- Studies reporting specific estimates for women
- Studies reporting specific estimates including both genders

Foguet et al. Unpublished data

Epidemiology of Multimorbidity



Interventions for Multimorbidity

Interventions for improving outcomes in patients with multimorbidity in primary care and community settings (Review)

Smith SM, Soubhi H, Fortin M, Hudon C, O'Dowd T



- Smith S, et al. Cochrane Col 2012
- Systematic review of RCTs of interventions for multimorbidity
- 10 studies
- Complex interventions
- Mixed results, trend towards improved prescribing and medication adherence

Interventions for Multimorbidity

- Paucity of research into interventions to improve outcomes for multimorbidity with the focus to date being on co-morbid conditions or multimorbidity in older patients.
- Interventions that are targeted at either specific combinations of common conditions, or at specific problems for patients with multiple conditions, may be more effective.
- Further research is needed
 - clear and broader definitions of participants
 - consideration of appropriate outcomes,
 - further pragmatic studies based in primary care settings

Interventions for Multimorbidity

Contents lists available at SciVerse ScienceDirect

Health Policy

Journal homepage: www.elsevier.com/locate/healthpol

Review

Comprehensive care programs for patients with multiple chronic conditions: A systematic literature review

Simone R. de Bruin^{a,*}, Nathalie Versnel^{b,c}, Lidwien C. Lemmens^a,
Claudia C.M. Molema^a, François G. Schellevis^{b,c}, Giel Nijpels^b, Caroline A. Baan^a

^a National Institute for Public Health and the Environment, Centre for Prevention and Health Services Research, PO Box 1, 3720 BA Bilthoven, The Netherlands
^b Department of General Practice/EMGO+ Institute for Health and Care Research, VU University Medical Center, v.d. Boelelaan 1117, 1081 HJ Amsterdam, The Netherlands
^c NIVEL, Netherlands Institute for Health Services Research, PO Box 1 568, 3500 BN Utrecht, The Netherlands

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ABSTRACT

Objective: To provide insight into the characteristics of comprehensive care programs for patients with multiple chronic conditions and their impact on patients, informal caregivers, and professional caregivers.

Methods: Systematic literature search in multiple electronic databases for English language papers published between January 1995 and January 2011, supplemented by reference tracking and a manual search on the internet. Wagner's chronic care model (CCM) was used to define comprehensive care. After inclusion, the methodological quality of each study was assessed. A best-evidence synthesis was applied to draw conclusions.

Results: Forty-two publications were selected describing thirty-three studies evaluating twenty-eight comprehensive care programs for multimorbid patients. Programs varied in the target patient groups, implementation settings, number of included interventions, and number of CCM components to which these interventions related. Moderate evidence was found for a beneficial effect of comprehensive care on inpatient healthcare utilization and healthcare costs, health behavior of patients, perceived quality of care, and satisfaction of patients and caregivers. Insufficient evidence was found for a beneficial effect of comprehensive care on health-related quality of life in terms of mental functioning, medication use, and outpatient healthcare utilization and healthcare costs. No evidence was found for a beneficial effect of comprehensive care on cognitive functioning, depressive symptoms, functional status, mortality, quality of life in terms of physical functioning, and caregiver burden.

Conclusion: Because of the heterogeneity of comprehensive care programs, it is as yet too early to draw firm conclusions regarding their effectiveness. More rigorous evaluation studies are necessary to determine what constitutes best care for the increasing number of people with multiple chronic conditions.

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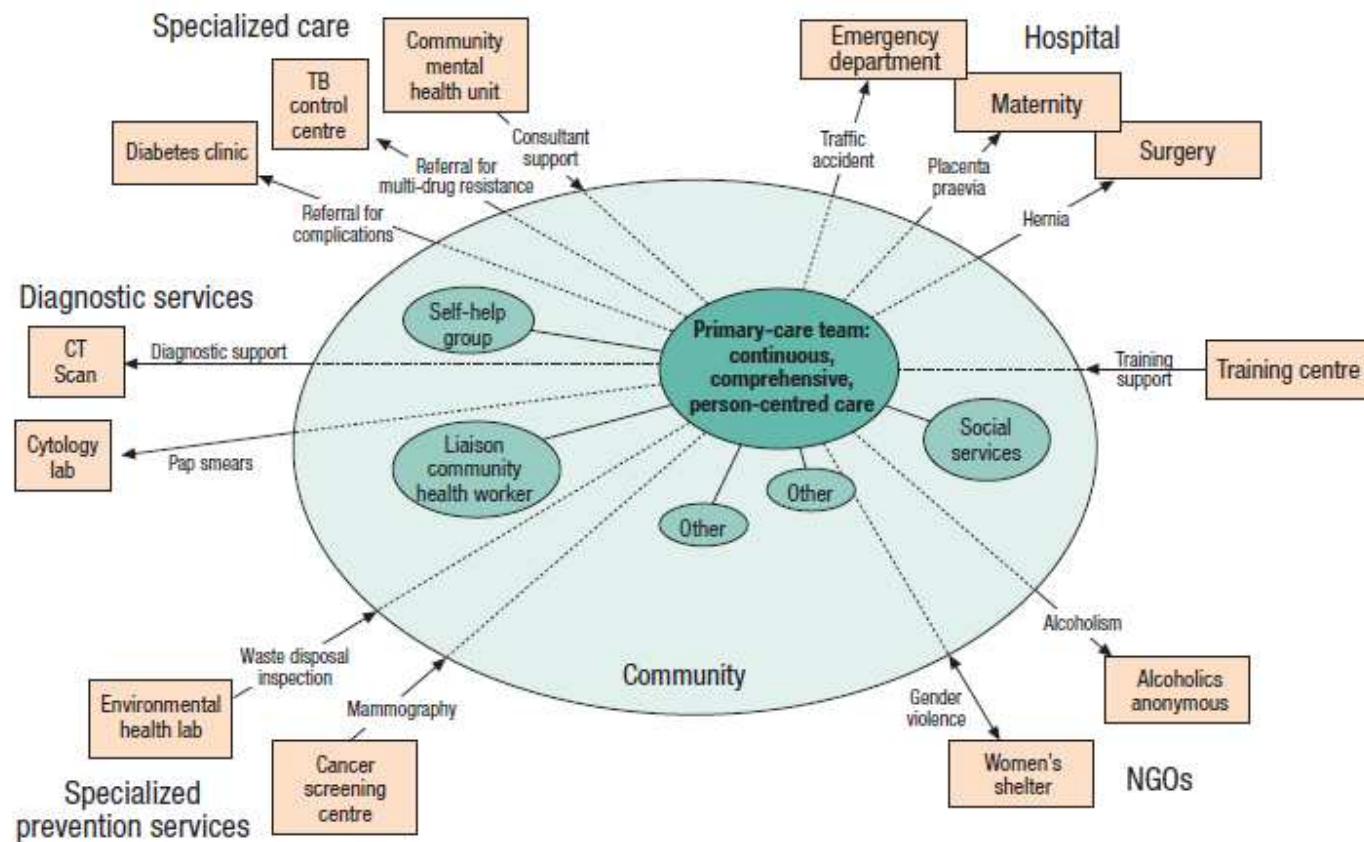
- De Bruin S, et al. Health Policy 2012
- Systematic review of RCTs of comprehensive care programmes
- 33 studies
- Insufficient evidence on GP relevant outcomes

Summary

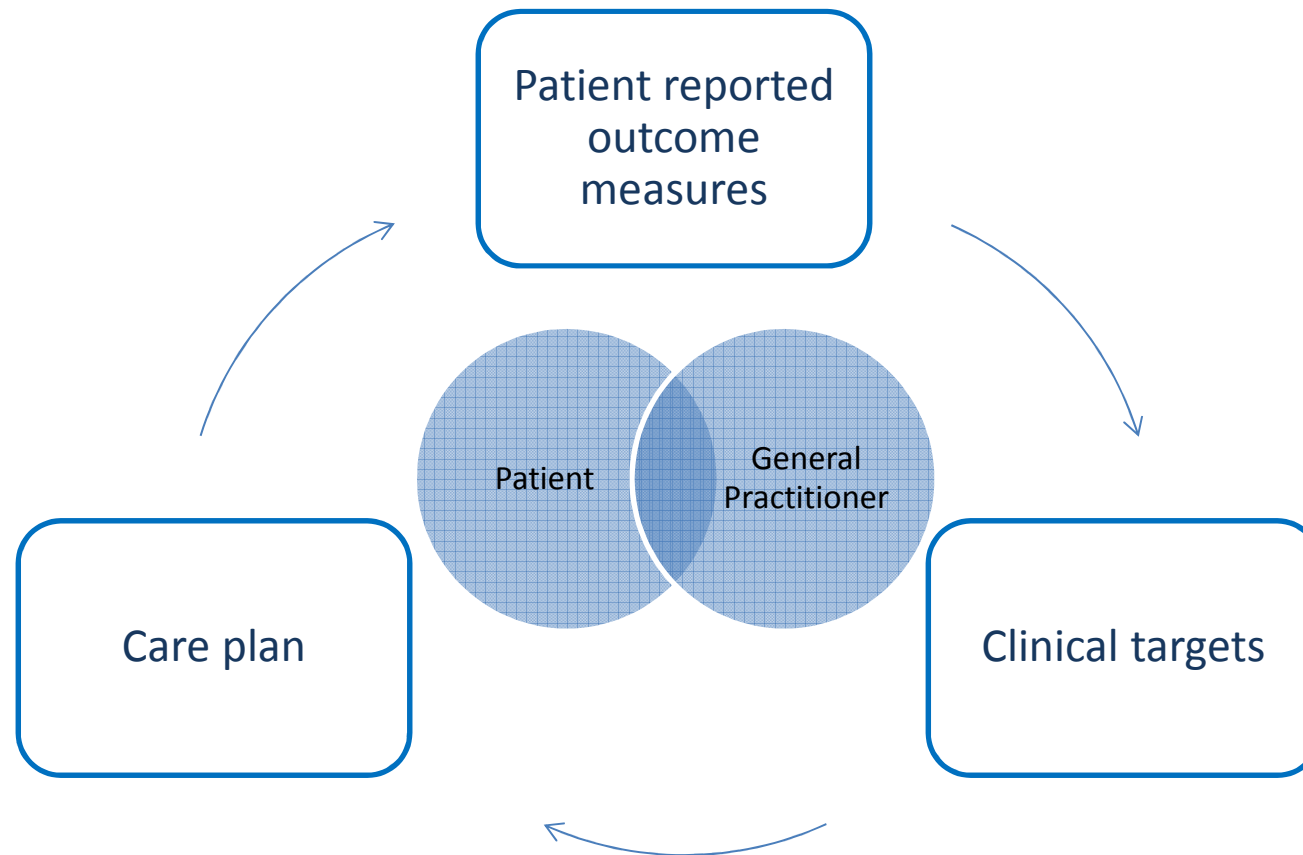
- NOT the same as complexity
- Highly prevalent, associated with female gender, low socioeconomic status and impaired mental health (...but specific index conditions? Common risk factors? Patterns?)
- Challenge for applying current Clinical Practice Guidelines and the broader evidence base
- Little evidence for specific effective interventions

Medical care model for General Practice

Primary care as a hub of coordination: networking within the community served and with outside partners



Goal oriented care



Goal oriented care

By placing a checkmark in one box in each group below, please indicate which statements best describe your own health state today.

Mobility

- | | | |
|--------------------------|---------------------------------------|--------------------------|
| <input type="checkbox"/> | I have no problems in walking about | <input type="checkbox"/> |
| <input type="checkbox"/> | I have some problems in walking about | <input type="checkbox"/> |
| <input type="checkbox"/> | I am confined to bed | <input type="checkbox"/> |

Self-Care

- | | | |
|--------------------------|-------------------------------------------------|--------------------------|
| <input type="checkbox"/> | I have no problems with self-care | <input type="checkbox"/> |
| <input type="checkbox"/> | I have some problems washing or dressing myself | <input type="checkbox"/> |
| <input type="checkbox"/> | I am unable to wash or dress myself | <input type="checkbox"/> |

Usual Activities (e.g., work, study, housework, family, or leisure activities)

- | | | |
|--------------------------|----------------------------------------------------------|--------------------------|
| <input type="checkbox"/> | I have no problems with performing my usual activities | <input type="checkbox"/> |
| <input type="checkbox"/> | I have some problems with performing my usual activities | <input type="checkbox"/> |
| <input type="checkbox"/> | I am unable to perform my usual activities | <input type="checkbox"/> |

Pain/Discomfort

- | | | |
|--------------------------|------------------------------------|--------------------------|
| <input type="checkbox"/> | I have no pain or discomfort | <input type="checkbox"/> |
| <input type="checkbox"/> | I have moderate pain or discomfort | <input type="checkbox"/> |
| <input type="checkbox"/> | I have extreme pain or discomfort | <input type="checkbox"/> |

Anxiety/Depression

- | | | |
|--------------------------|--------------------------------------|--------------------------|
| <input type="checkbox"/> | I am not anxious or depressed | <input type="checkbox"/> |
| <input type="checkbox"/> | I am moderately anxious or depressed | <input type="checkbox"/> |
| <input type="checkbox"/> | I am extremely anxious or depressed | <input type="checkbox"/> |

Goal oriented care

STAGE 1 area/ activity (eg sport)	STAGE 2 score each area/ activity out of 100	STAGE 3 spend your 60 points between the different areas	
<input type="text"/>	<input type="text"/>	<input type="text"/>	Total number of points should add up to 60
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
All other aspects of your life not mentioned above	<input type="text"/> You must fill in this box	<input type="text"/>	

- 100 Exactly as you would like to be
- 90 Close to how you would like to be
- 80 Very good but not how you would like to be
- 70 Good but not how you would like to be
- 60 Between fair and good
- 50 Fair
- 40 Between poor and fair
- 30 Poor but not the worst you could imagine
- 20 Very poor but not the worst you could imagine
- 10 Close to the worst you could imagine
- 0 The worst you could imagine

Goal oriented practice

- Rethoric to practice
- The patient in the mirror
- Challenges

Mrs. Jones

- Female
- Aged 68
- Living with partner, small pension, rented flat, moved recently
- Obese: IMC 31
- Smoker: 10 cigarettes/d (recent relapse)
- Type 2 Diabetes: irregular control with insulin
- Ischaemic heart disease: asymptomatic and well controlled with medical treatment
- Osteoarthritis both knees: has been already referred for surgery (left)
- Insomnia: long term and reason for consultation

Key Messages

- Multimorbidity is the norm in General Practice
- ... but we still know very little about it
- The burden of care of multimorbidity is substantially made up of preventive activities
- Multimorbidity is not itself a problem, it is a powerful stress test for patient centredness of health systems, research evidence and clinical practice alike
- The patient has the answer to this (their) problem