The challenge of managing multiple chronic conditions

Bruce Guthrie

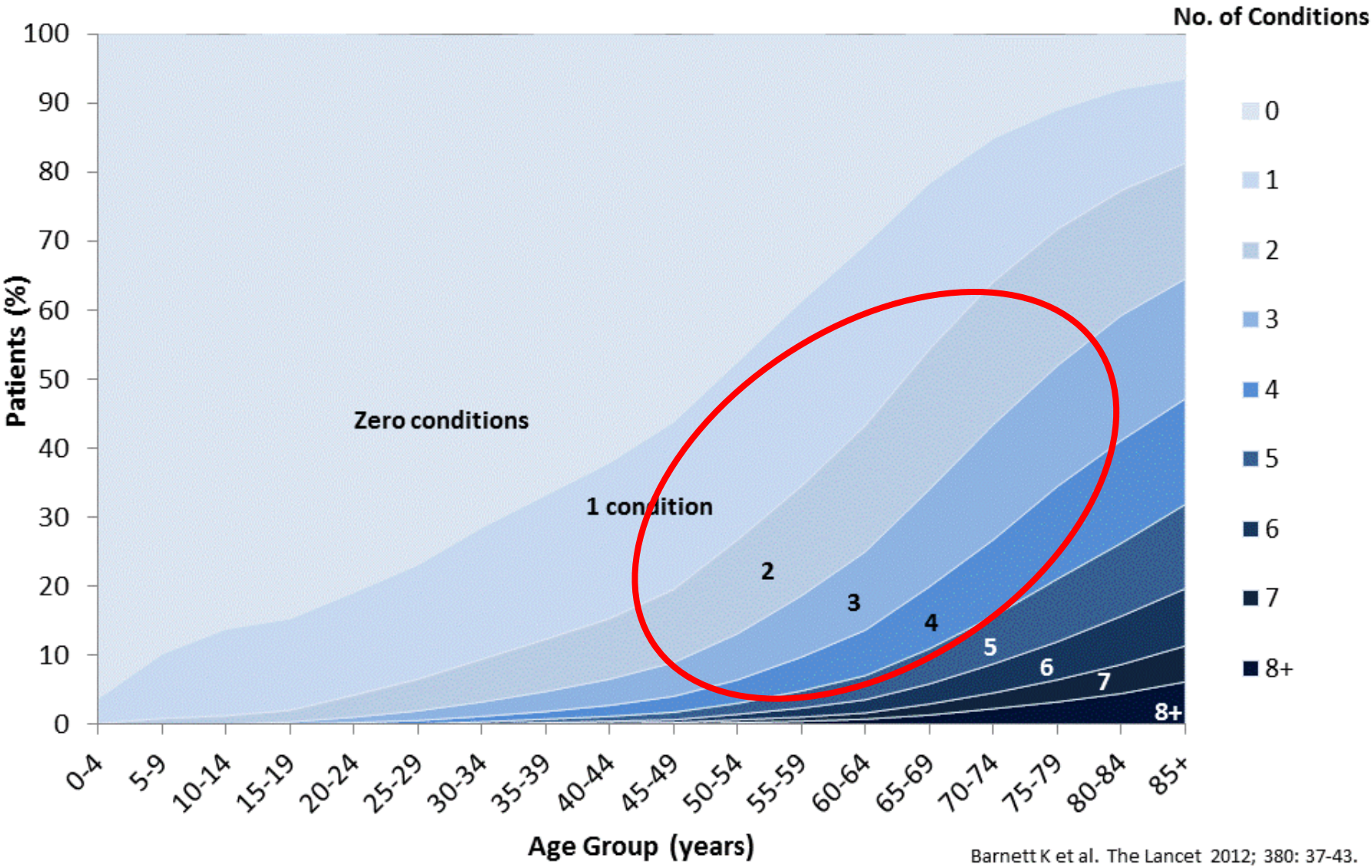
Professor of Primary Care Medicine, University of Dundee

NICE Multimorbidity Guideline Development Group Chair

Outline

- Epidemiology of multimorbidity
- How can healthcare systems respond?
- UK National Institute for Health and Care Excellence Multimorbidity guideline
  - Recommendations for an approach to care that accounts for multimorbidity
  - Speaking personally, not on behalf of NICE

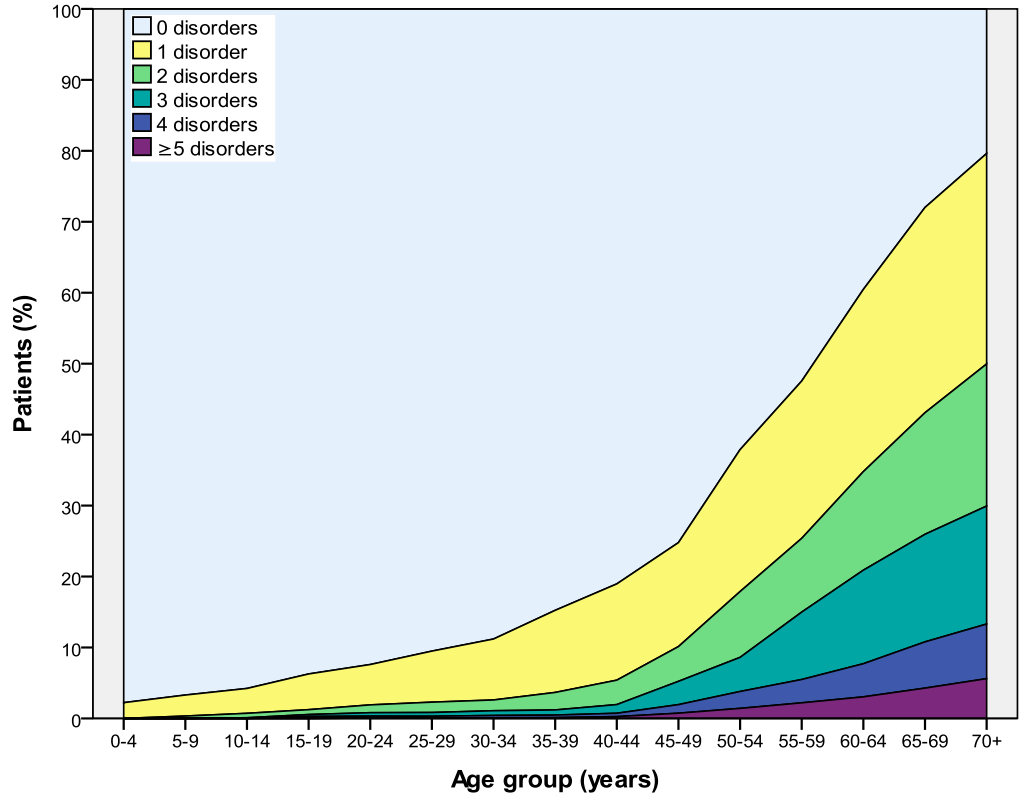
Epidemiology



Barnett K et al. The Lancet 2012; 380: 37-43.

Similar patterns worldwide

- Household survey of 160,000 residents in 3 prefectures in Guangdong province, China



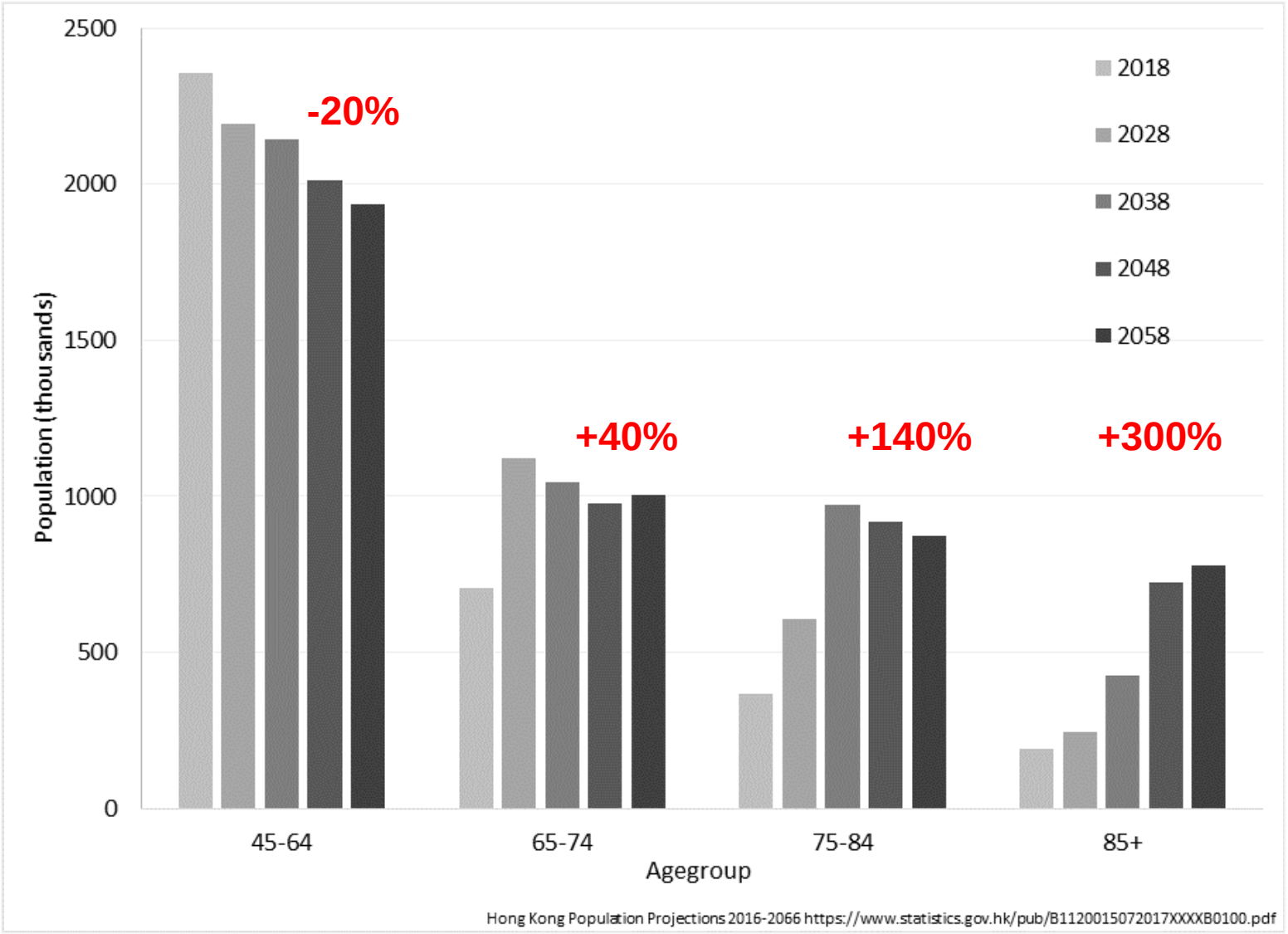
Wang HHX et al. BMC Medicine 2014:12:188

Multimorbidity in Hong Kong

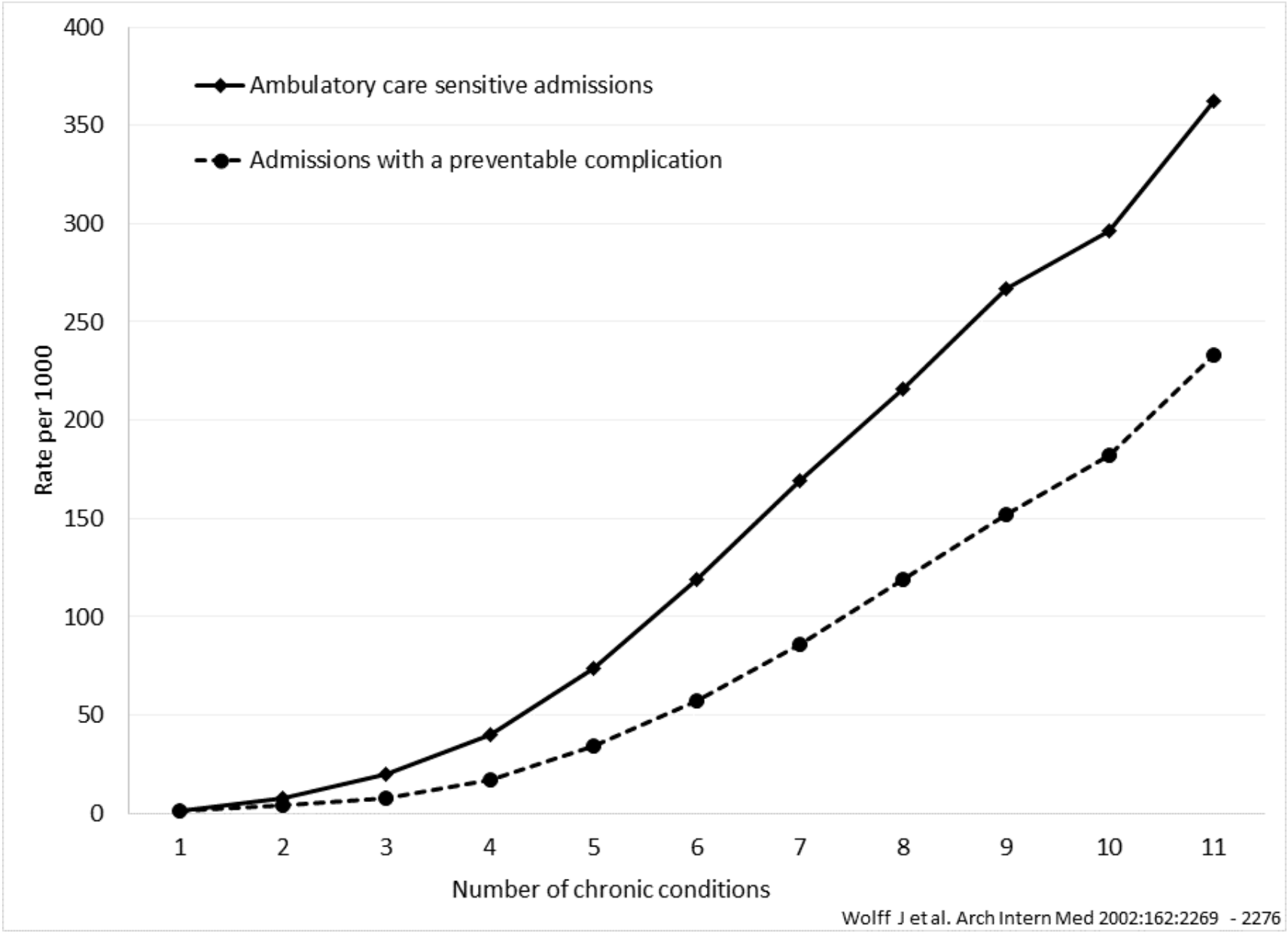
- Population survey 25,780 adults in Hong Kong
- 12.5% have multimorbidity based on self-report
- Commoner in older people
  - Adjusted OR 18.4 aged 65+ vs aged 15-24
- Commoner in the less affluent
  - Adjusted OR 1.5 household income <HK$4K vs >HK$40K
  - Adjusted OR 1.7 kindergarten vs higher education

Chung RY et al. PLoS ONE 2015:10(10):e0140040.

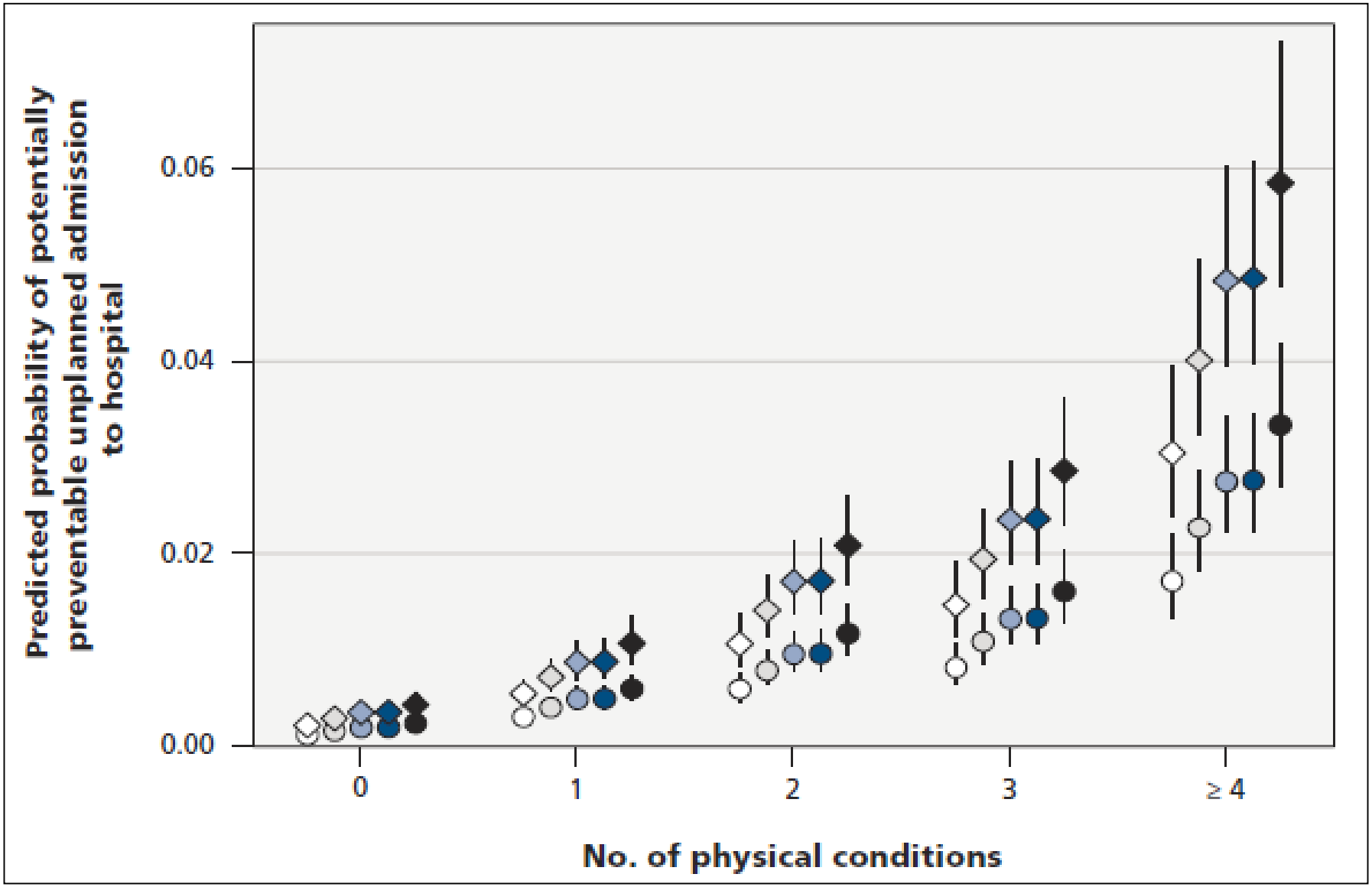
Population aging – Hong Kong



Hong Kong Population Projections 2016-2066 https://www.statistics.gov.hk/pub/B11200150720l7XXXXB0100.pdf



Wolff J et al. Arch Intern Med 2002:162:2269 - 2276



Payne R et al. CMAJ 2013; 185: E221-E8.

Epidemiology summary

- Multimorbidity is common and socially patterned however you measure it
  - Exact patterns vary by context/country
- Multimorbidity matters because high impact on patients and health services
- Multimorbidity driven by population aging and better survival from acute disease
- The price of this success is the major challenge to health systems that multimorbidity poses

How can health systems respond?

How can health systems respond?

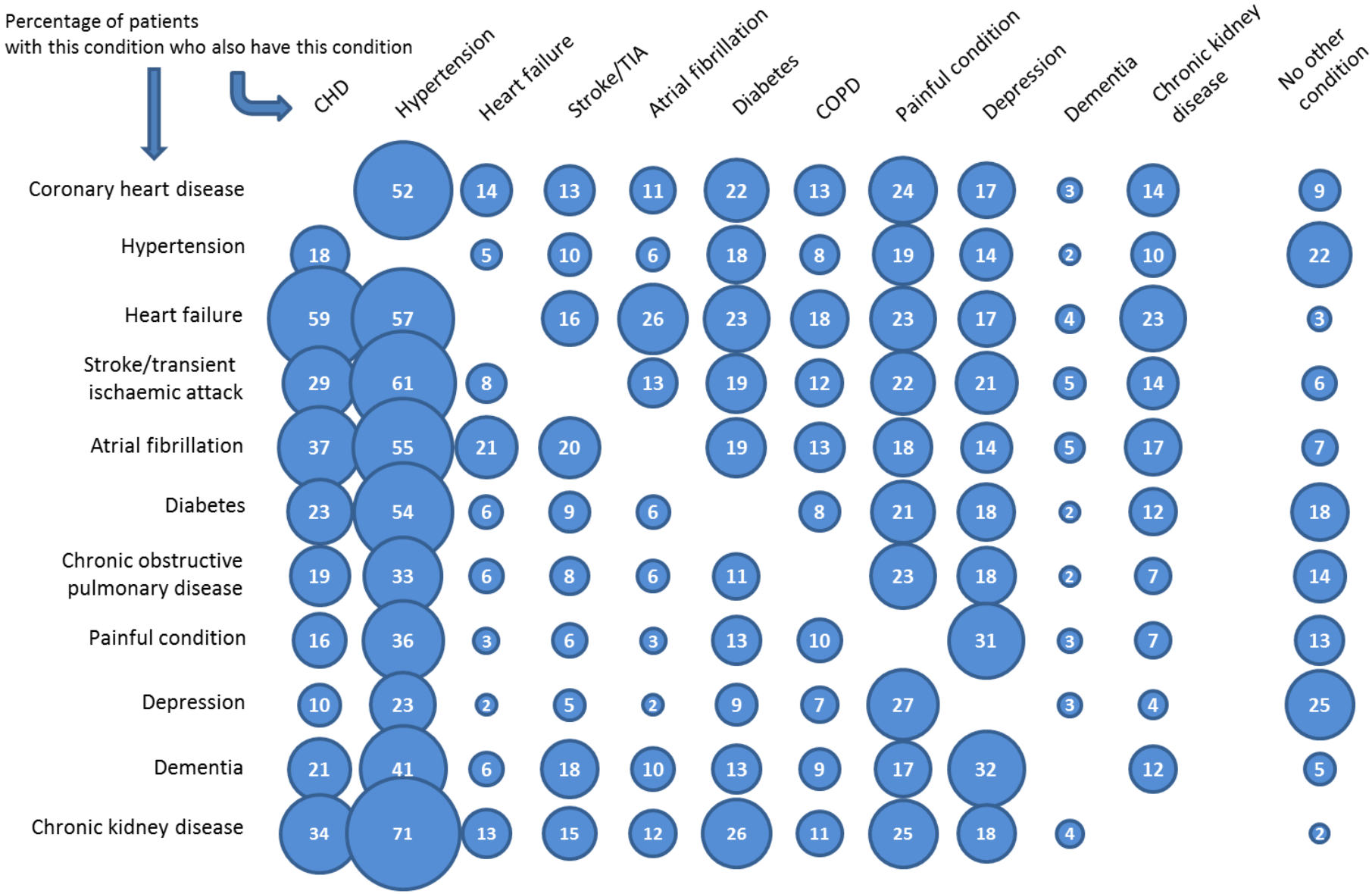
Multimorbidity is most of healthcare…

1. Focus on specific problems that are common and important to people with multimorbidity
2. Focus on high-volume processes predominately used by people with multimorbidity
3. Focus on holistic care and care co-ordination
4. Ensure health systems retain strong generalism

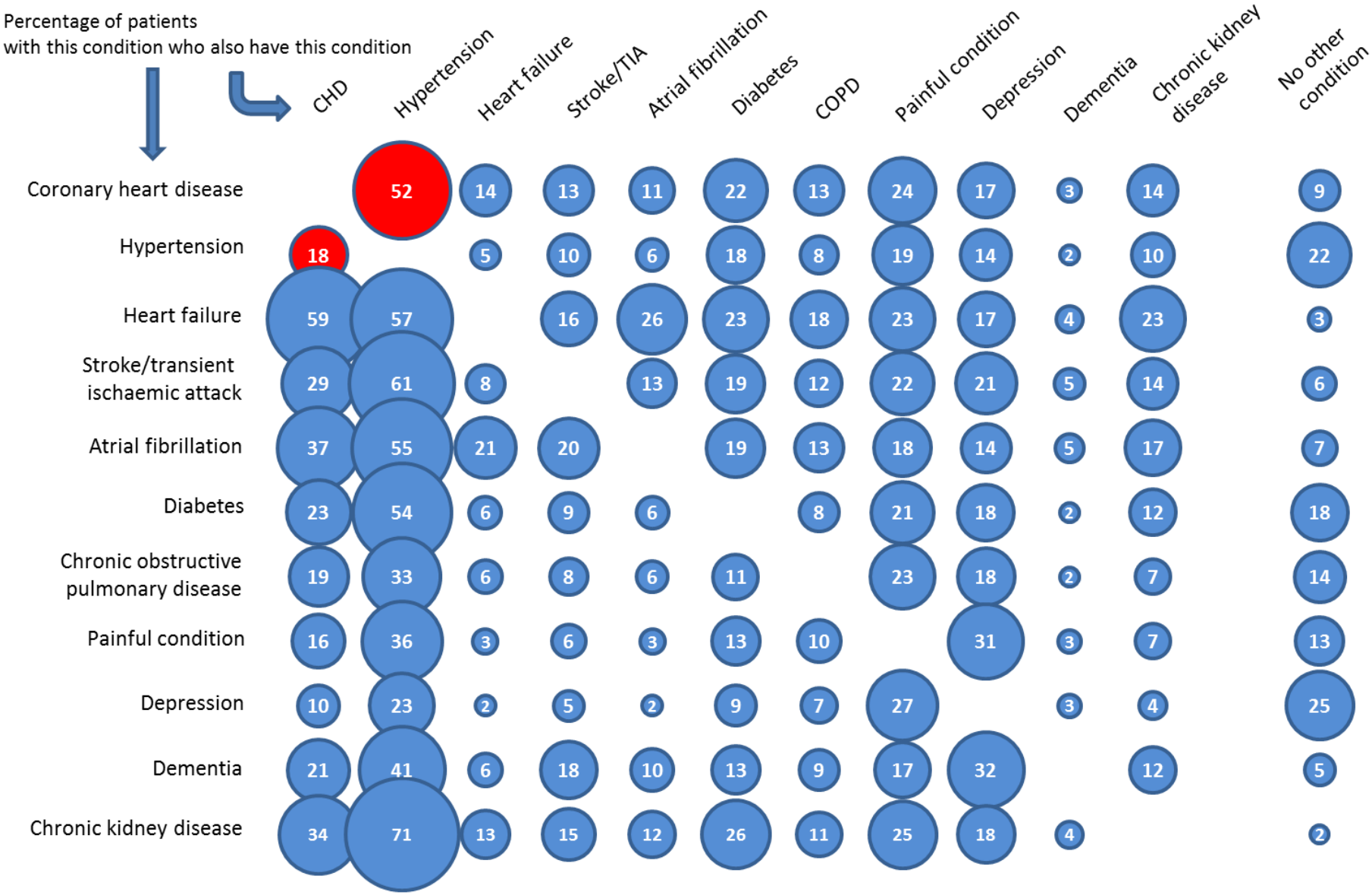
1. Specific problems

- Multimorbidity is very heterogenous
  - Concordant, discordant and dominant morbidities
  - Potentially curative cancer usually dominates
- Can't plan for every eventuality but can plan for common combinations
  - Diabetes & cardiovascular risk, diabetes in pregnancy
  - Learning disabilities and epilepsy
  - Depression in everyone with chronic physical disease

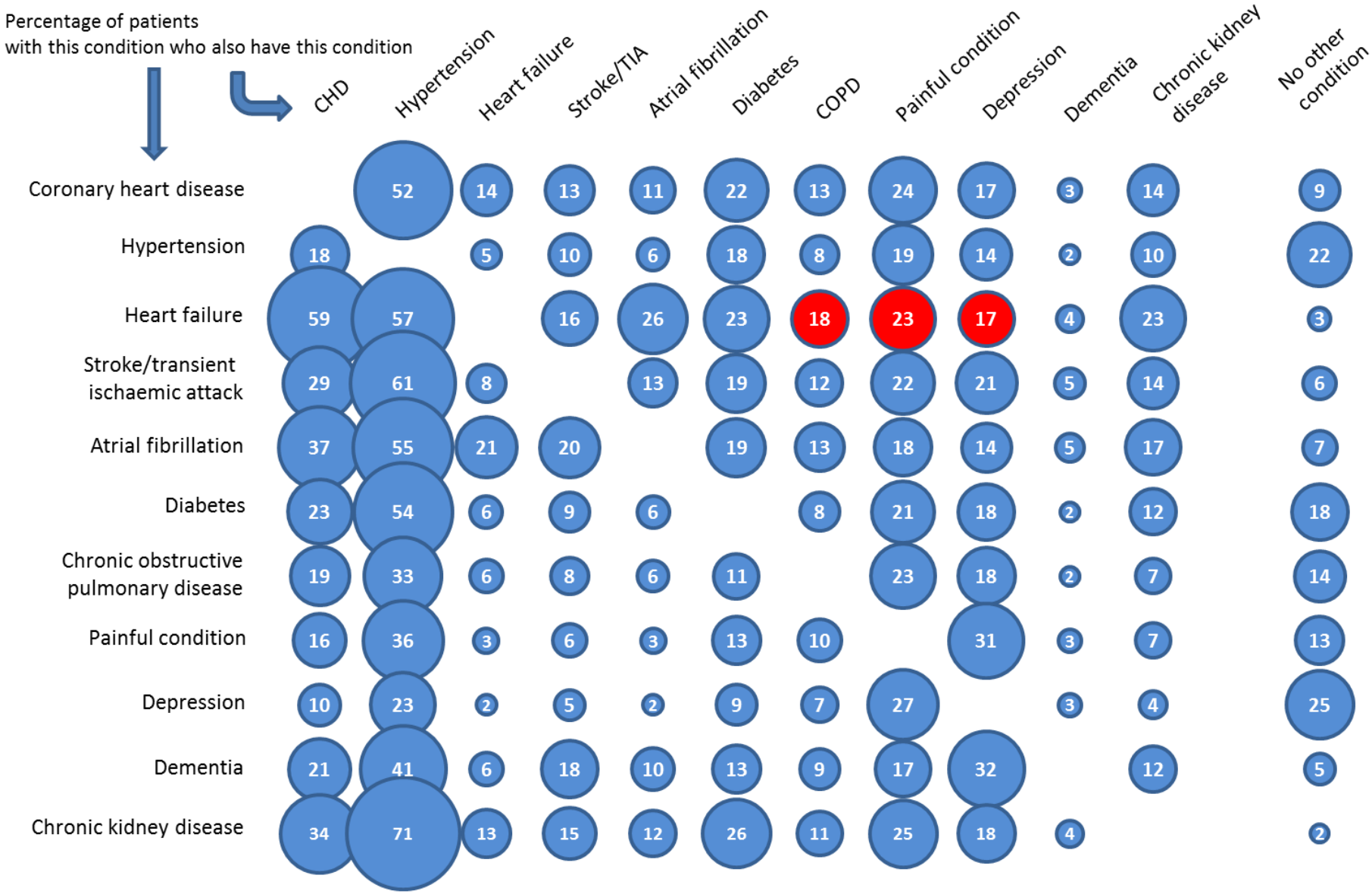
Piette JD, Kerr EA. Diabetes Care 2006; 29(3): 725-31.



Adapted from Farmer et al. BMJ 2016; 354: i4843



Adapted from Farmer et al. BMJ 2016; 354: i4843



Adapted from Farmer et al. BMJ 2016; 354: i4843

2. High volume processes

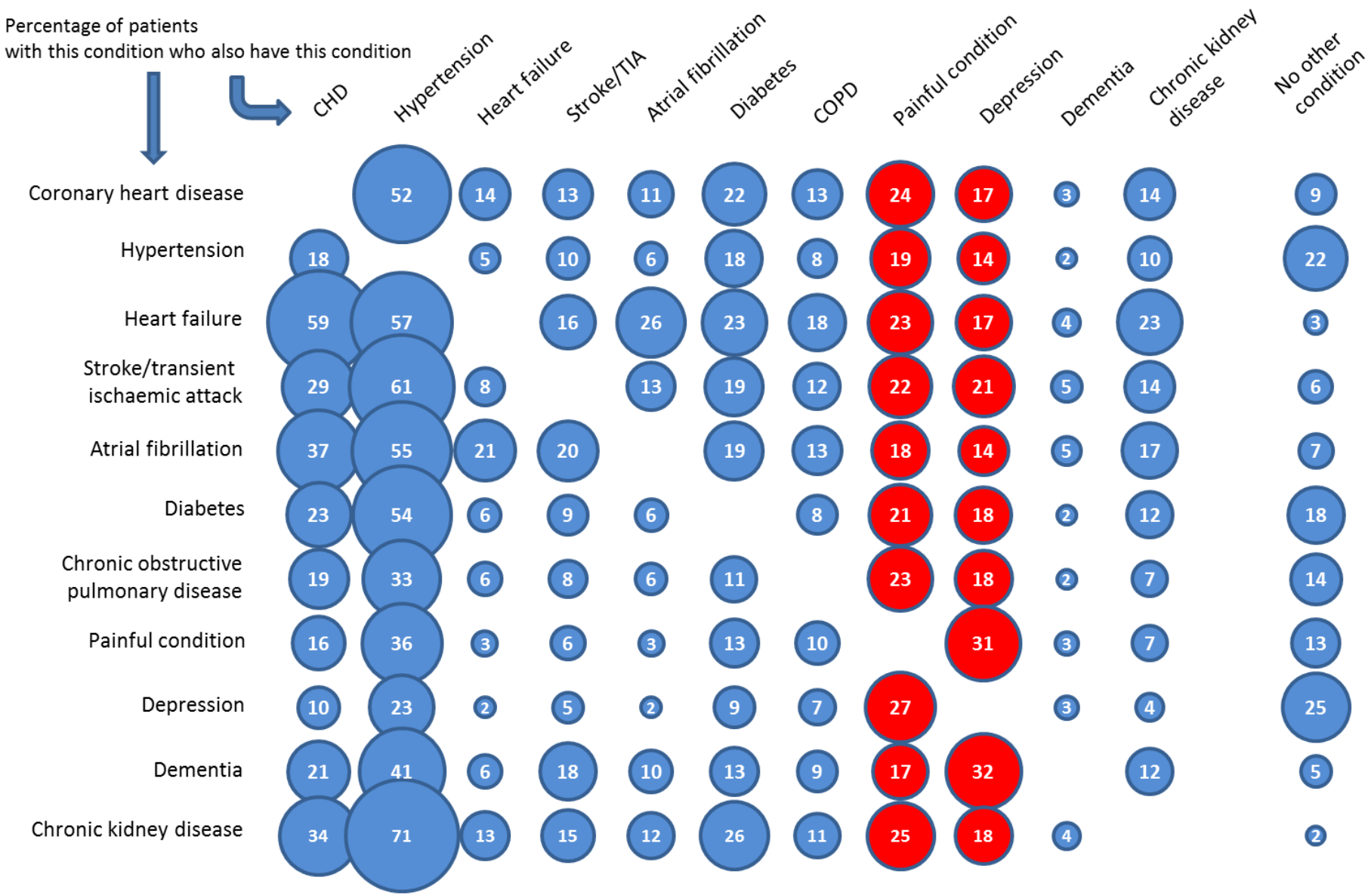
- Improving discharge planning
- Polypharmacy/medicines optimisation
- Medicines reconciliation at transitions
- Handwashing
- Central line care bundles
- Repeat prescribing systems
- Document handling
- Antimicrobial prescribing

3. Holistic care

- Final common pathways
  - Frailty, death…
- Holistic care is easy to say, but hard to define
  - Generalist by definition, care co-ordination & similar
  - 'Geriatric syndromes' like falls, continence, function
  - Balancing single disease guideline recommendations
- Comprehensive Geriatric Assessment
  - Effective for inpatients and recently discharged
  - Uncertain if effective more generally

4. Strong generalism

- Core generalist disciplines
  - General practitioners, geriatricians, ‘acute medicine’, specialist geriatric nurses
  - Increasing specialisation across all disciplines
- Balance between primary and specialist care
  - The right balance will depend on context, but primary care has to be strong
- Generalist care by specialists
  - All specialists care for people with major comorbidity



Adapted from Farmer et al. BMJ 2016; 354: i4843

The NICE Multimorbidity Guideline

NICE Multimorbidity guideline

- Published in 2016
  - https://www.nice.org.uk/guidance/ng56
- Structured evidence based process
  - Single disease trial evidence is limited because trials exclude people with comorbidity and co-prescribing
  - More evidence in relation to holistic care
- Guidance on an approach to care that accounts for multimorbidity

NICE Multimorbidity guideline

- Guidelines are guidance not rules

  1.1.3 Be aware that the evidence for recommendations in NICE guidance on single health conditions is regularly drawn from people without multimorbidity and taking fewer prescribed regular medicines.

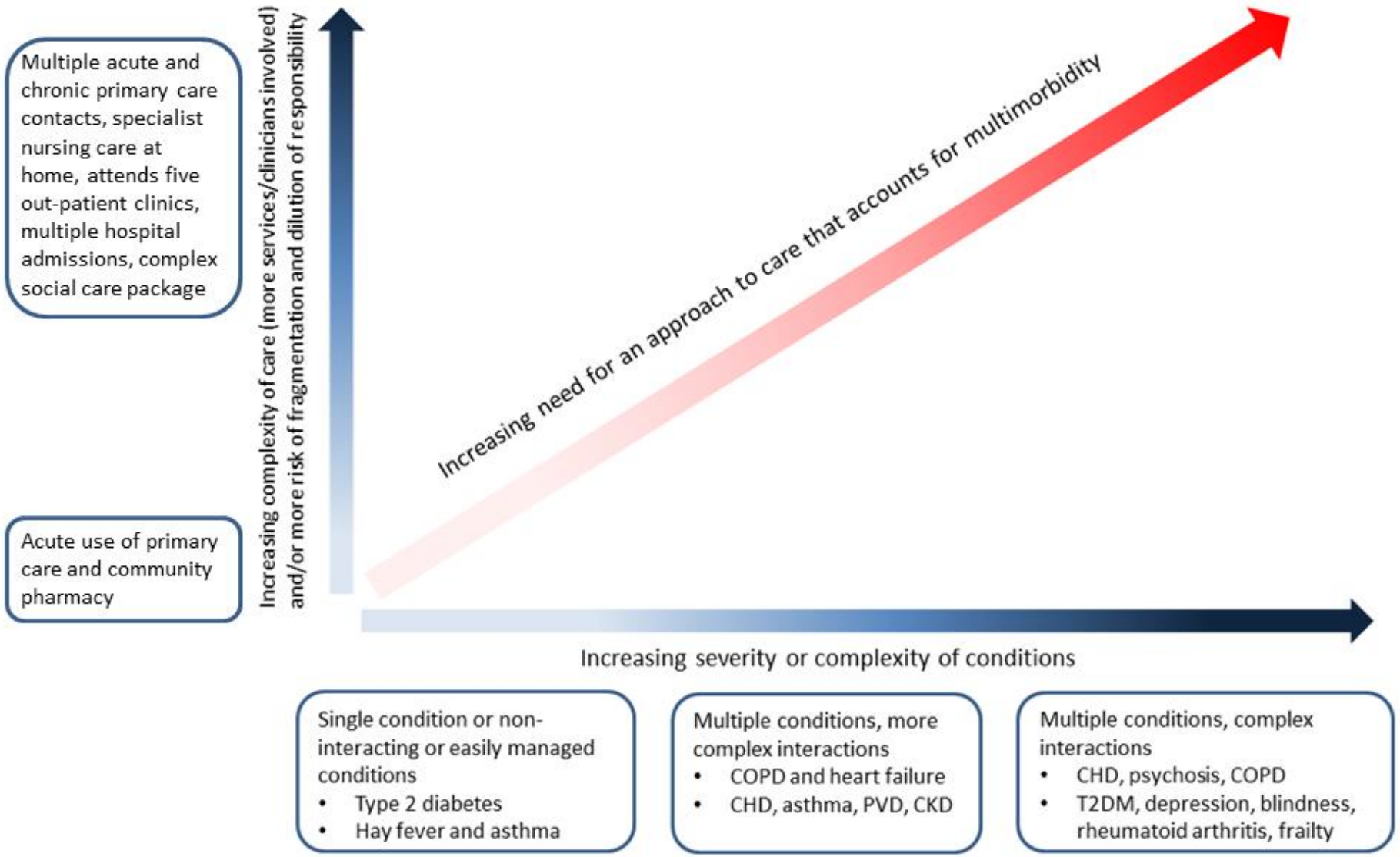
https://www.nice.org.uk/guidance/ng56

Key recommendations

1.3.1 Identify adults who may benefit from an approach to care that takes account of multimorbidity:

- opportunistically during routine care
- proactively using electronic health records (electronic frailty index, emergency admission risk prediction tools, 15+ regular drugs and some taking fewer)

https://www.nice.org.uk/guidance/ng56



https://www.nice.org.uk/guidance/ng56

Key recommendations

1.4.1 Consider assessing frailty in people with multimorbidity.

- an informal assessment of gait speed (for example, time taken to answer the door, time taken to walk from the waiting room)
- Self rated health, measured gait speed, PRISMA 7

https://www.nice.org.uk/guidance/ng56

Clinical Frailty Scale*

1 Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2 Well – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.

3 Managing Well – People whose **medical problems are well controlled,** but are **not regularly active** beyond routine walking.

4 Vulnerable – While **not dependent** on others for daily help, often **symptoms limit activities.** A common complaint is being "slowed up", and/or being tired during the day.

5 Mildly Frail – These people often have **more evident slowing,** and need help in **high order IADLs** (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6 Moderately Frail – People need help with **all outside activities** and with **keeping house**. Inside, they often have problems with stairs and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.

7 Severely Frail – **Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8 Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9. Terminally Ill - Approaching the end of life. This category applies to people with **a life expectancy <6 months**, who are **not otherwise evidently frail.**

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia**, they cannot do personal care without help.

* 1. Canadian Study on Health & Aging. Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

DALHOUSIE UNIVERSITY *Inspiring Minds*

http://geriatricresearch.medicine.dal.ca/pdf/Clinical%20Faily%20Scale.pdf

Key recommendations

1.6.7 Encourage people with multimorbidity to clarify what is important to them, including their personal goals, values and priorities. These may include:

- maintaining their independence
- undertaking paid or voluntary work, taking part in social activities and playing an
- active part in family life
- preventing specific adverse outcomes (for example, stroke)
- reducing harms from medicines
- reducing treatment burden
- lengthening life.

https://www.nice.org.uk/guidance/ng56

Key recommendations

- When reviewing treatments
  - Consider using STOPP/START
  - Consider starting as well as stopping
  - Actively check if symptomatic treatments work
  - 1.6.13 Take into account the possibility of lower overall benefit of continuing treatments that aim to offer prognostic benefit, particularly in people with limited life expectancy or frailty.
  - 1.6.14 Discuss with people who have multimorbidity and limited life expectancy or frailty whether they wish to continue treatments recommended in guidance on single health conditions which may offer them limited overall benefit.

https://www.nice.org.uk/guidance/ng56

Key recommendations

- 1.6.17 After a discussion of disease and treatment burden and the person's personal goals, values and priorities, develop and agree an individualised management plan … this could include:
  - starting, stopping or changing medicines and non-pharmacological treatments
  - prioritising healthcare appointments
  - anticipating possible changes to health and wellbeing
  - assigning responsibility for coordination of care and ensuring this is communicated to other healthcare professionals and services
  - other areas the person considers important to them
  - arranging a follow-up and review of decisions made

https://www.nice.org.uk/guidance/ng56

Key recommendations

- 1.6.17 After a discussion of disease and treatment burden and the person's **personal goals, values and priorities**, develop and agree an individualised management plan … this could include:
  - starting, stopping or changing medicines and non-pharmacological treatments
  - prioritising healthcare appointments
  - anticipating possible changes to health and wellbeing
  - assigning responsibility for coordination of care and ensuring this is communicated to other healthcare professionals and services
  - other areas the person considers important to them
  - arranging a follow-up and review of decisions made

https://www.nice.org.uk/guidance/ng56

Key recommendations

- 1.6.17 After a discussion of disease and treatment burden and the person's personal goals, values and priorities, develop and agree an individualised management plan … this could include:
  - **starting, stopping or changing** medicines and non-pharmacological treatments
  - prioritising healthcare appointments
  - anticipating possible changes to health and wellbeing
  - assigning responsibility for coordination of care and ensuring this is communicated to other healthcare professionals and services
  - other areas the person considers important to them
  - arranging a follow-up and review of decisions made

https://www.nice.org.uk/guidance/ng56

Key recommendations

- 1.6.17 After a discussion of disease and treatment burden and the person's personal goals, values and priorities, develop and agree an individualised management plan … this could include:
  - starting, stopping or changing medicines and non-pharmacological treatments
  - **prioritising healthcare appointments**
  - anticipating possible changes to health and wellbeing
  - assigning responsibility for coordination of care and ensuring this is communicated to other healthcare professionals and services
  - other areas the person considers important to them
  - arranging a follow-up and review of decisions made

https://www.nice.org.uk/guidance/ng56

Key recommendations

- 1.6.17 After a discussion of disease and treatment burden and the person's personal goals, values and priorities, develop and agree an individualised management plan … this could include:
  - starting, stopping or changing medicines and non-pharmacological treatments
  - prioritising healthcare appointments
  - anticipating possible changes to health and wellbeing
  - assigning **responsibility for coordination of care** and ensuring this is communicated to other healthcare professionals and services
  - other areas the person considers important to them
  - arranging a follow-up and review of decisions made

https://www.nice.org.uk/guidance/ng56

Key recommendations

- 1.7.1 Start a comprehensive assessment of older people with complex needs at the point of admission and preferably in a specialist unit for older people.
  - This is based on ‘Comprehensive Geriatric Assessment’ trials
  - Evidence of reduced mortality, increased independent living
  - But note unable to make a recommendation for comprehensive assessment in the community as the evidence is inconclusive

https://www.nice.org.uk/guidance/ng56

Managing multimorbidity

- Major challenge for health services everywhere
- Needs a system wide approach
  - Specific disease combinations
  - High volume processes
  - Holistic care
  - Strong generalism
- Care for the individual
  - Does this person need a different approach to care?
  - What are trying to achieve for this person?
  - What are the goals of the person or their carers?
  - Who is responsible? Should it be me?

University of Dundee

dundee.ac.uk

Thank you

This presentation draws on work done in collaboration with many people

Stewart Mercer, Graham Watt, Sally Wyke (University of Glasgow)

Francisco TT Lai, Samuel YS Wong, Benjamin HK Yip, Roger Y Chung, (Jockey Club School of Public Health and Primary Care)

The guideline development group of the NICE multimorbidity guideline

Rupert Payne (University of Bristol)