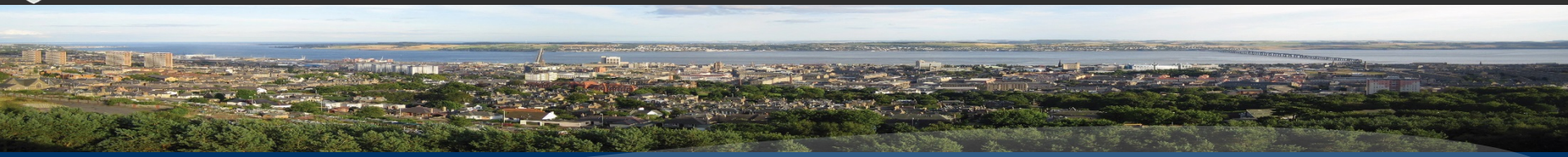
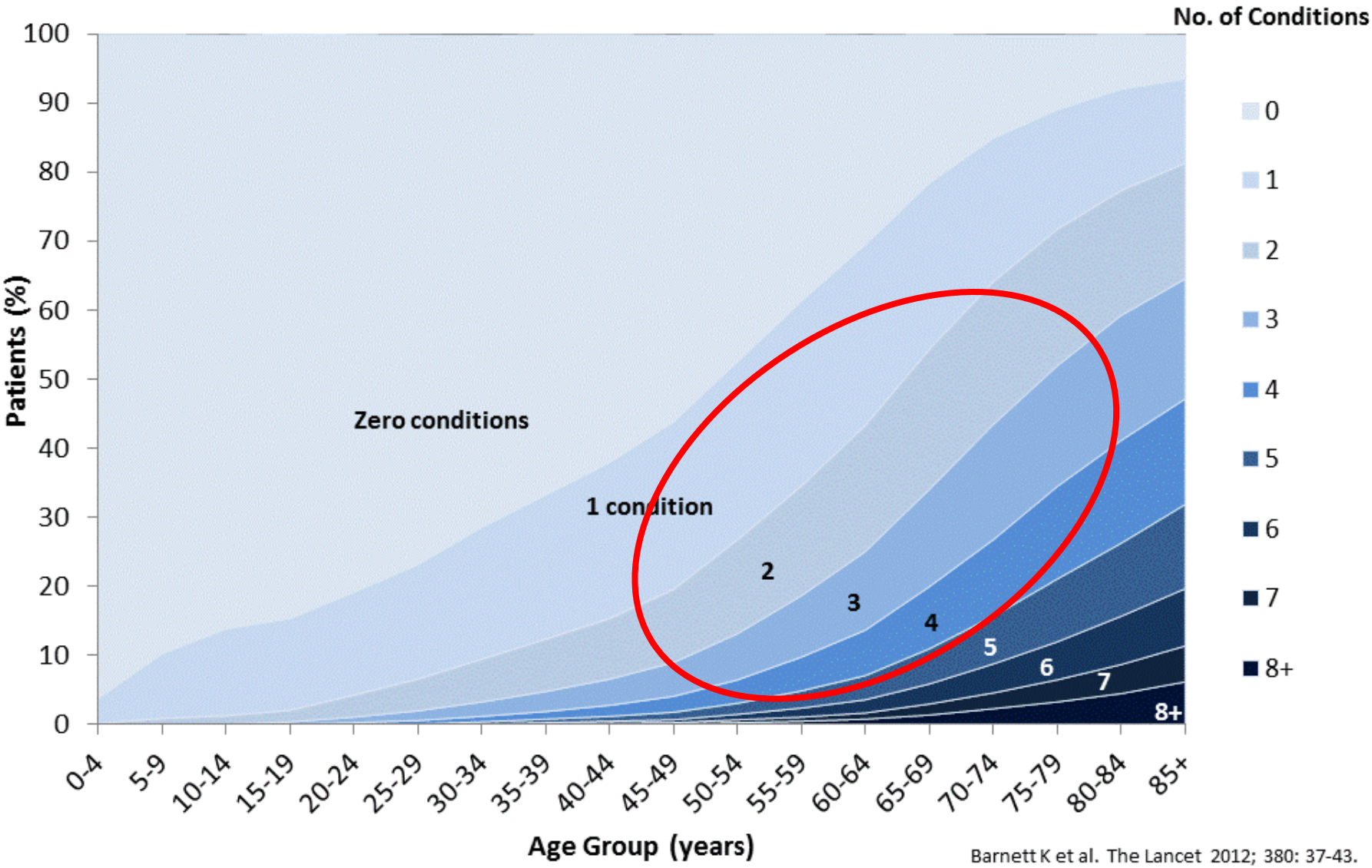


Multimorbidity: prevention and management

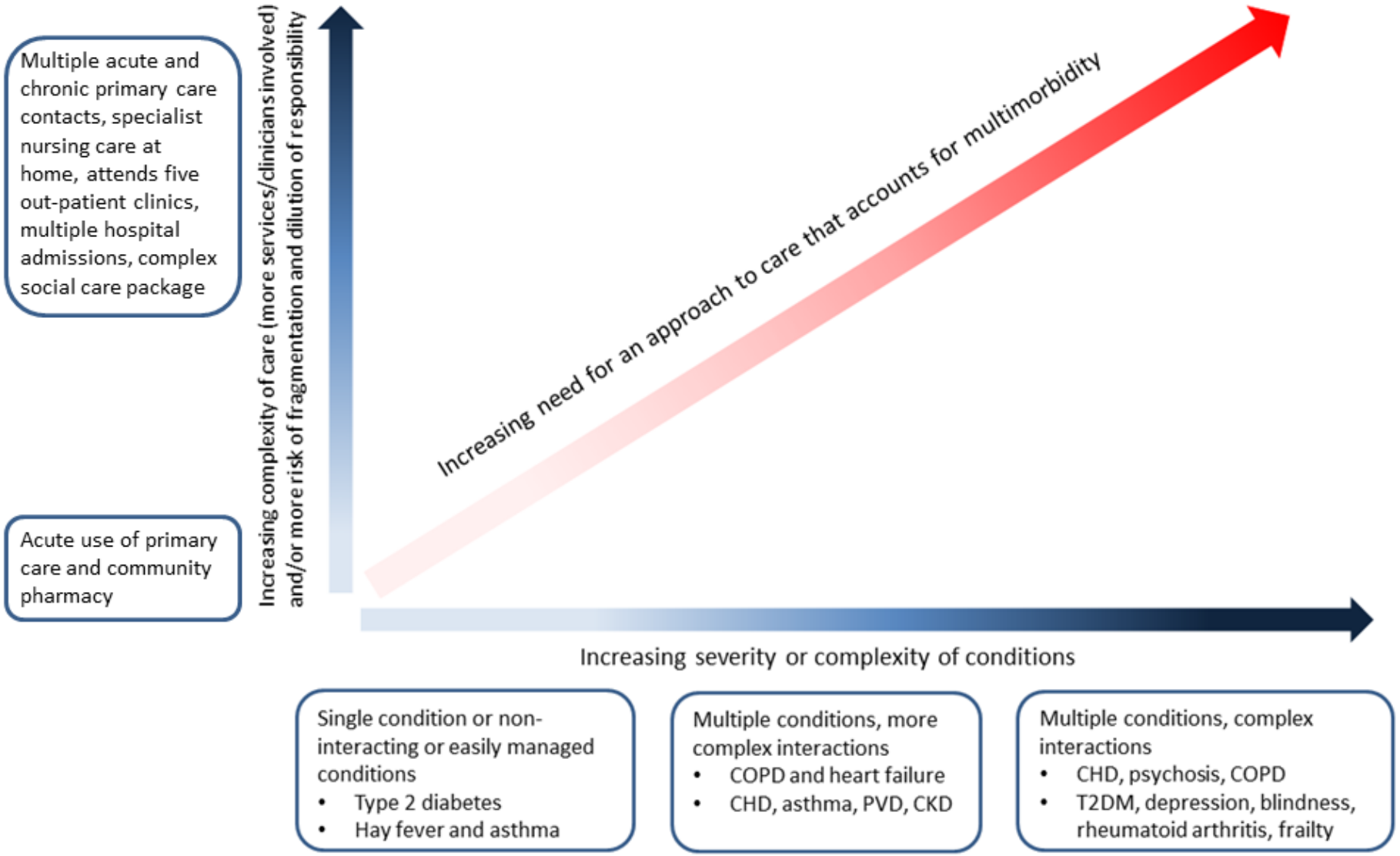
Bruce Guthrie

Professor of Primary Care Medicine, University of Dundee

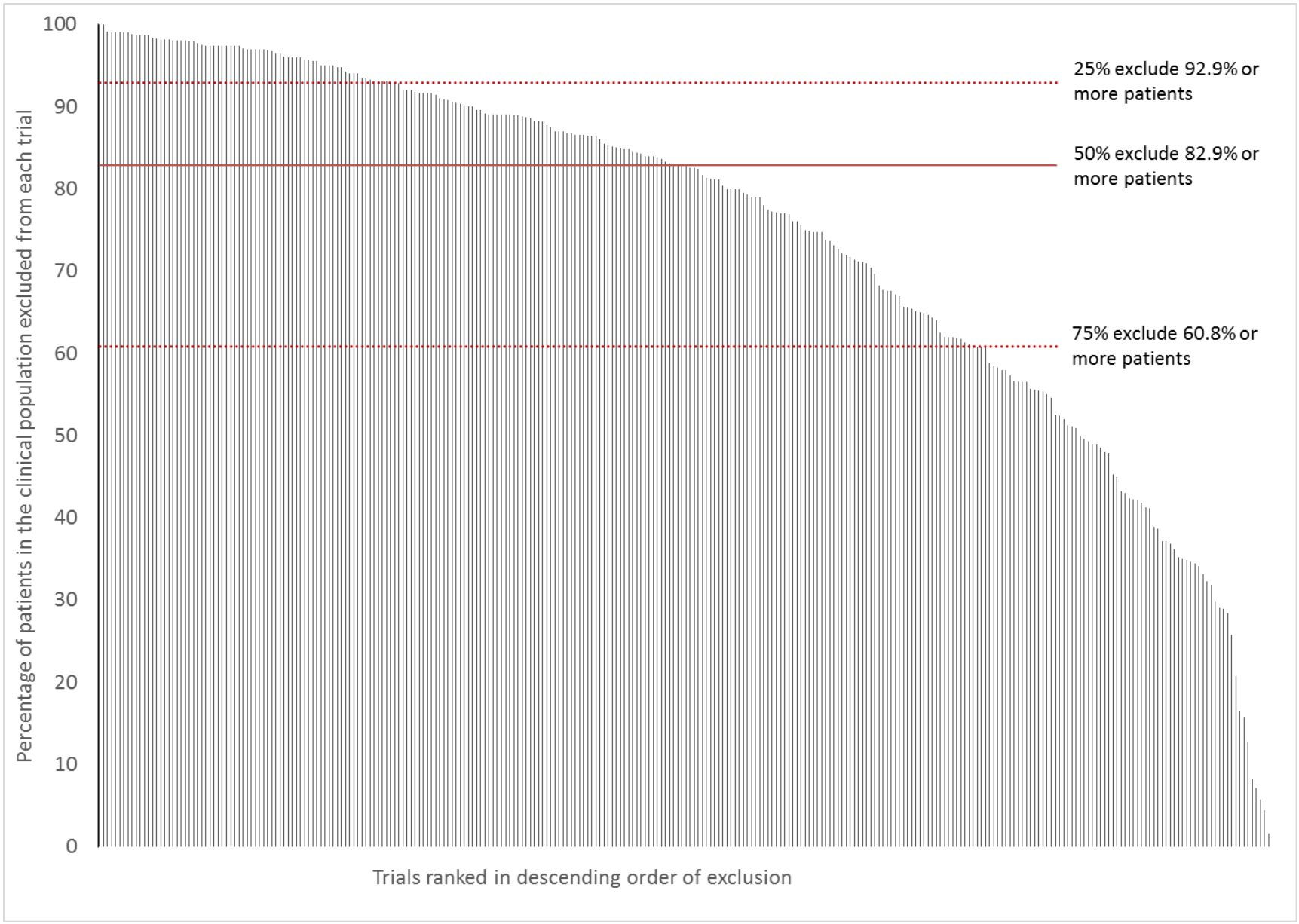
NICE Multimorbidity Guideline Development Group Chair



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



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


100
90
80
70
60
50
40
30
20
10
0
Percentage of patients in the clinical population excluded from each trial
25% exclude 92.9% or more patients
50% exclude 82.9% or more patients
75% exclude 60.8% or more patients
Trials ranked in descending order of exclusion

The limits of disease evidence

- Exclusion criteria driving this pattern
  - Age, comorbidity, co-prescription and more
- Median exclusion for common conditions
  - Atrial fibrillation 38%, CHD 75%, hypertension 83%, COPD 84%, rheumatoid arthritis 92%, type 2 diabetes 93%, asthma 96%

Suffer from and die of disease
Single risks
Precision 1

Suffer from and die of 'stuff'
Competing risks
Precision 2

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

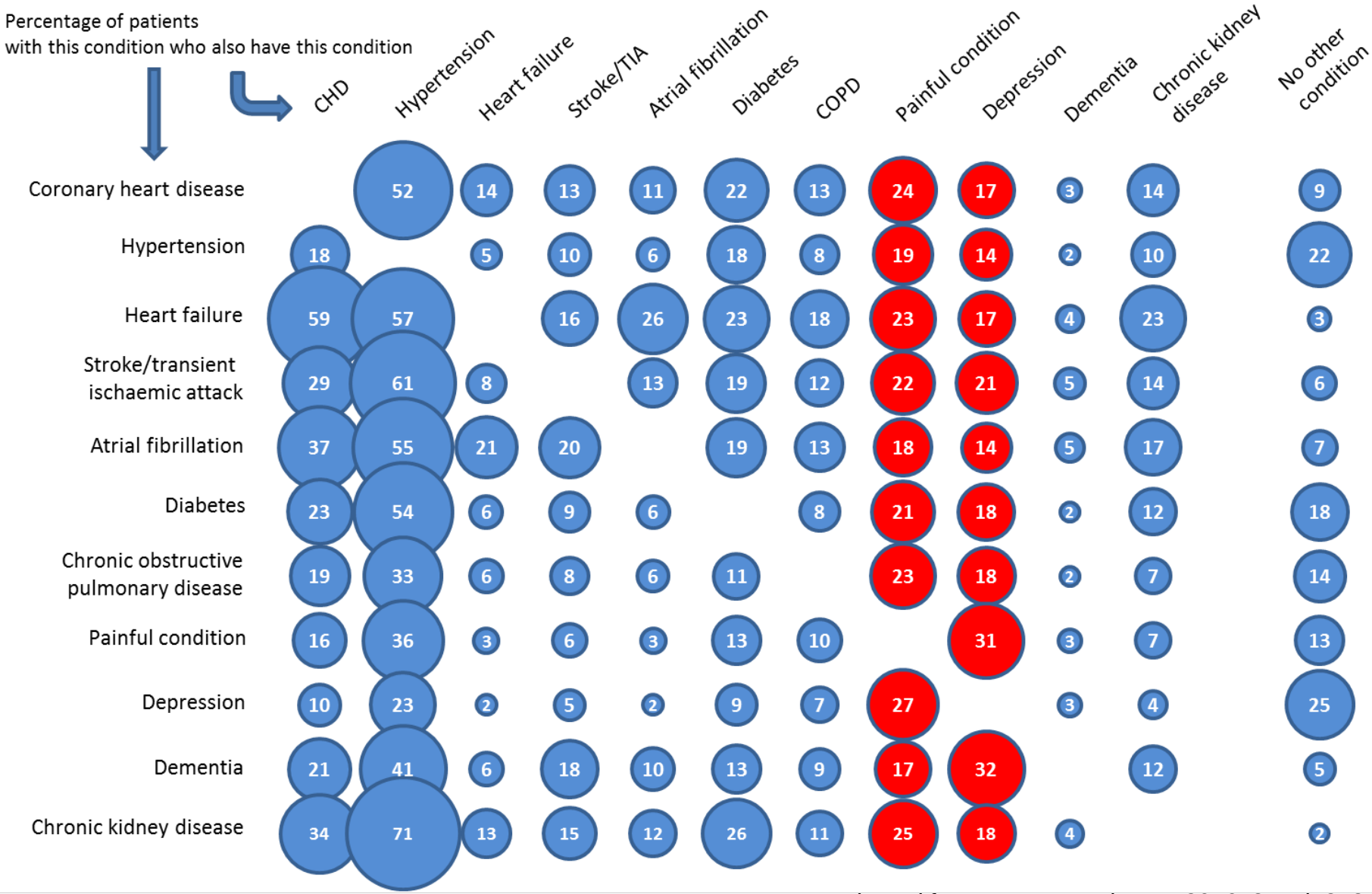
How can health systems respond?

Multimorbidity is most of healthcare…

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

1. 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

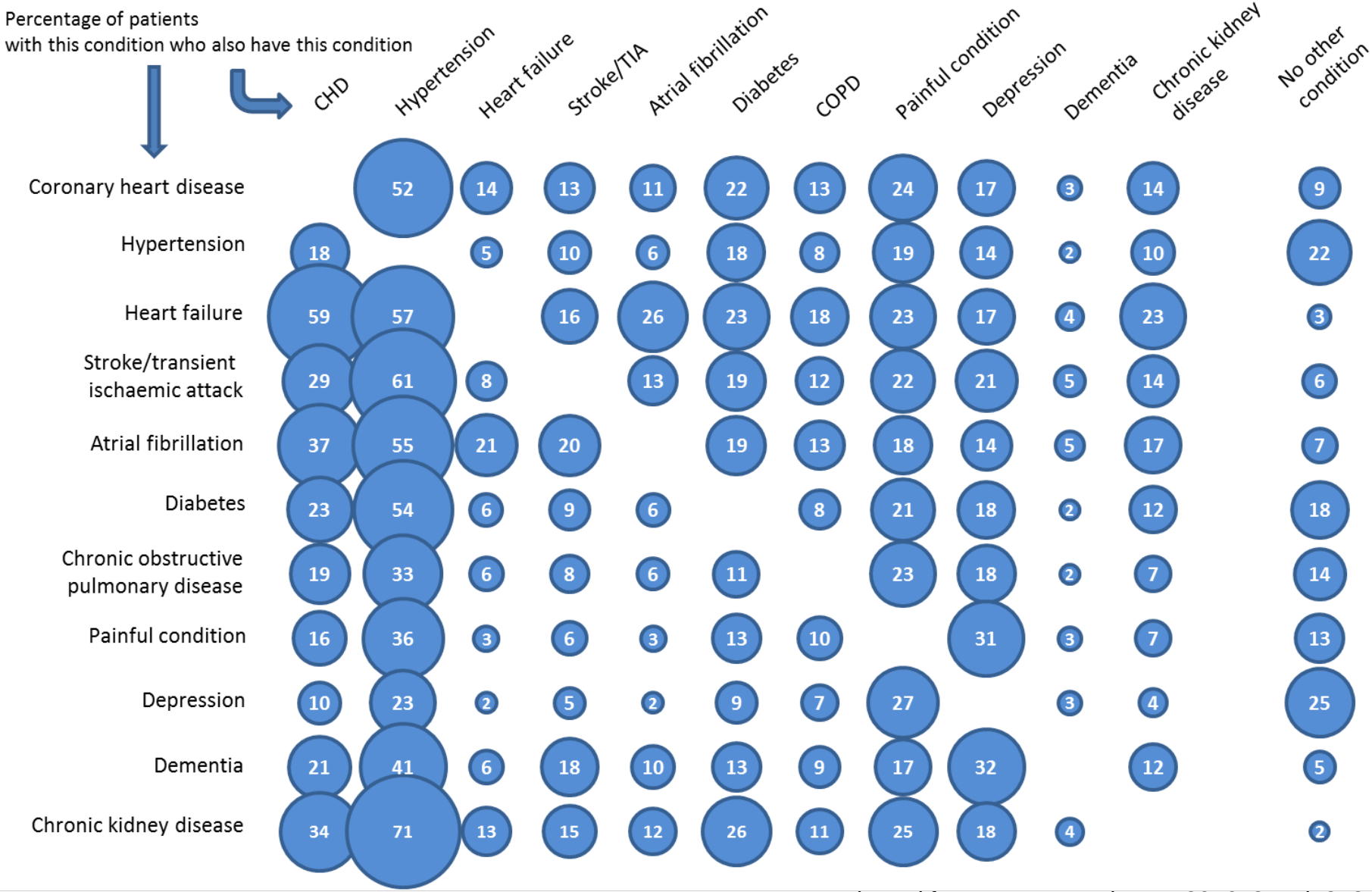


Adapted from Farmer et al. BMJ 2016; 354: i4843

2. 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.



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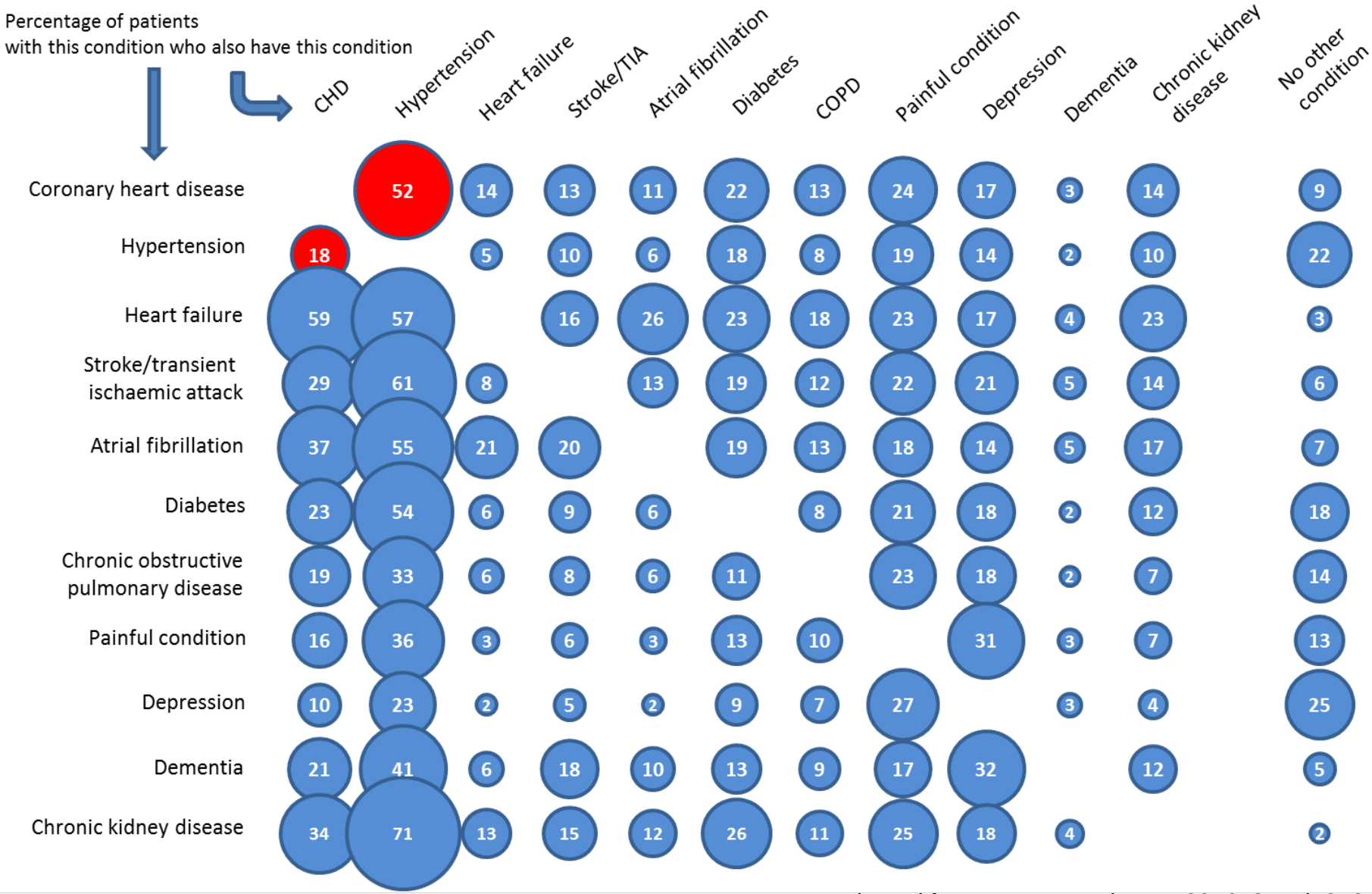

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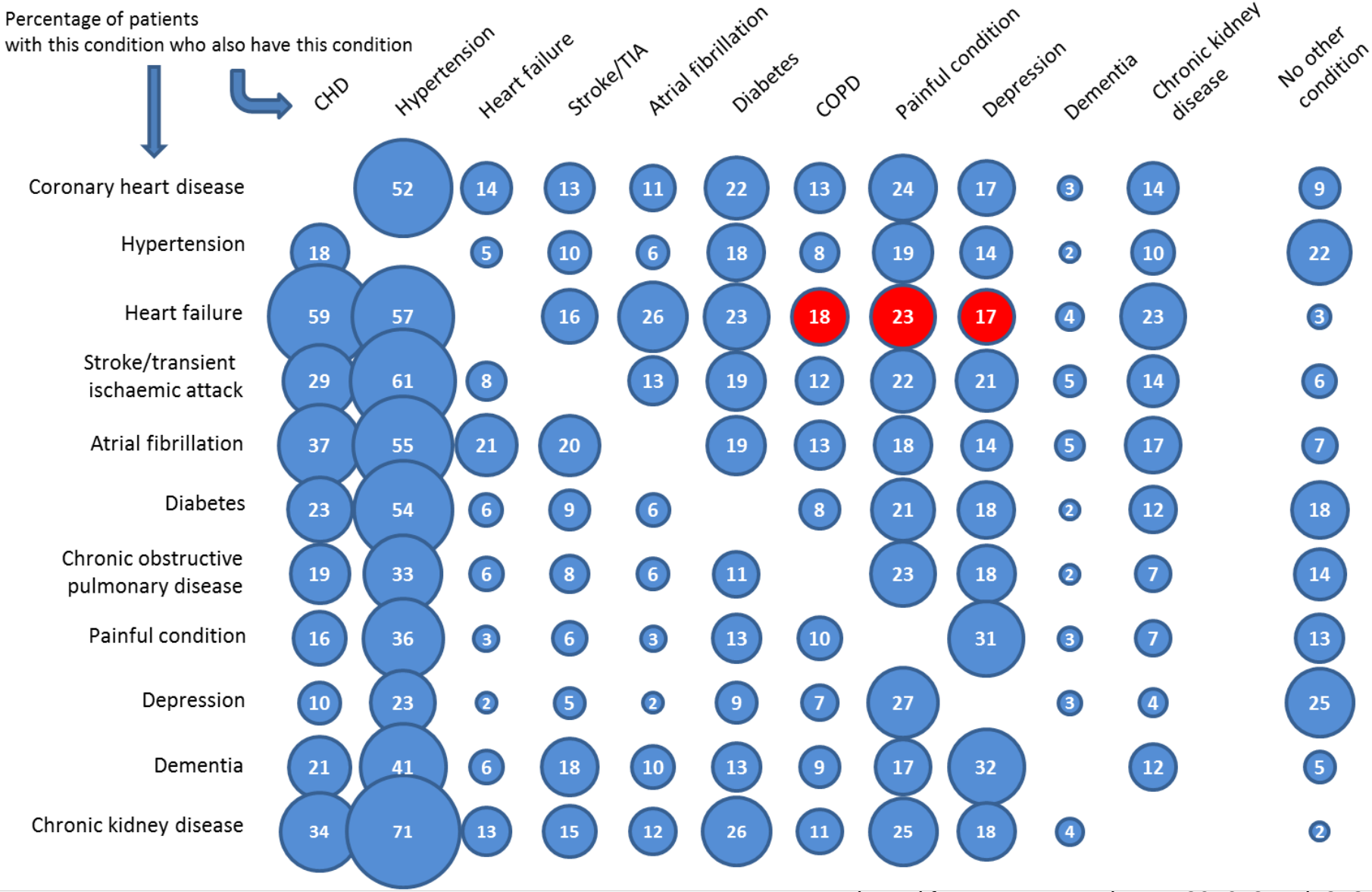

Adapted from Farmer et al. BMJ 2016; 354: i4843

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

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

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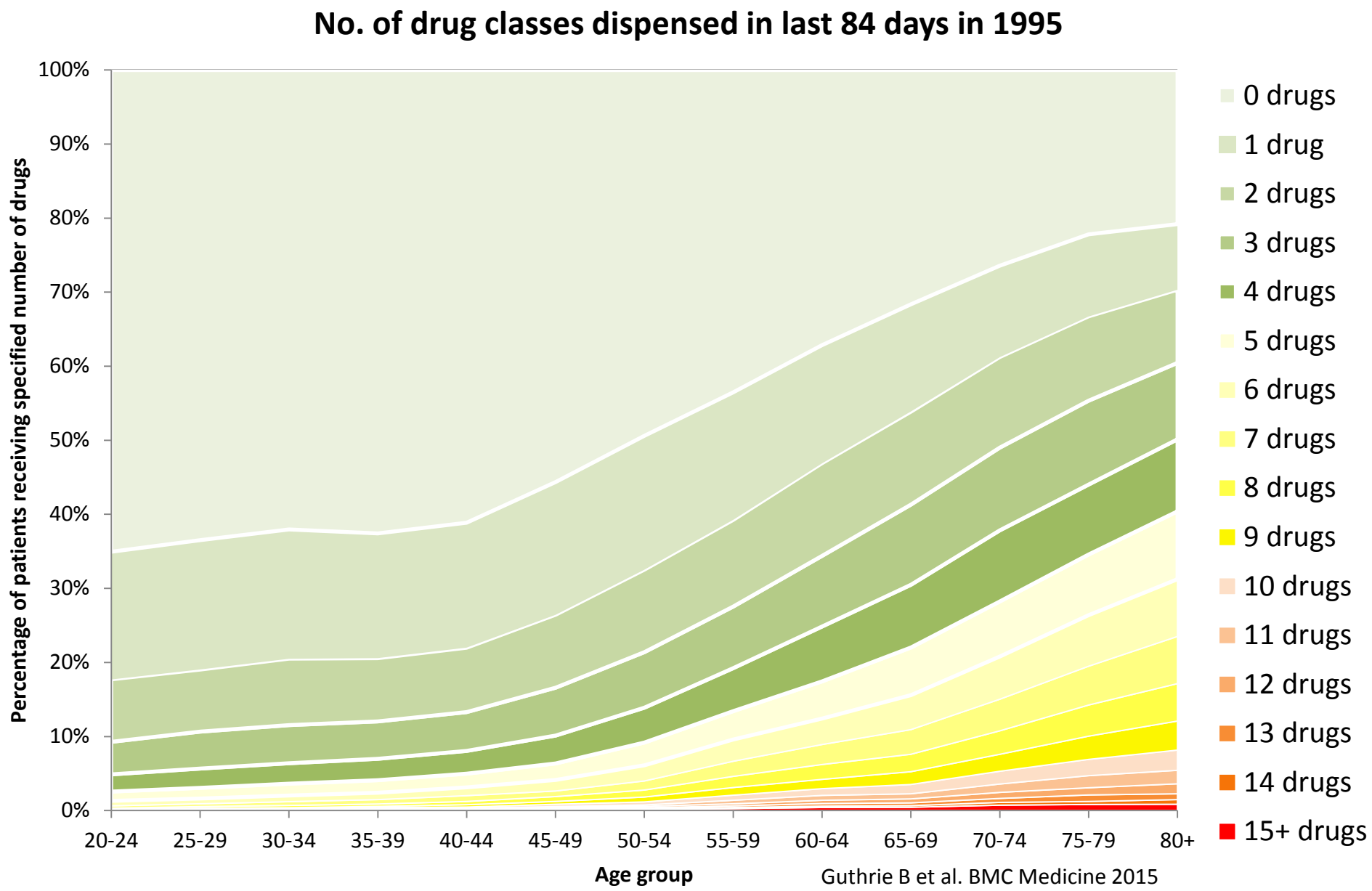
Key recommendations

- 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
- Applicability to current NHS practice?
  - May need more research but an obvious direction of travel

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

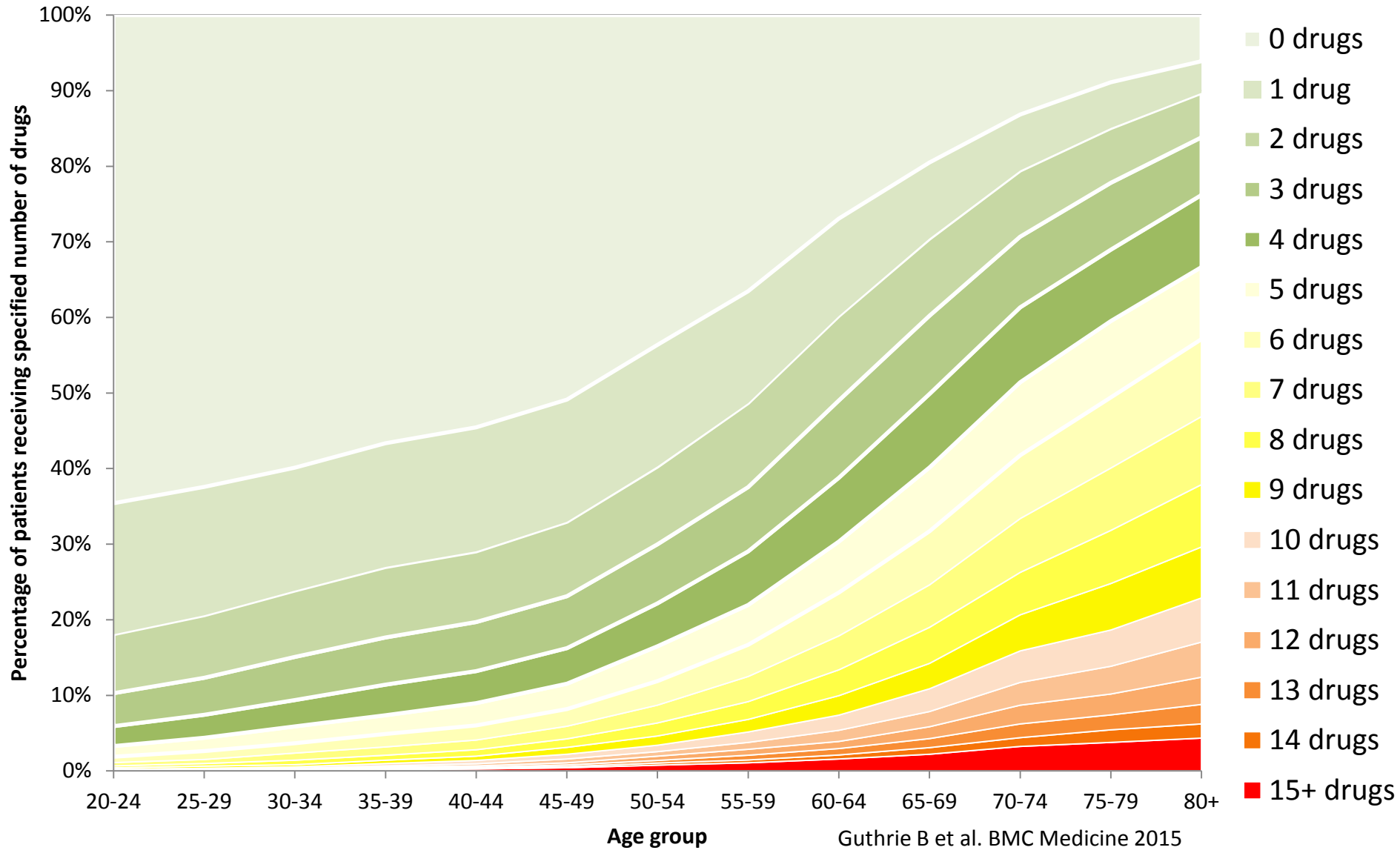
4. High volume processes

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



Guthrie B et al. BMC Medicine 2015

No. of drug classes dispensed in last 84 days in 2010



Guthrie B et al. BMC Medicine 2015

Safer but more people at risk…

- People on warfarin prescribed NSAIDs, anti-platelets, high-risk antibiotics, oral azole antifungals
- 16.0% in 1995 (258/1611)
- 10.7% in 2010 (538/5006)
- ‘Safer’ but more people are at risk…
- Even if increasing prescribing is more effective, it creates increasing risk that needs managing

Preventing multimorbidity

- 'Primary prevention'
- We only have limited understanding of trajectories of developing multimorbidity
- We know a lot about preventing morbidity
  - Smoking
  - Fitness and exercise
  - Weight and diet
  - Alcohol and drugs
  - Medication eg primary prevention of CVD

Preventing consequences of MM

- ‘Secondary prevention’
- Preventing worsening severity of individual morbidities
- Preventing new morbidities
- Maintaining fitness and function
  - Smoking, fitness and exercise, weight and diet, alcohol and rugs, primary prevention
  - Comprehensive Geriatric Assessment?

Conclusion

- Many evidence gaps but we know enough to act in many areas while balancing:
  - Generalism and specialism
  - Disease precision vs person precision
- Legitimate to rationally extend the evidence
  - 'Community CGA'
  - Frailty wards and services
  - Health and social care integration
  - Evaluate and research as well as implement

Thank you!