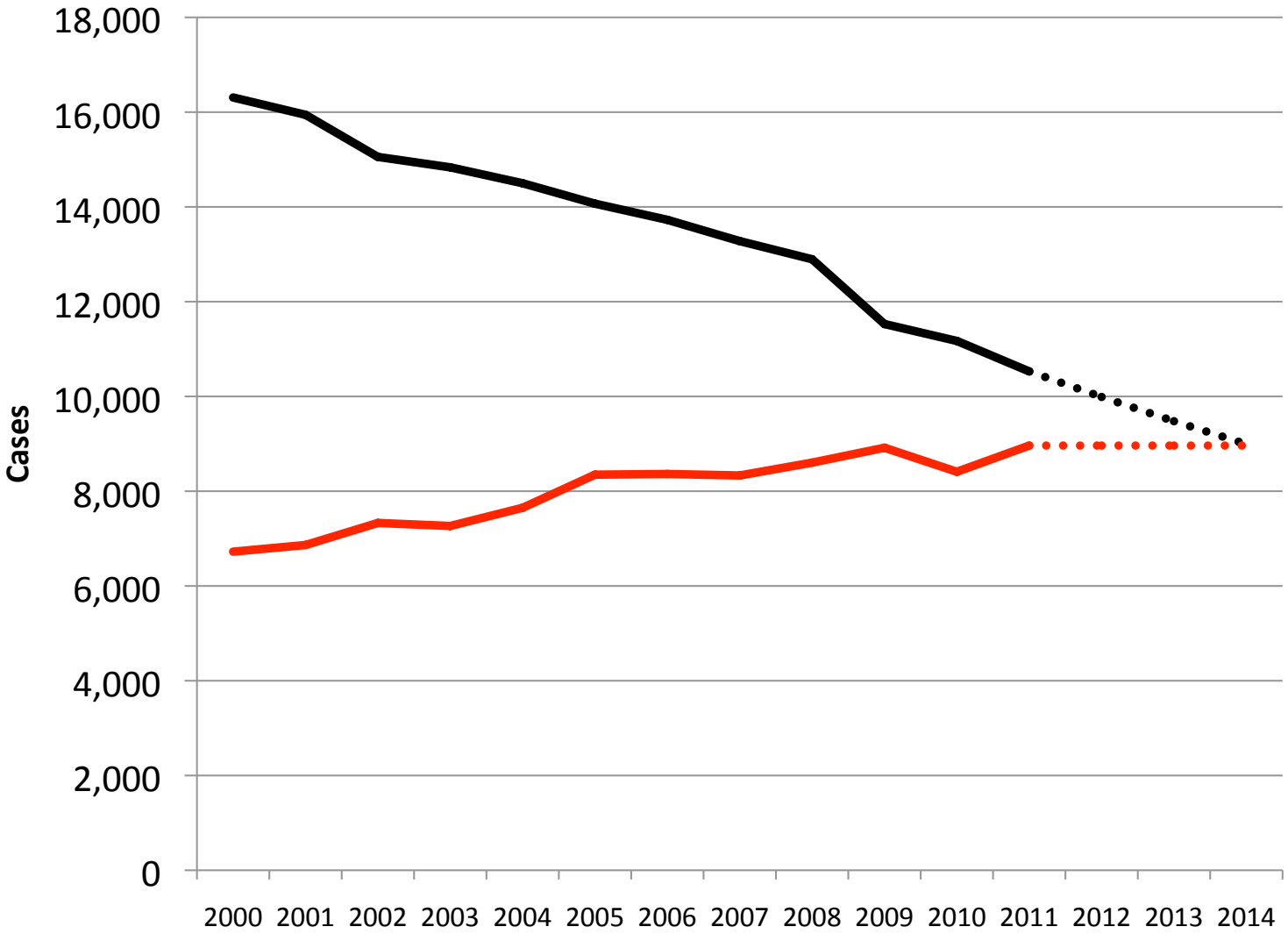
Multiple morbidity and inverse care

AI Story

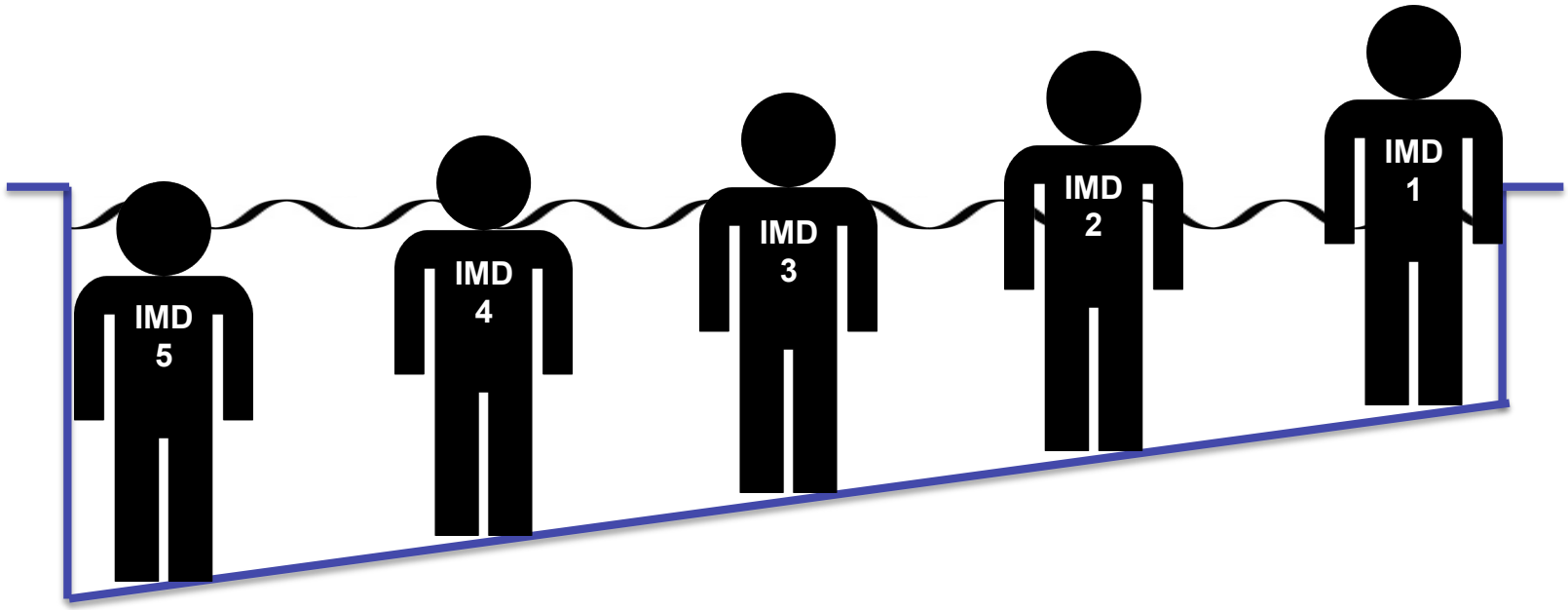
TB cases UK and US



*Dotted lines indicate projected numbers

“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.”

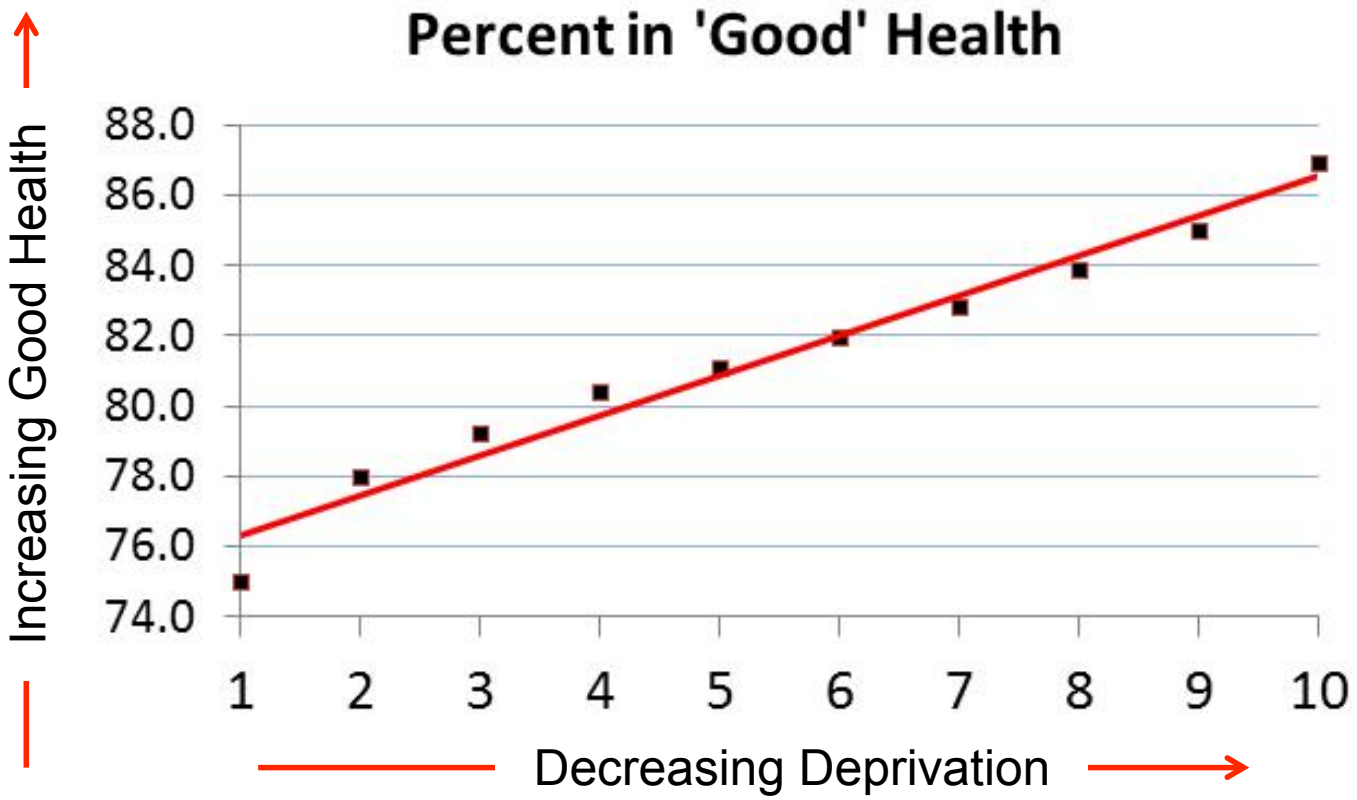
Martin Marshall, McKenzie Lecture, 2010



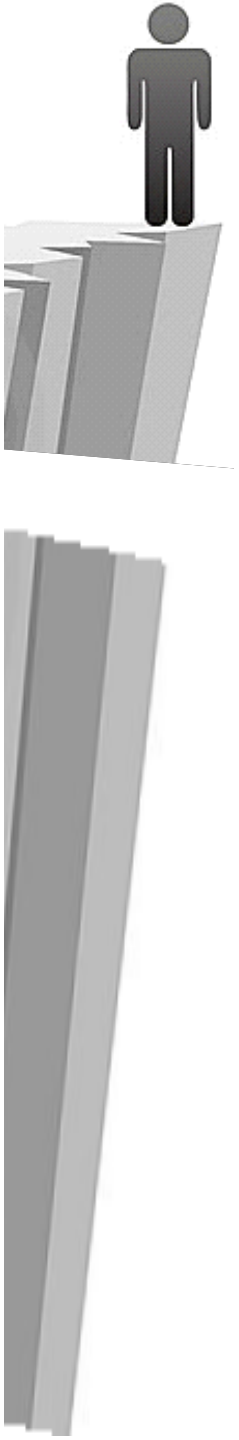
Multiple morbidity

- COD (co-occurring disorders)
- Not just age related
- Frequency and duration of hospital admission
- Poorer quality of life:-
  - physical functioning, depression, adherence/engaging
- Onset occurs 10-15 years earlier in people living in the most deprived areas compared with those living in the least deprived areas
- Premature death

The Slope

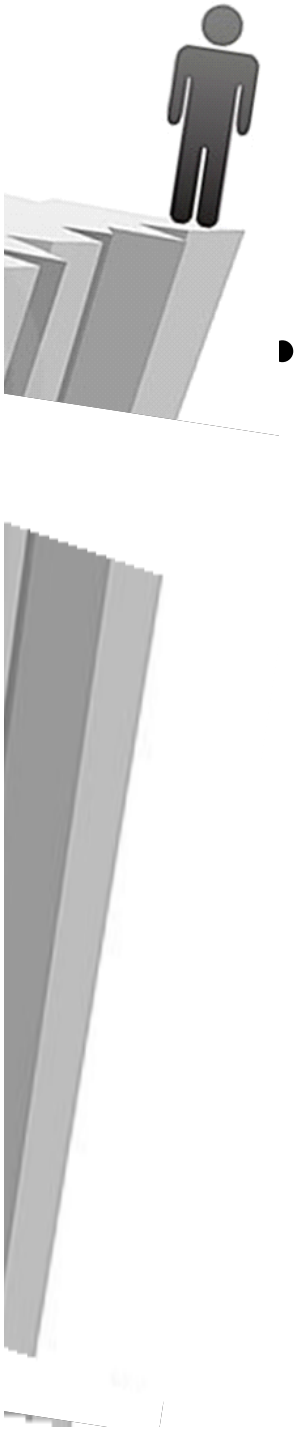


General health in 2011 by level of area deprivation in England. ONS 2011



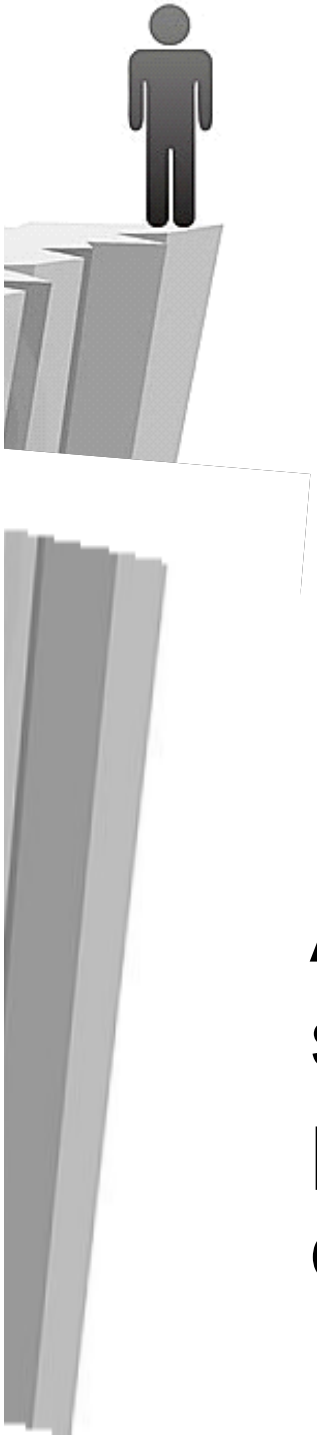
The Cliff

- The health of single homeless people compared to the health of people living in the most socially deprived areas



Invisible populations

- No good measures of morbidity and quality of life of homeless people compared to the housed population.



Aims

To compare the prevalence of chronic disease, quality of life and multiple morbidity in homeless people with the housed population

Are the health of single homeless people significantly worse than the health of people living in the most socially deprived areas?

Cross-sectional survey

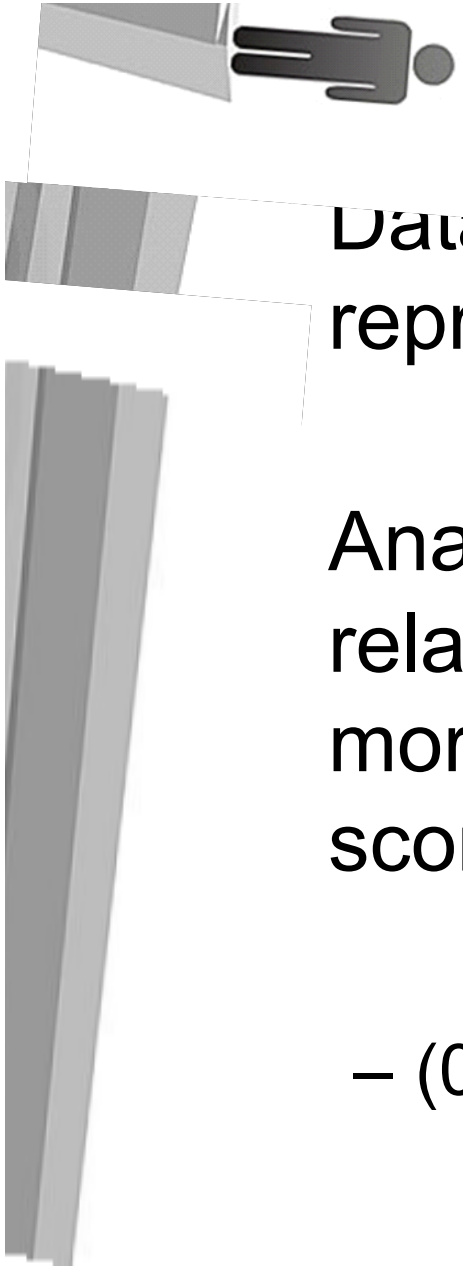
Target group: Homeless people

Settings: 27 separate hostels and day centres in London July - August in 2012.

Eligibility*:* attendance at screening venues. No specific exclusion criteria.

- Health questionnaire - chronic disease and health related quality of life (EQ5D) administered by trained peer advocates

Analysis

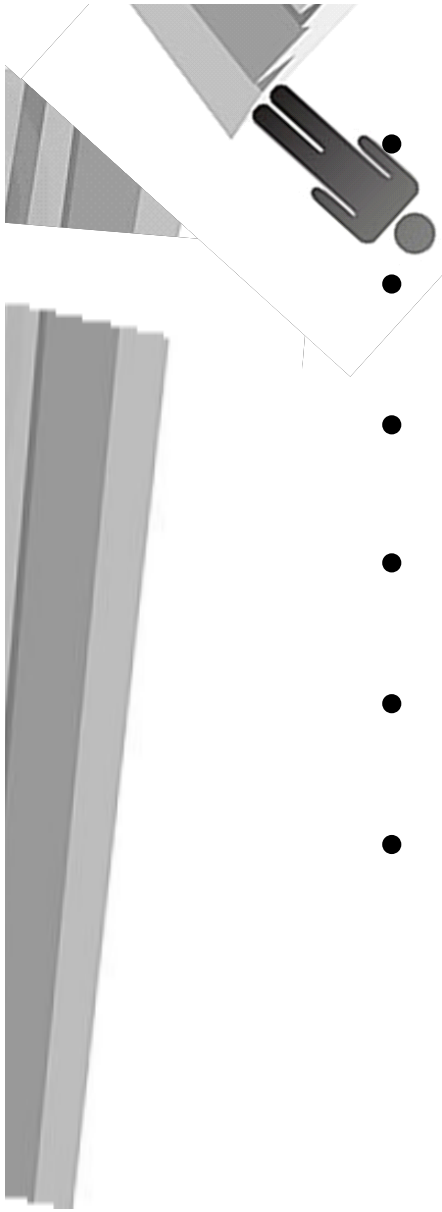


Data merged with HSE 2010 data of representative housed population (n=8,420)

Analyses comparing age and sex-adjusted relative risk of chronic disease, multiple morbidity and of having a quality of life score of <0.5

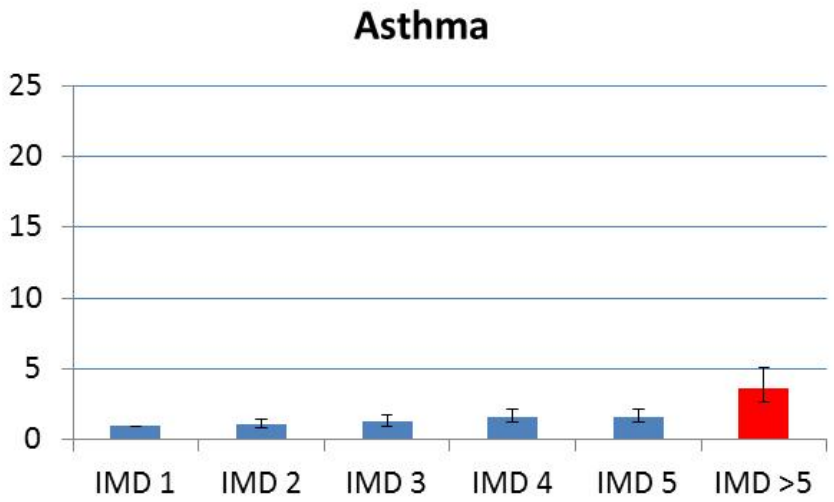
– (0 = no quality of life 1 = perfect health)

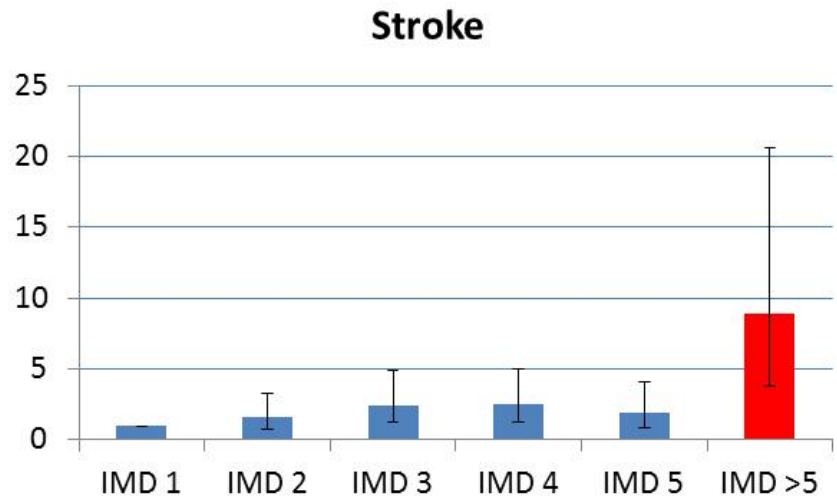
Results

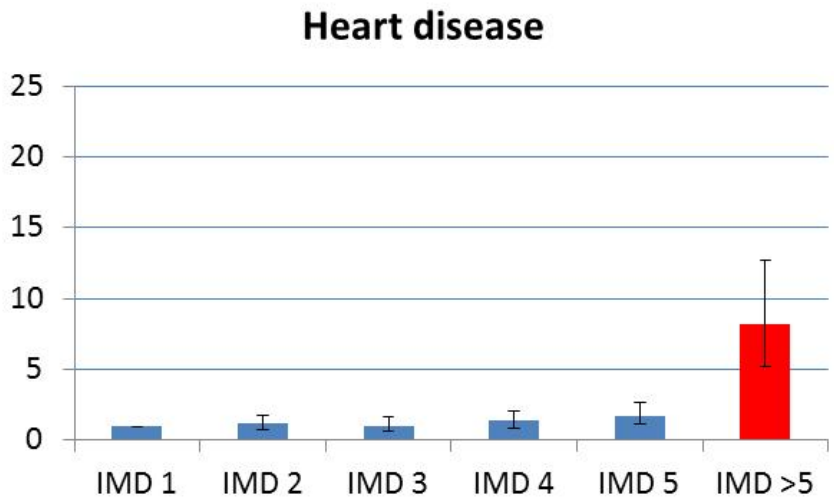


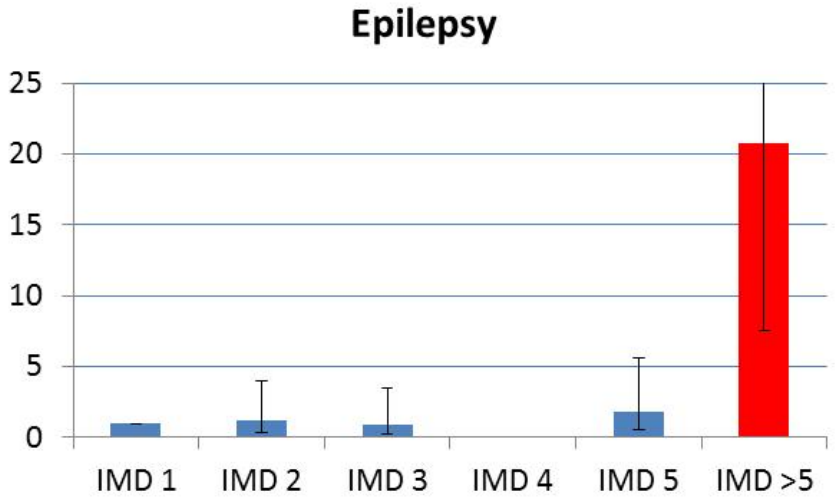
- 77% response rate (455/592)
- Majority male (365/452; 80.75%)
- Most were aged 16-44 (261/455; 57.36%)
- Most born in the UK (277/452; 61.28%)
- 73% registered with a GP (329/452; 72.79%)
- Missing data <1% across all variables

Risks of chronic disease



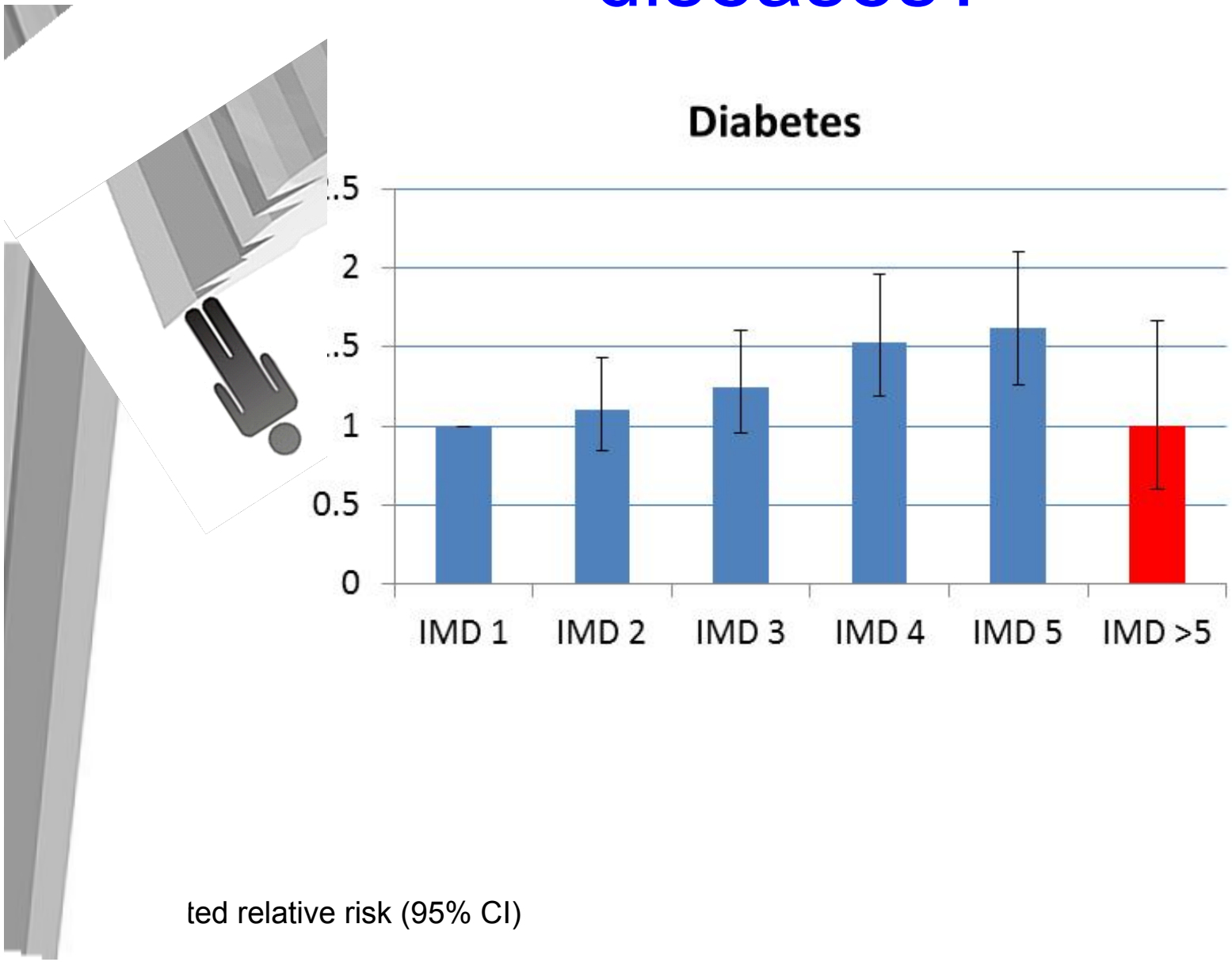






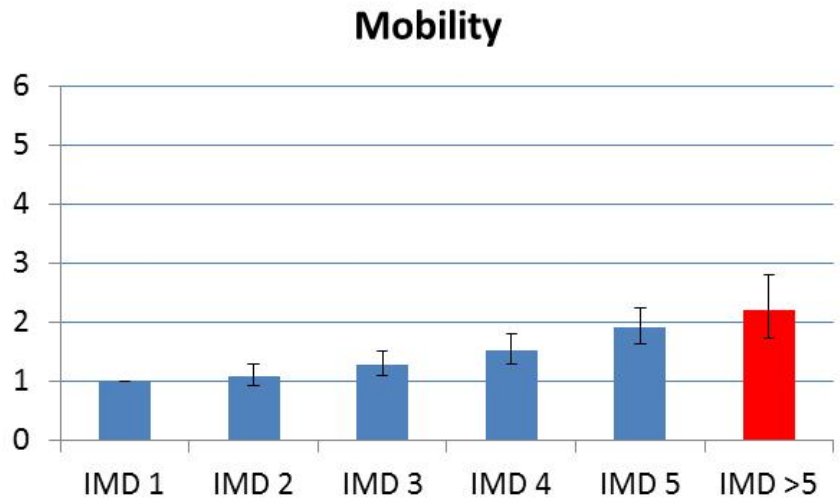
Age adjusted relative risk (95% CI)

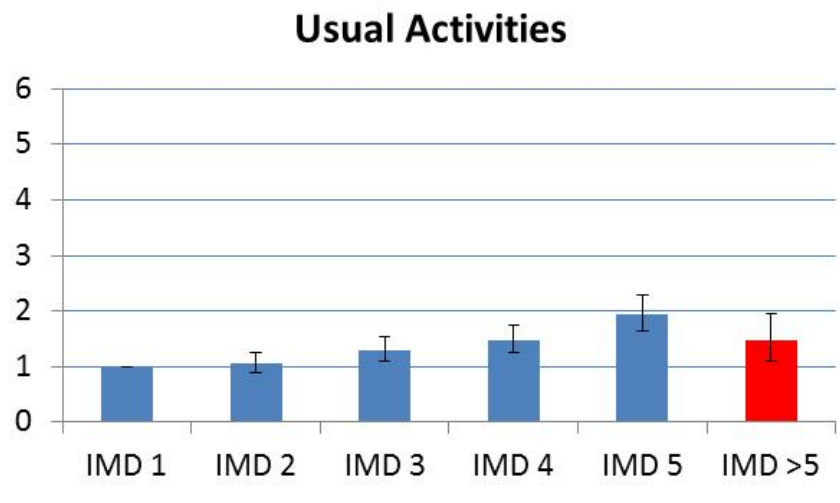
Under-diagnosis of “silent” diseases?

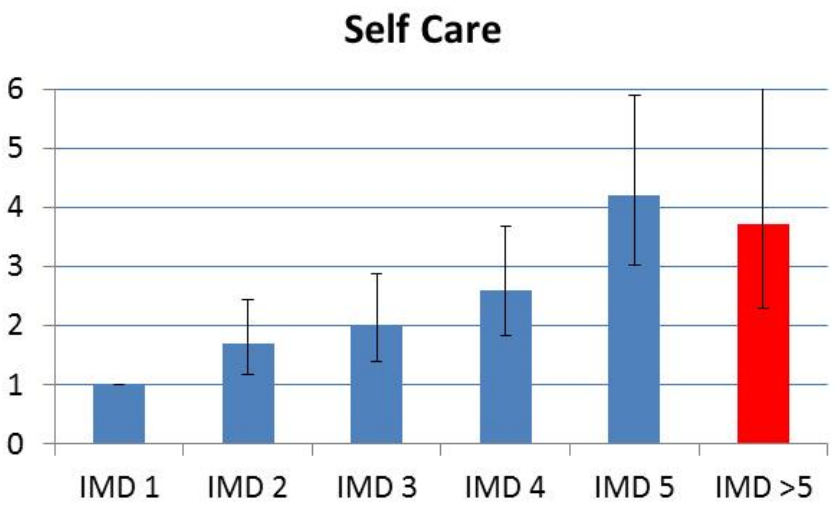


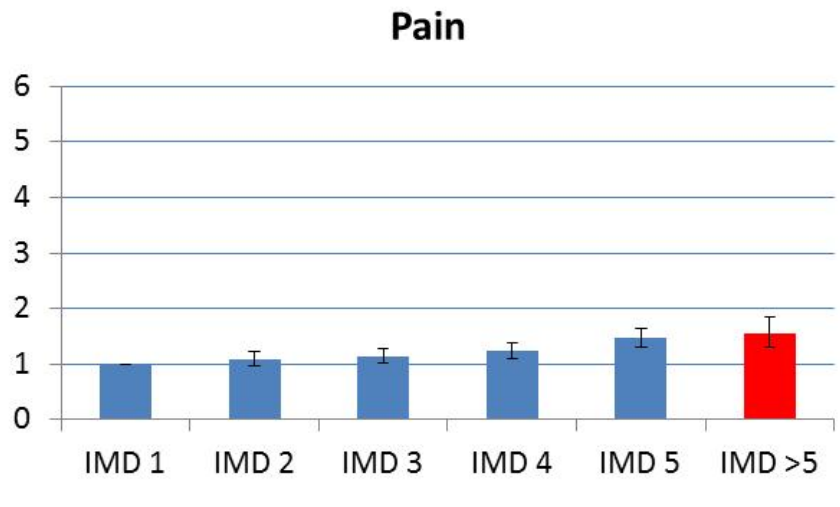
ted relative risk (95% CI)

EQ5D questions



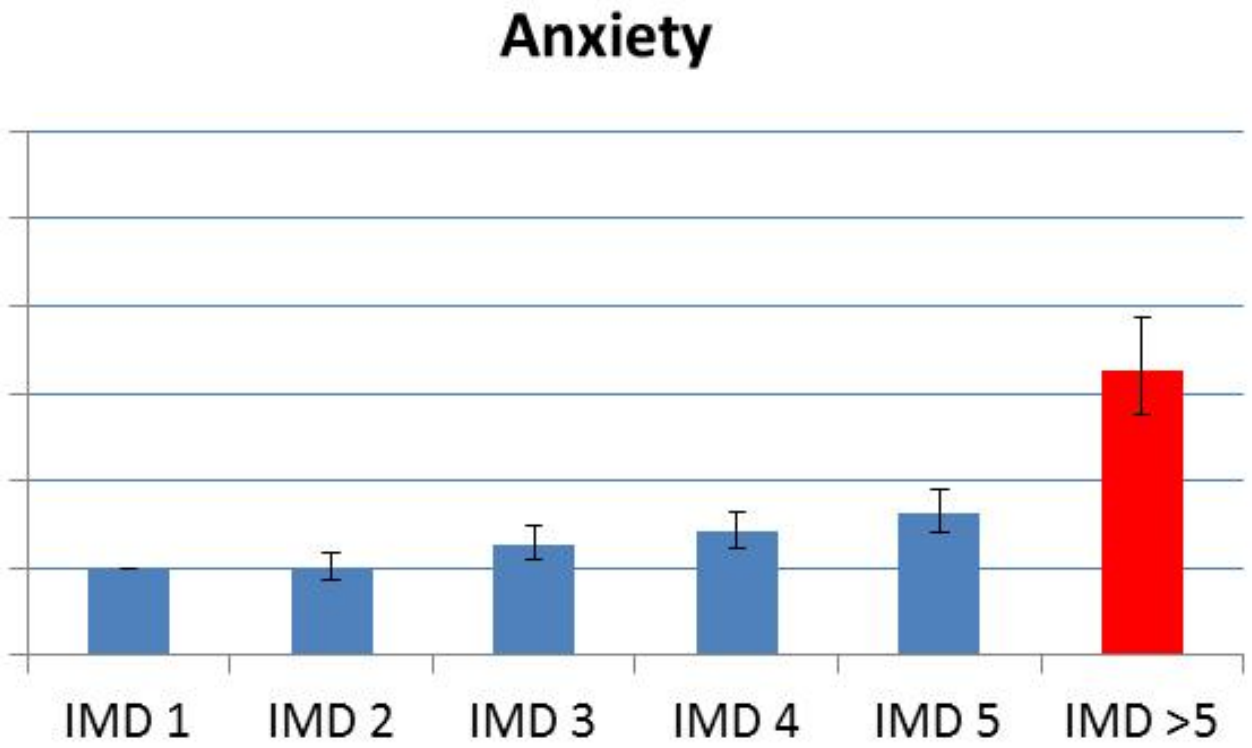






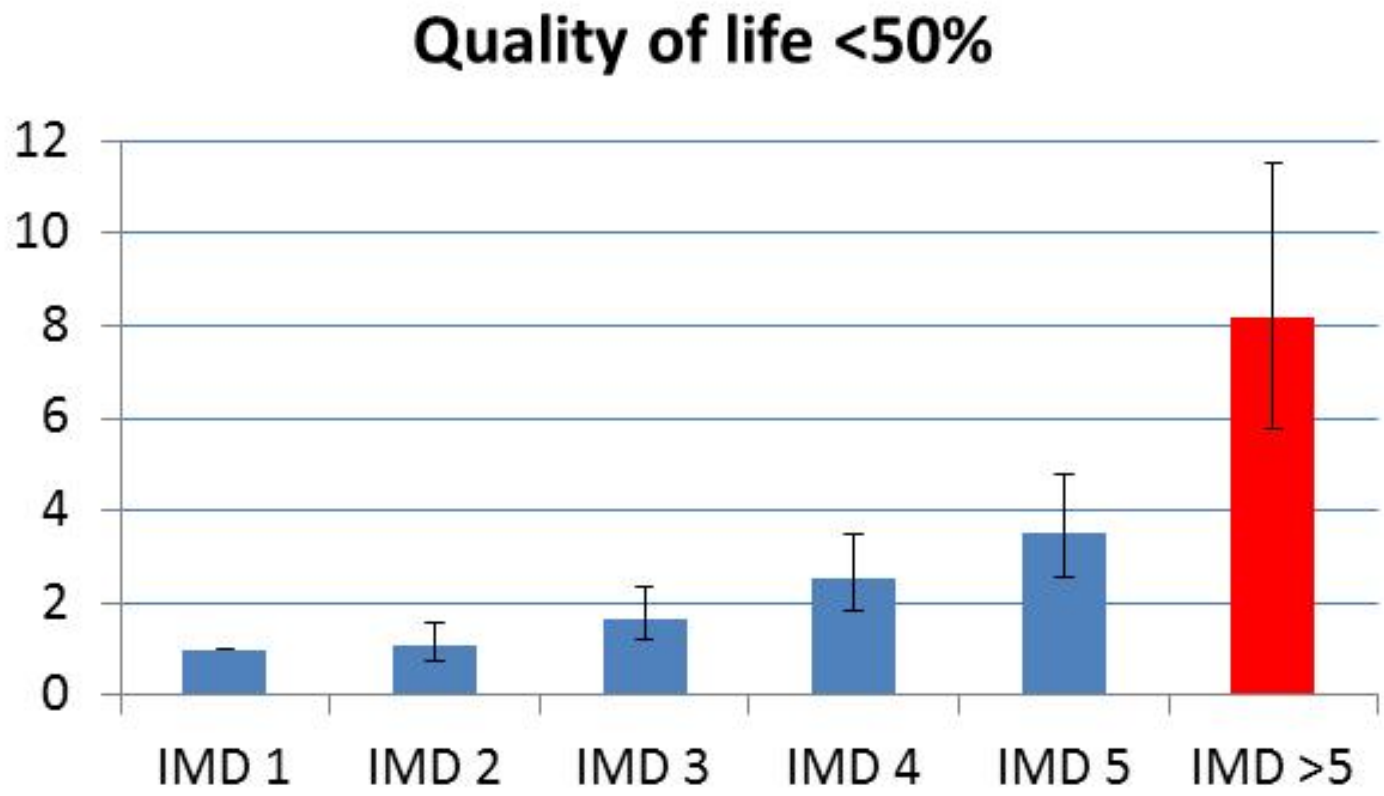
Age adjusted relative risk (95% CI)

EQ5D Anxiety



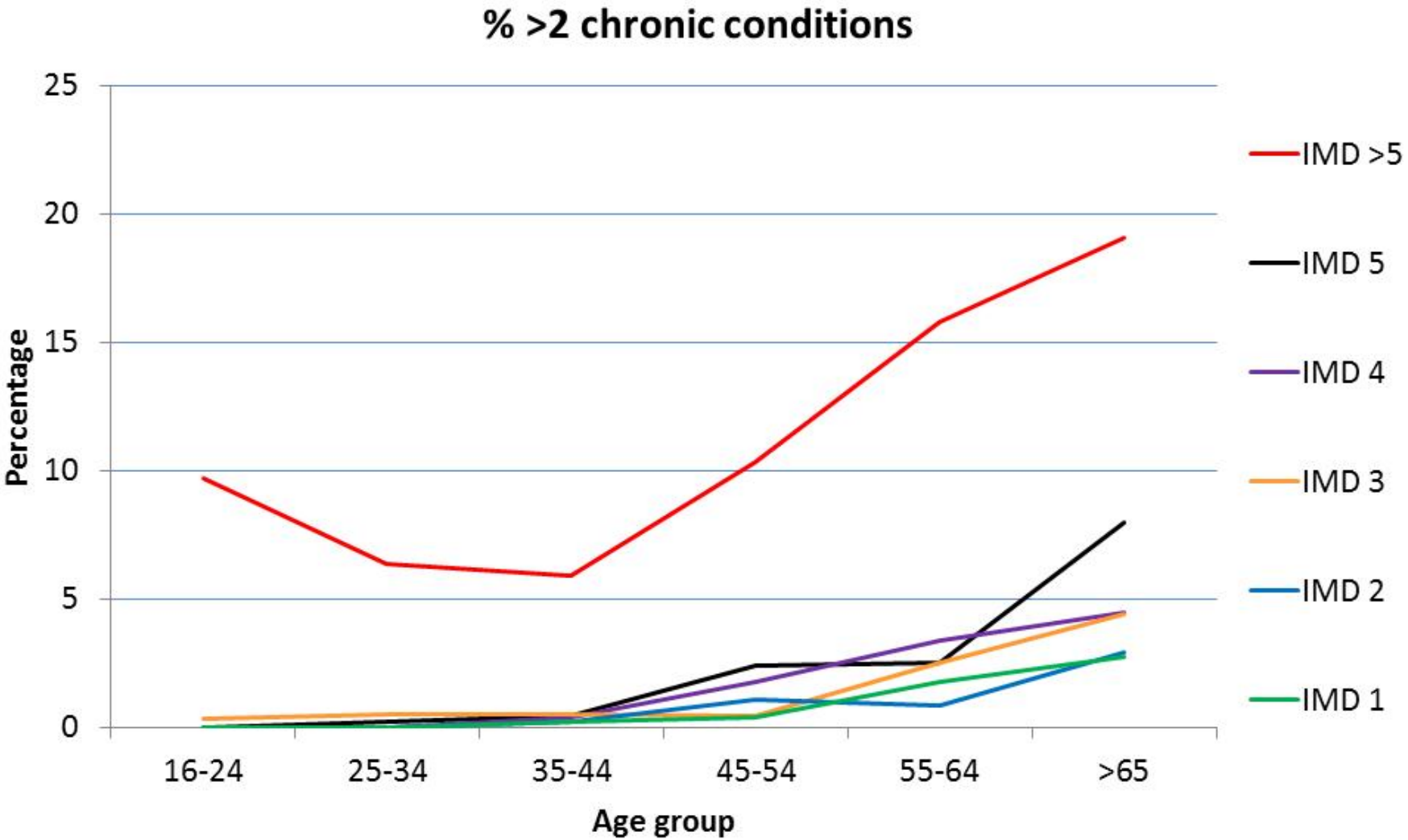
Age adjusted relative risk (95% CI)

QALY

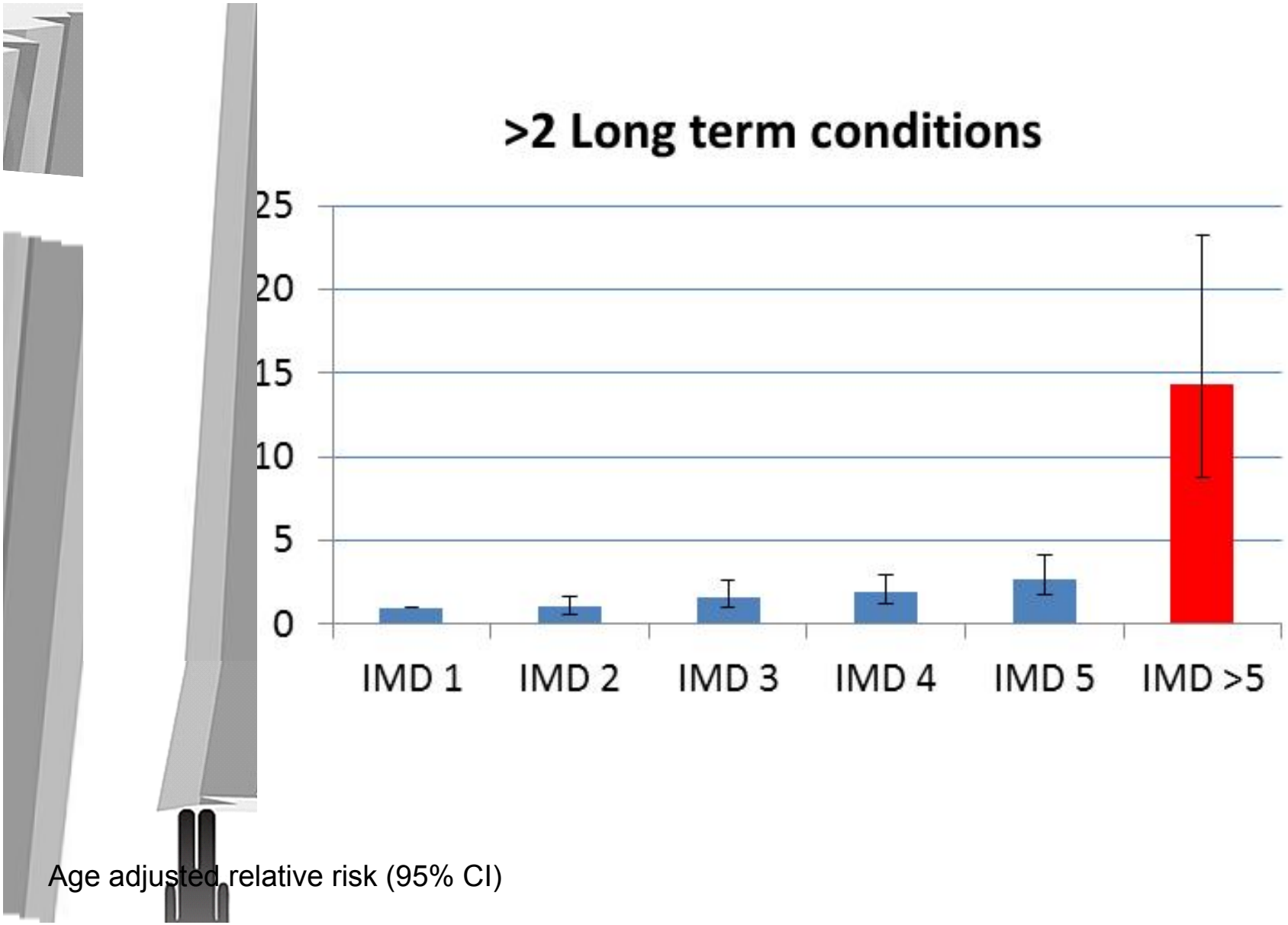


Age adjusted relative risk (95% CI)

Multimorbidity

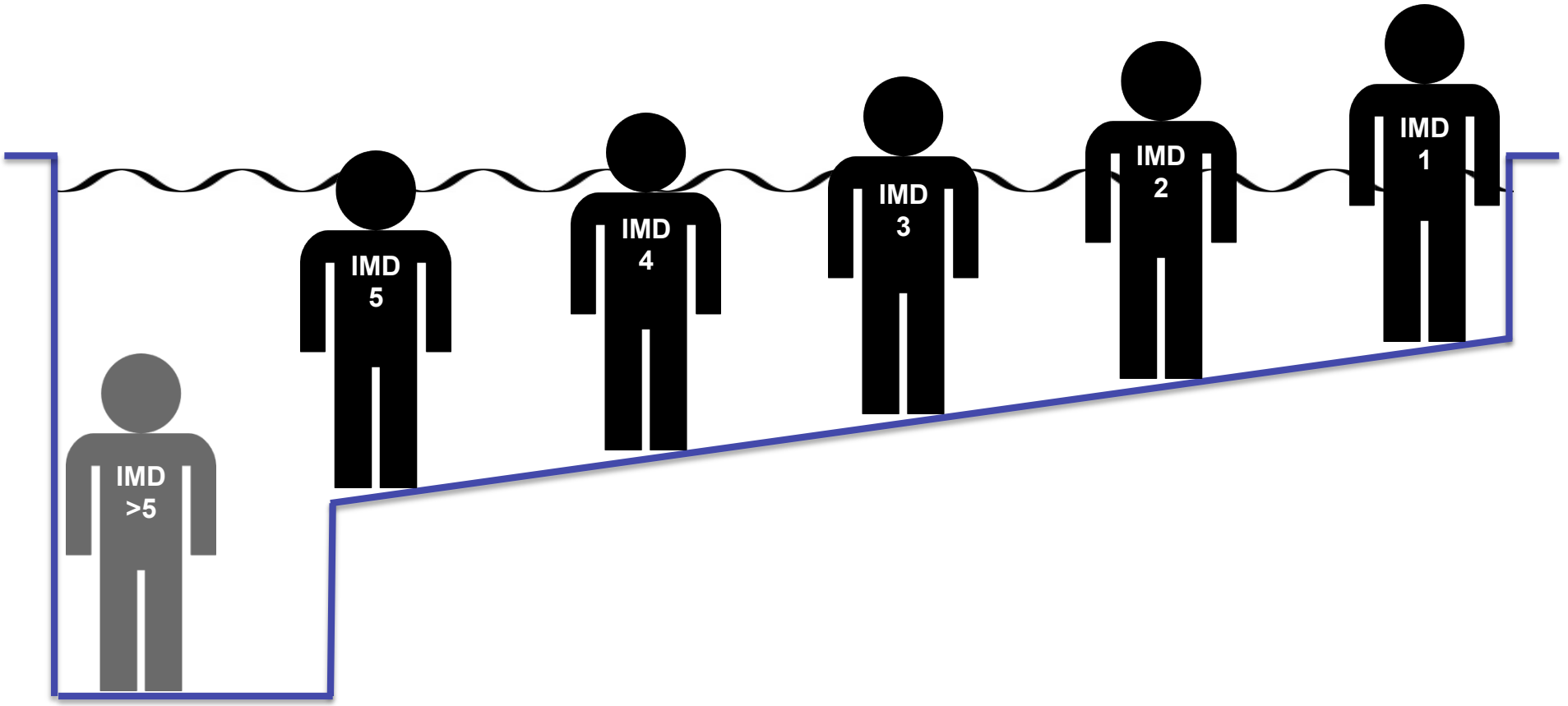


Multiple morbidity



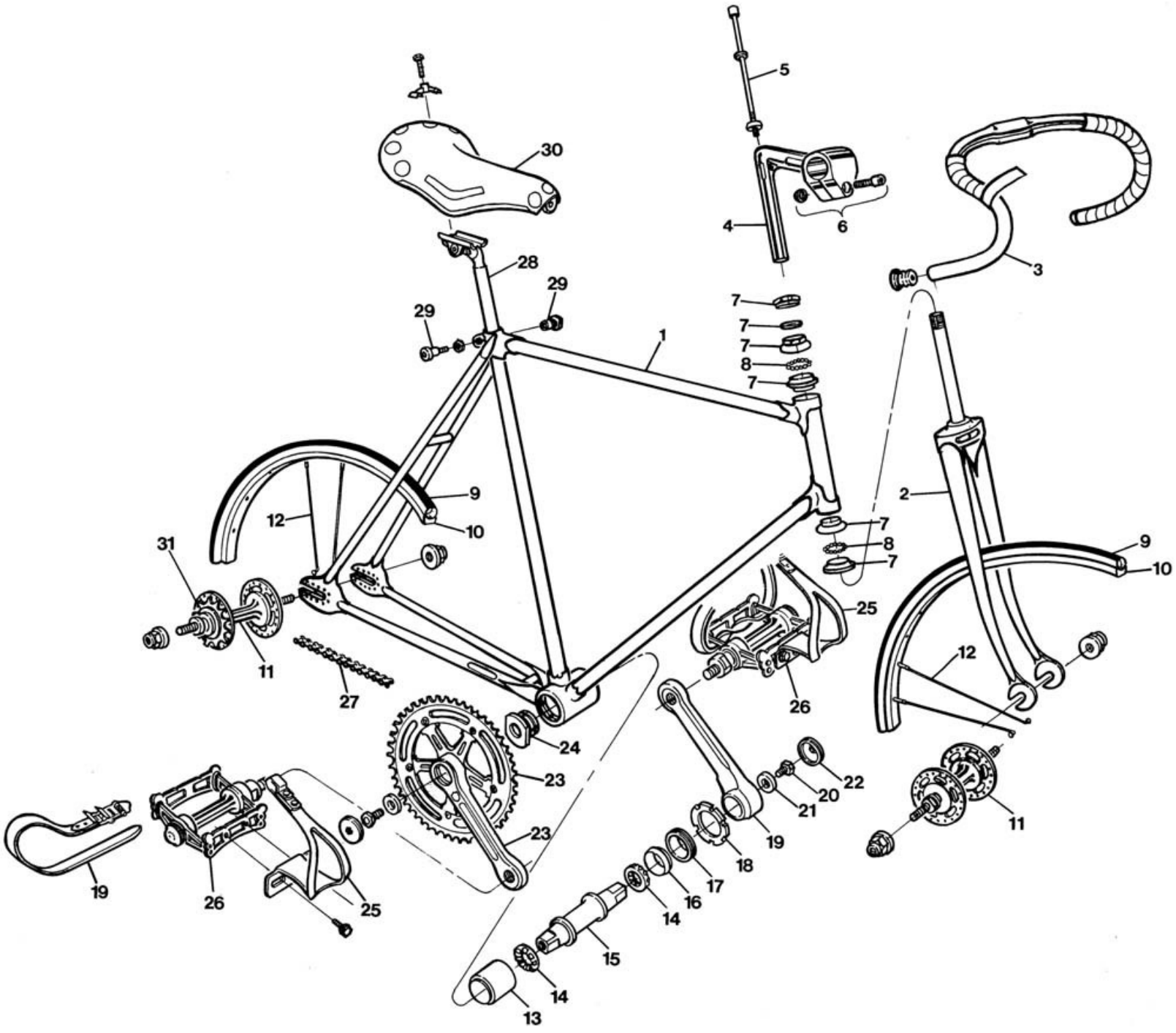
Age adjusted relative risk (95% CI)

Impact



Implications

- Multiple morbidity is
  - the norm for homeless people
  - a force for exclusion and inverse care law
  - under-diagnosed
  - under-reported
  - misunderstood
  - life shortening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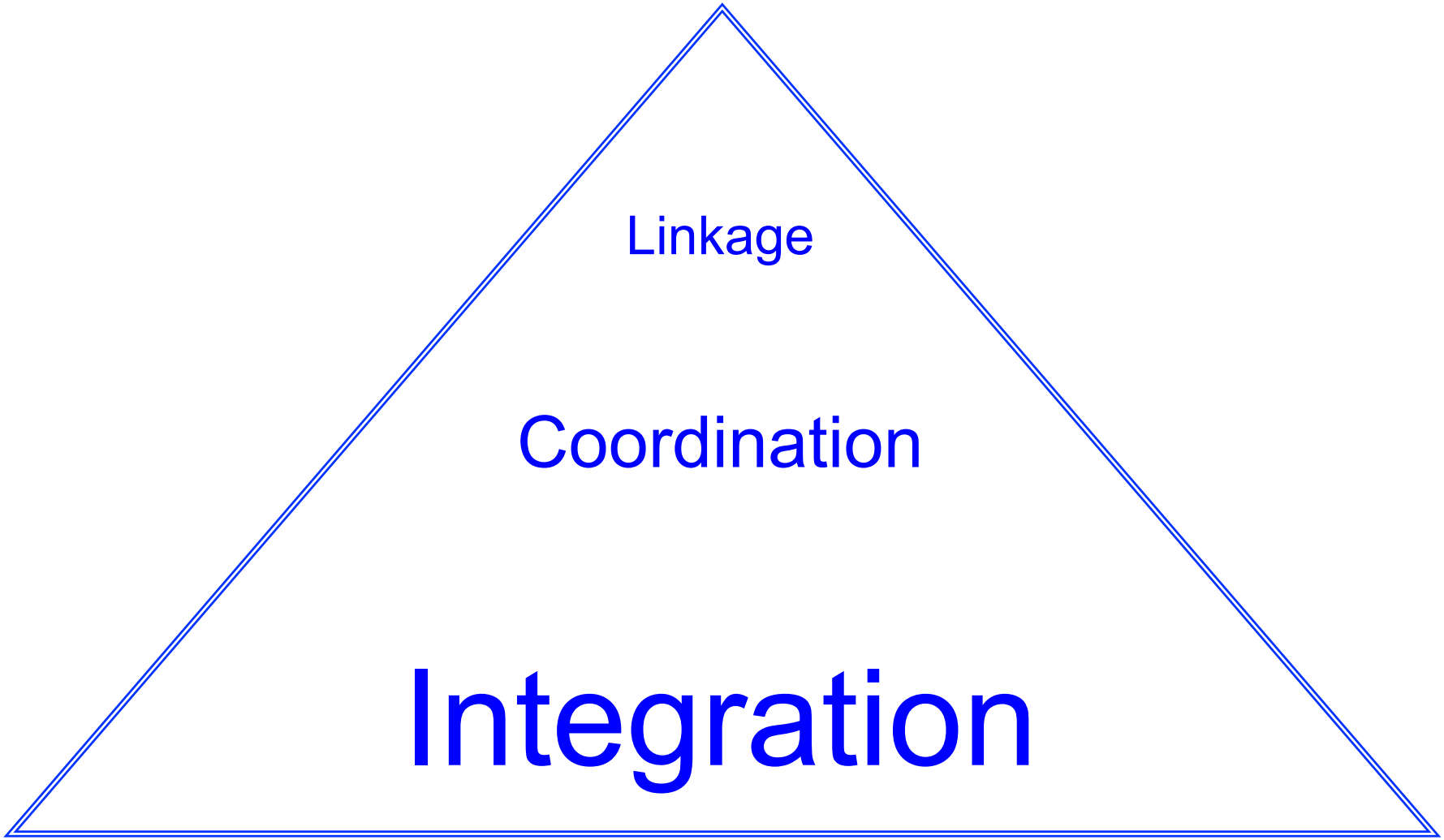
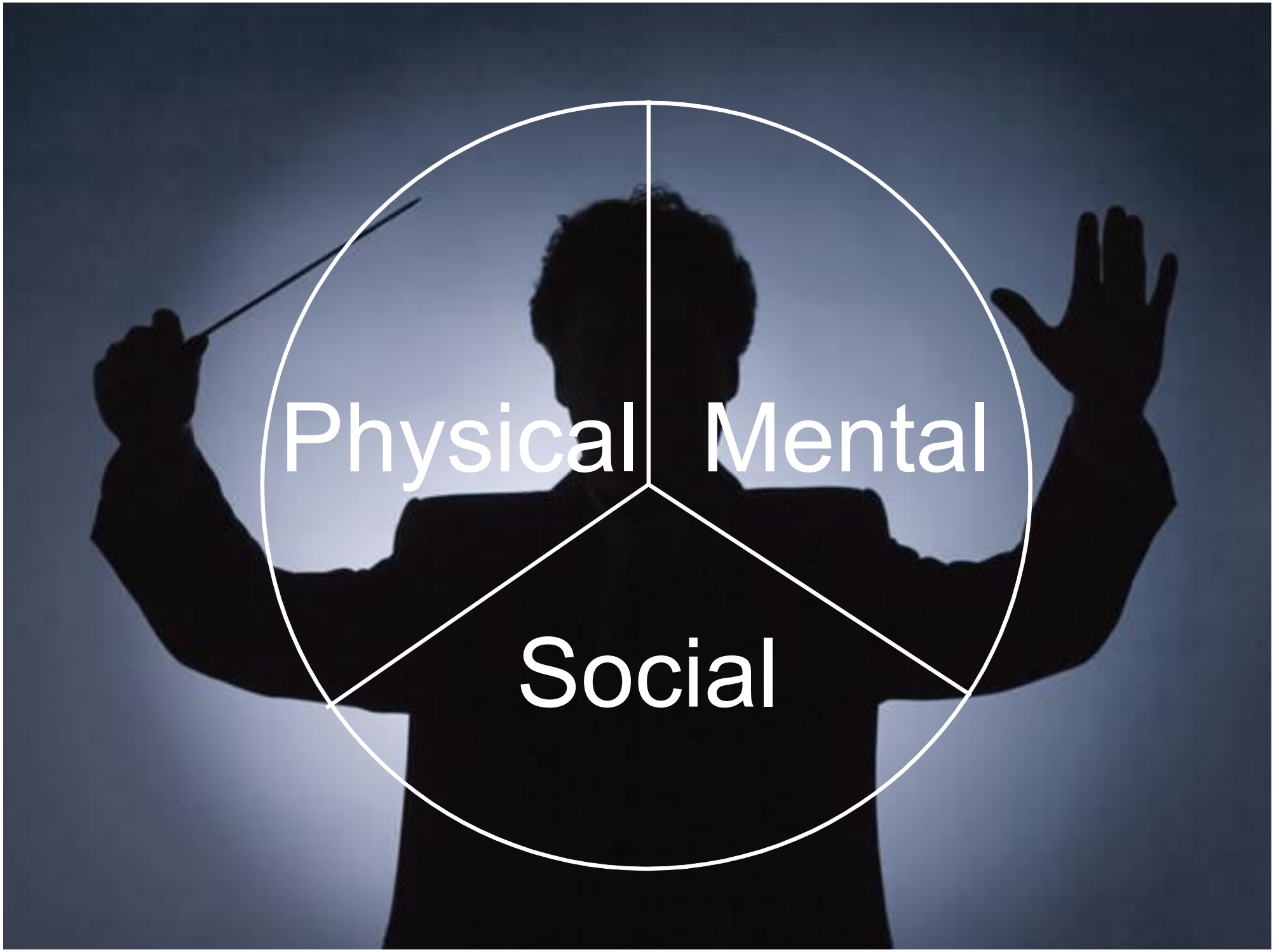
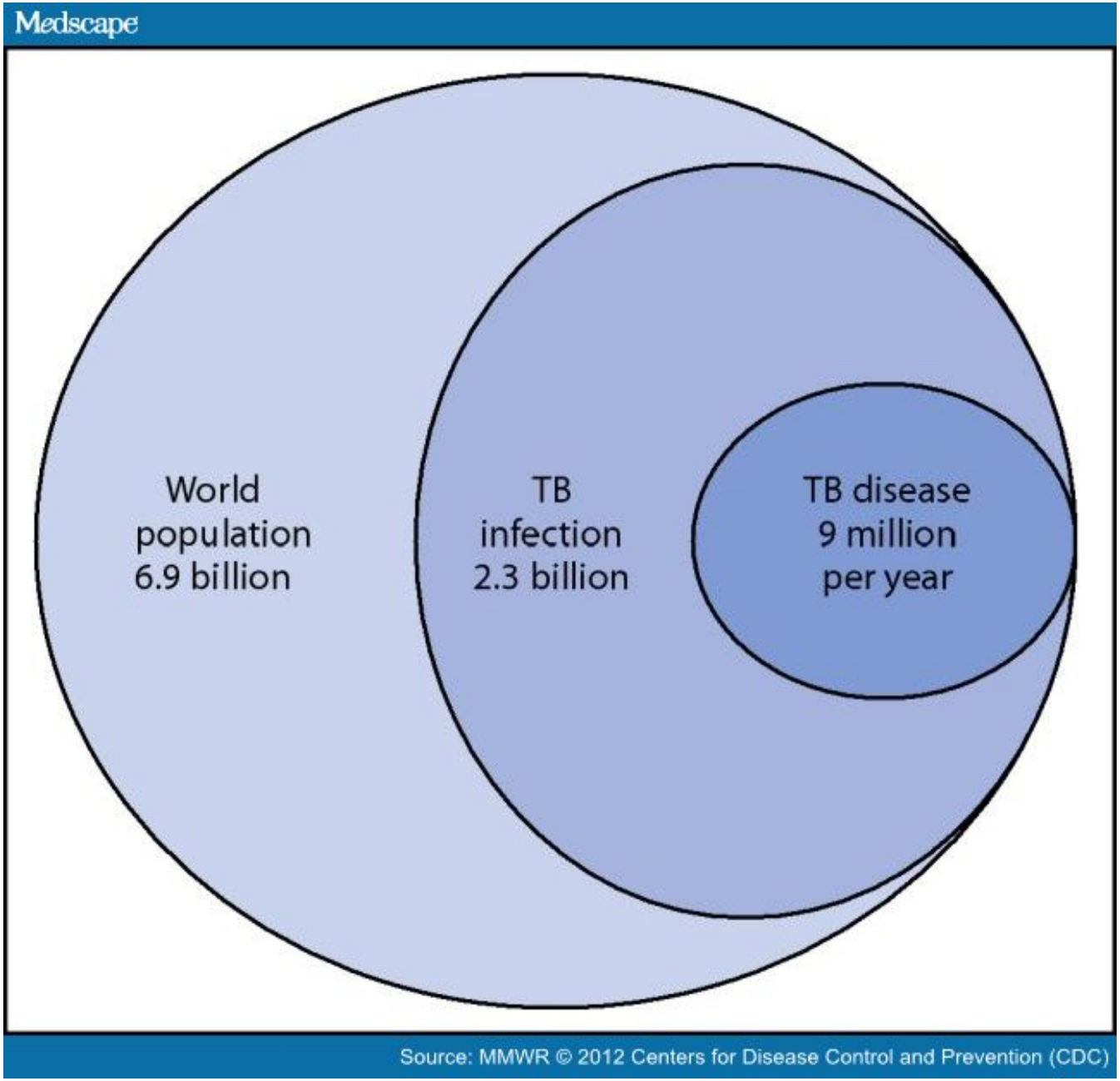

Linkage
Coordination
Integration


Physical
Mental
Social

Conclusion

- A slope down to a cliff
- Improving the health of the poorest fastest?

Thank you


Medscape
World population 6.9 billion
TB infection 2.3 billion
TB disease 9 million per year
Source: MMWR © 2012 Centers for Disease Control and Prevention (CDC)

2. Fortin M, Soubhi H, Hudon C, Bayliss EA, van den Akker M. Multimorbidity's many challenges. BMJ2007;334:1016-7.
3. Marengoni A, Angleman S, Melis R, Mangialasche F, Karp A, Garmen A, et al. Aging with multimorbidity: a systematic review of the literature. Ageing Res Rev2011;10:430-9.
4. Smith SM, O'Dowd T. Chronic diseases: what happens when they come in multiples? Br J Gen Pract2007;57:268-70.
5. Taylor AW, Price K, Gill TK, Adams R, Pilkington R, Carrangis N, et al. Multimorbidity—not just an older person's issue. Results from an Australian biomedical study. BMC Public Health2010;10:718.
6. Vogeli C, Shields AE, Lee TA, Gibson TB, Marder WD, Weiss KB, et al. Multiple chronic conditions: prevalence, health consequences, and implications for quality, care management, and costs. J Gen Intern Med2007;22(suppl 3):391-5.
7. Menotti A, Mulder I, Nissinen A, Giampaoli S, Feskens EJ, Kromhout D. Prevalence of morbidity and multimorbidity in elderly male populations and their impact on 10-year all-cause mortality: the FINE study (Finland, Italy, Netherlands, Elderly). J Clin Epidemiol2001;54:680-6.
8. Fortin M, Lapointe L, Hudon C, Vanasse A, Ntetu AL, Maltais D. Multimorbidity and quality of life in primary care: a systematic review. Health Qual Life Outcomes2004;2:51.
9. Townsend A, Hunt K, Wyke S. Managing multiple morbidity in mid-life: a qualitative study of attitudes to drug use. BMJ2003;327:837.
10. Barnett K, Mercer SW, Norbury M, Watt G, Wyke S, Guthrie B. The epidemiology of multimorbidity in a large cross-sectional dataset: implications for health care, research and medical education. Lancet2012: published online 9 May.

Integrated care

- Fragmented clinical care involving both primary care and multiple secondary care specialists who may not be communicating effectively, and there is a clear need for of multiple conditions.[13] [14] [15] [16]

12. Starfield B. New paradigms for quality in primary care. Br J Gen Pract2001;51:303-9.
13. Bayliss EA. Simplifying care for complex patients. Ann Fam Med2012;10:3-5.
14. Kamerow D. How can we treat multiple chronic conditions? BMJ2012;344:e1487.
15. Smith SM, O'Kelly S, O'Dowd T. GPs' and pharmacists' experiences of managing multimorbidity: a "Pandora's box." Br J Gen Pract2010;60:285-94.
16. Stange KC. In this issue: challenges of managing multimorbidity. Ann Fam Med2012;10:2-3.

Syndemic

- the concentration and deleterious interaction of two or more diseases or other health conditions in a population, especially as a consequence of social conditions that promote disease clustering.

The Scottish School of Primary Care

Multimorbidity in Scotland

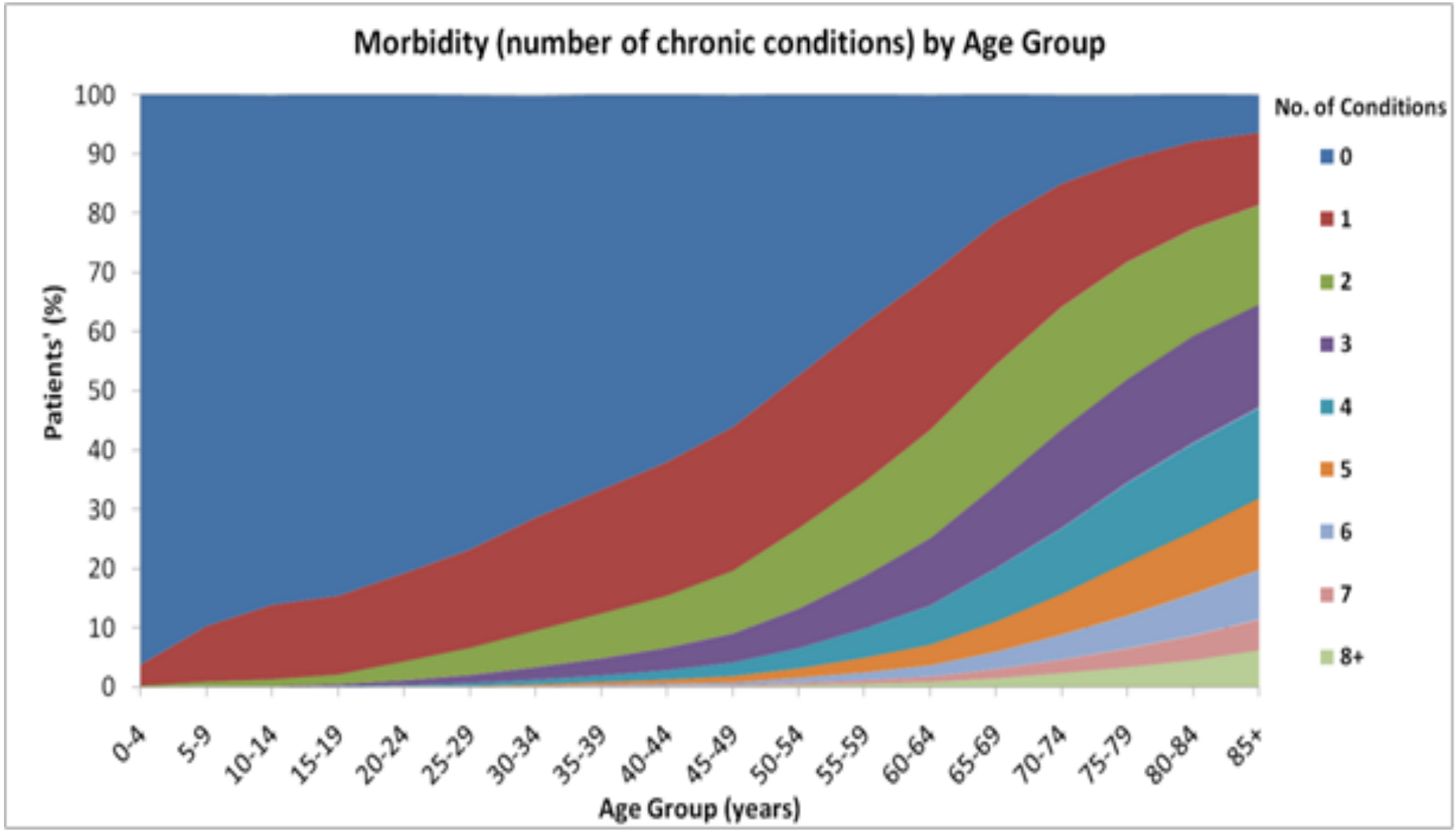
The Scottish School of Primary Care's
Multimorbidity Research Programme.

University of Glasgow | Institute of Health & Wellbeing

University of Dundee

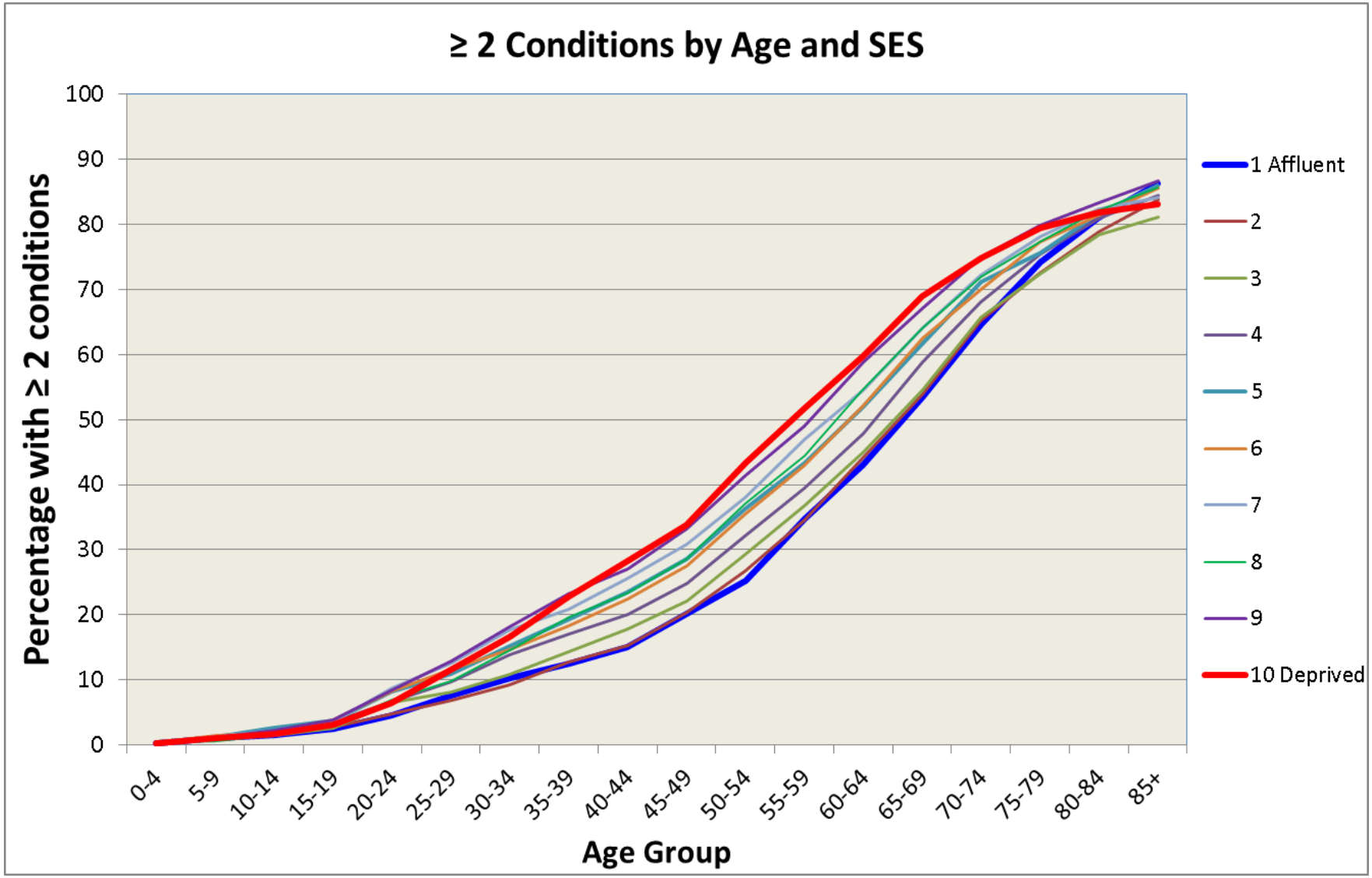
Chief Scientist Office

Multimorbidity is common in Scotland

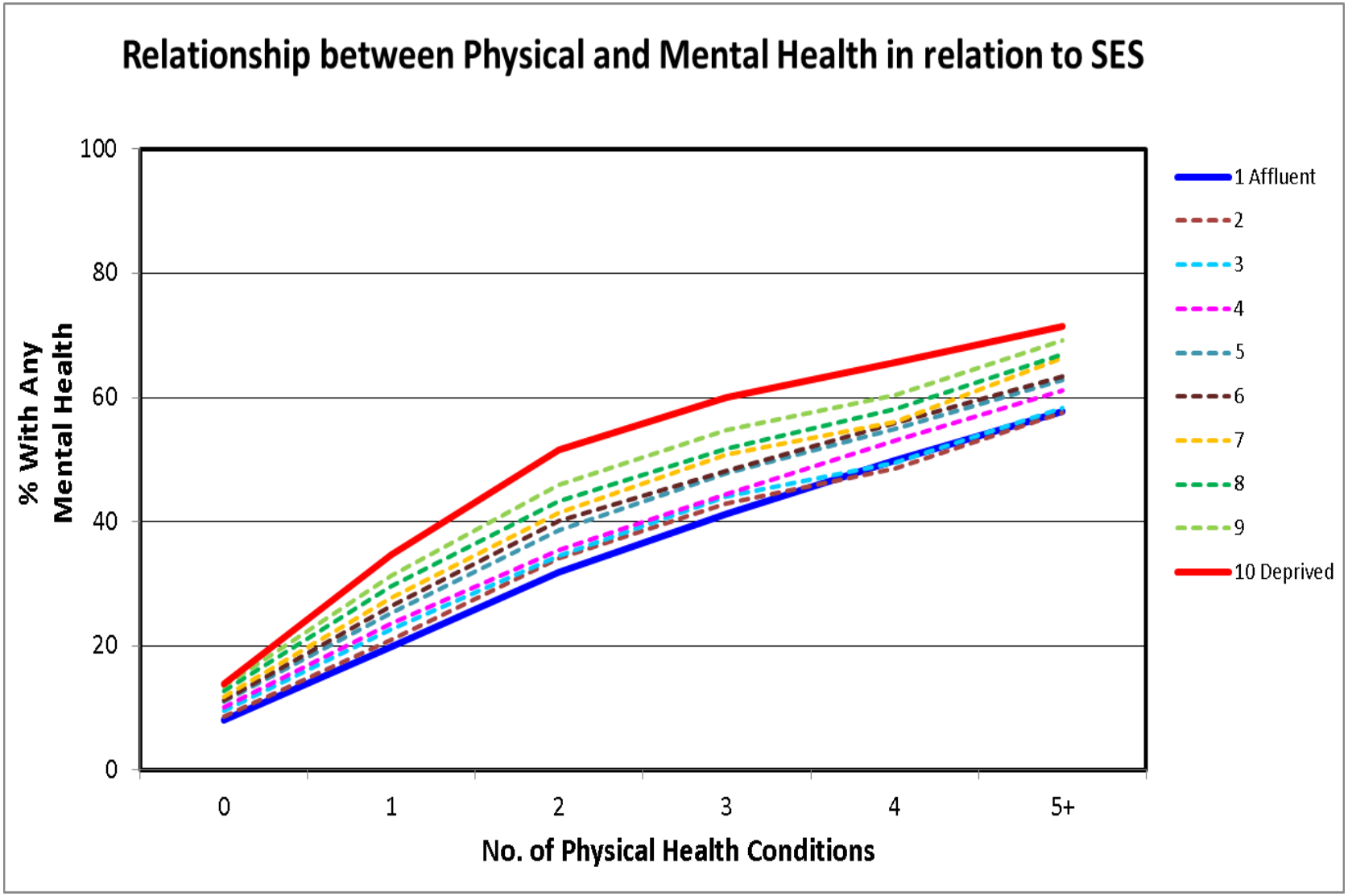


- The majority of over-65s have 2 or more conditions, and the majority of over-75s have 3 or more conditions
- More people have 2 or more conditions than only have 1

People living in more deprived areas in Scotland develop multimorbidity 10 years before those living in the most affluent areas

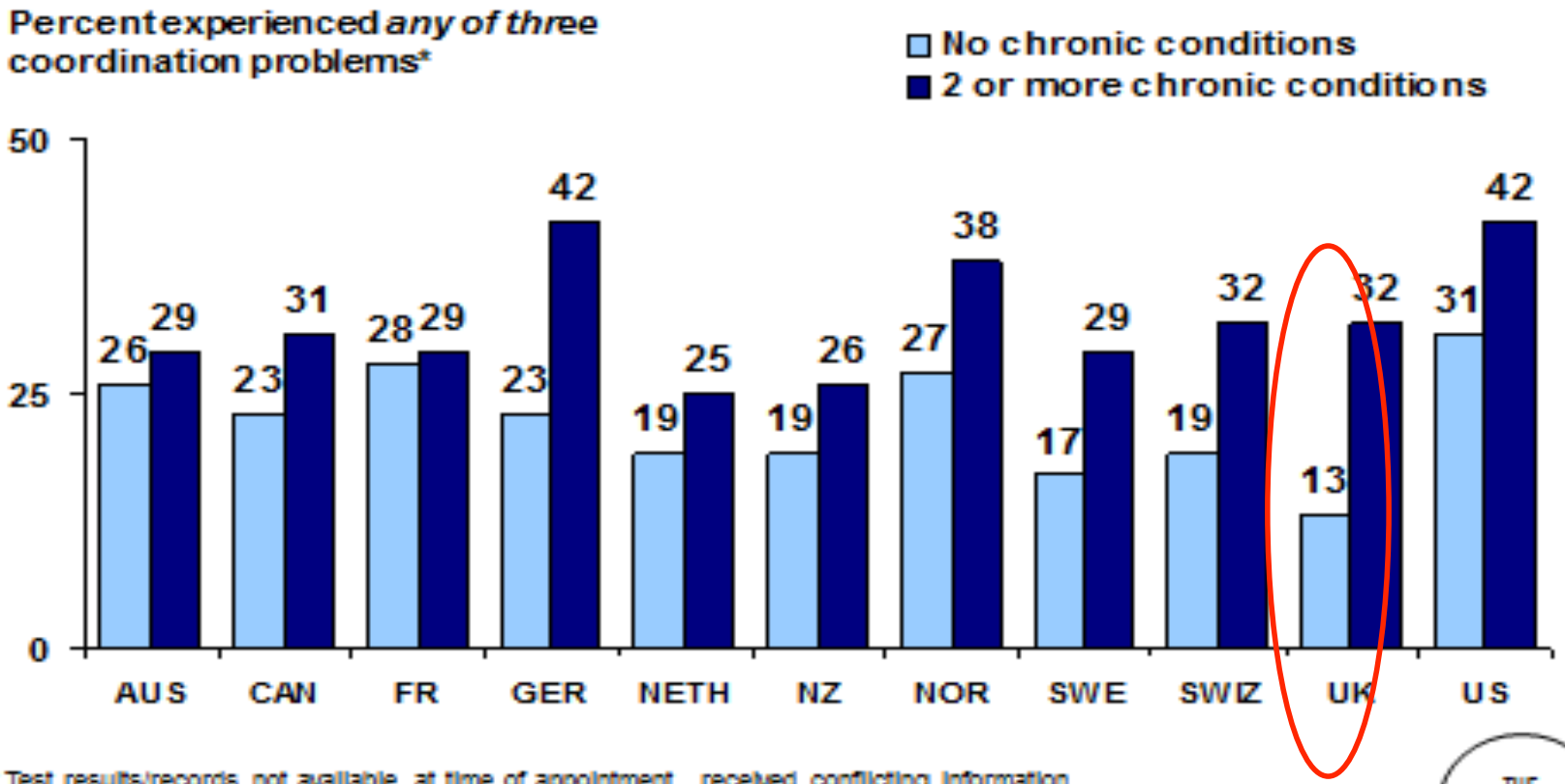


Mental health problems are strongly associated with the number of physical conditions that people have, particularly in deprived areas in Scotland



International evidence shows that people with multimorbidity experience more problems with the coordination of their care

Coordination Problems in the Past Two Years, by Number of Chronic Conditions



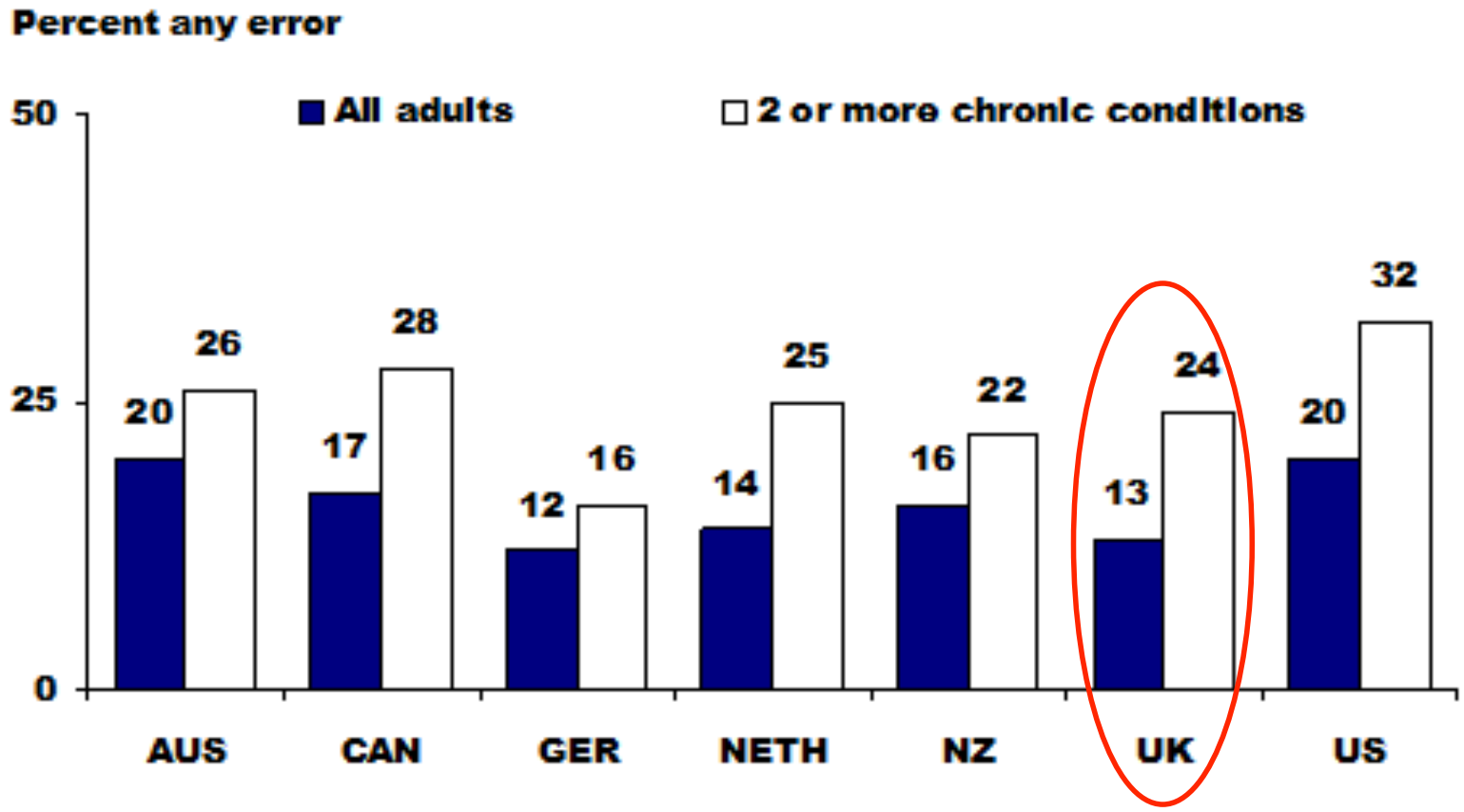
* Test results/records not available at time of appointment, received conflicting information from different health professionals, and/or doctors ordered test that had already been done.

Source: 2010 Commonwealth Fund International Health Policy Survey In Eleven Countries.

THE COMMONWEALTH FUND

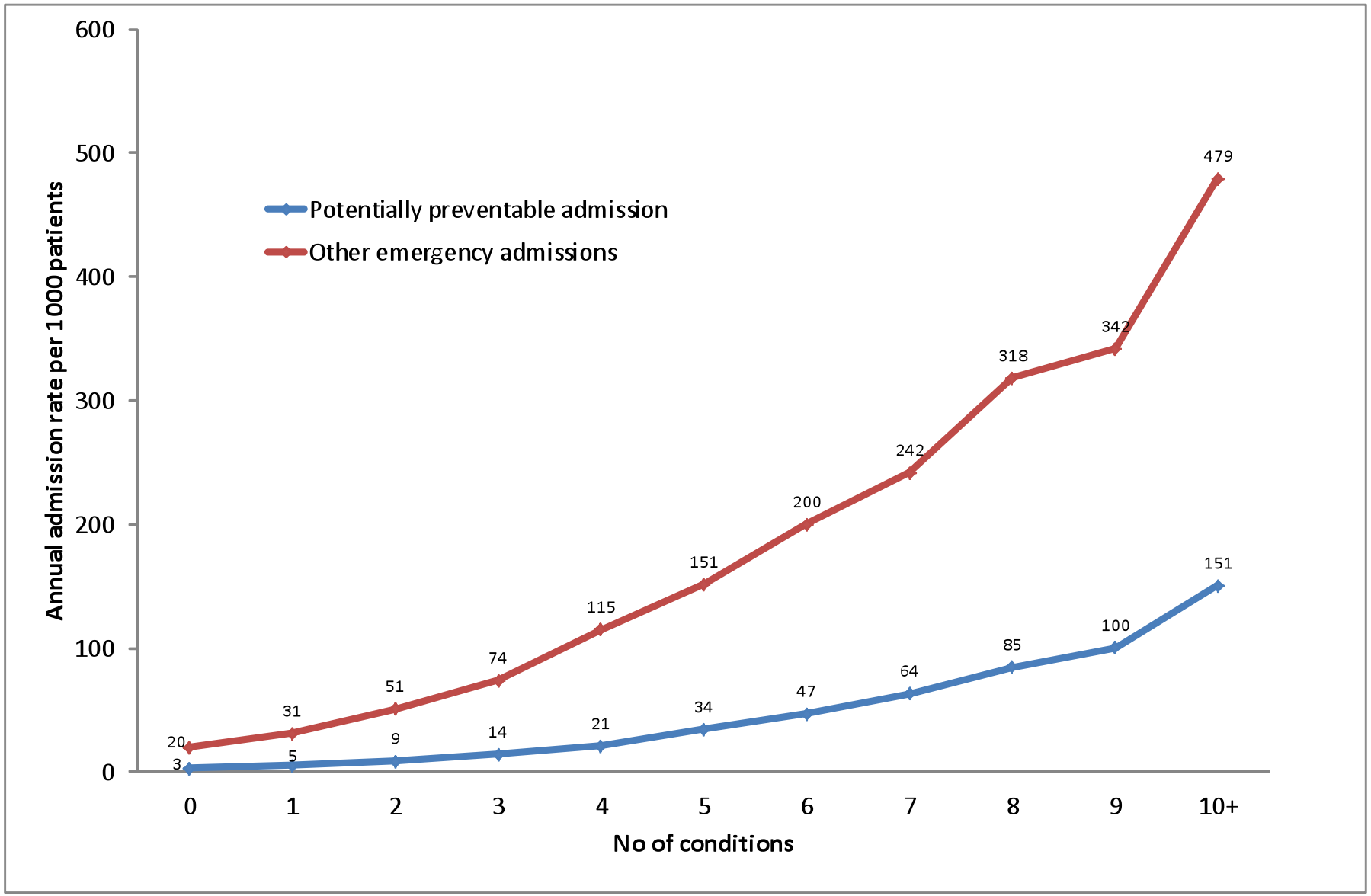
International evidence shows that people with multimorbidity experience more medical errors

Figure 37. Any Error in Past Two Years



Note: Errors include medical mistake, wrong dose/medication, or lab test error.
Source: 2007 Commonwealth Fund International Health Policy Survey.
Data collection: Harris Interactive, Inc.

People with multimorbidity in Scotland are much more likely to have emergency and potentially preventable admissions



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 course for GPs
  - Ask patient to prioritise

http://onlinelibrary.wiley.com/doi/10.1111/j.1471-8731.2004.00068.x/abstract;jsessionid=8E9C1CA401394EED1CC5AF4699C5CAB6.d01t02

- There is no longer any doubt about the pervasive influence of social factors on health. Almost two centuries of descriptive research provides convincing evidence of associations between social structures and relationships and health status in all countries and in all societies; if there is anything new from more recent research, it is that the association is not limited to differences between the lowest social strata and other social strata. Rather, the association is noted throughout the social spectrum. That is, there is a social gradient in health such that, for many if not most manifestations of ill health, the lower the social stratum, the worse the health.
- The challenge for the future is to understand why this is the case, to create a consensus that these inequalities are unnecessary and unacceptable, and to devise strategies that are both effective and possible. This paper will focus on the first of these aims, in a context that facilitates attention to the second and third aims.

A service level integrated health system for homeless and excluded populations

- Integrated care is required when a patient's needs cannot be covered by one professional or health care provider alone
- aim to improve patient outcomes with better coordination of services by focusing on:-
  - case management [45–48]
  - co-location of services and information [46, 48]
  - implementation of healthcare teams [46]
  - enhanced role of the primary care physicians [49]
  - use of a population health approach [50]

Defining Integrated Care

- ‘a coherent and coordinated set of services which are planned, managed and delivered to individual service users across a range of organisations and by a range of co-operating professionals and informal carers’

- Raak A, Mur-Veeman I, Hardy B, Steenbergen M, Paulus A. Integrated care in Europe. Description and comparison of integrated care in six EU countries. Maarssen, Elsevier Gezondheidszorg, 2003.

5 (+1) laws for integrating medical and social services

1. 'You can integrate all of the services for some of the people, some of the services for all of the people but you can't integrate all of the services for all of the people‘

   Which types of needs might be best served by the three levels of integration: linkage, coordination and full integration [1]

2. 'Integration costs before it pays‘

   Staff, support systems, services and start-up costs [1]

3. 'Your integration is my fragmentation‘

   Integration challenges professionals and organisations and can feel like fragmentation. Even the simplest 'linkage' takes time and effort to effect [1]

[1] Leutz W. Five laws for integrating medical and social services: lessons from the United States and the United Kingdom, Milbank Q 1999, 77:77-110.

5 (+1) laws for integrating medical and social services

4. 'You can't integrate a square peg and a round hole‘

   Underlying differences between health and social care frustrate attempts to integrate, e.g. eligibility criteria and funding arrangements [1]

5. 'The one who integrates calls the tune‘

   The organisation that initiates and leads on integration has the greatest impact on the integrated services main focus [1]

6. 'All integration is local‘

   Each integration effort has to be implemented locally and be consistent with local systems. Larger policies should facilitate rather than dictate the structure and pace of local action. [2]

[1] Leutz W. Five laws for integrating medical and social services: lessons from the United States and the United Kingdom, Milbank Q 1999, 77:77-110.
[2] Leutz W. Reflections on integrating medical and social services: five laws revisited. Int J Integr Care 2005, 13:3-11.

Key messages

- Involve service users, carers and community service providers in planning and oversight
- Develop systems to integrate, coordinate and link services
- Clarify borders between medical and other systems

Leutz W. Reflections on integrating medical and social services: five laws revisited. Int J Integr Care 2005, 13:3-11.

- Horizontal integration
  - between organisations / units on the same level / status of health care delivery
- Vertical integration
  - between organisations at different levels or hierarchal structures like general practitioners, nursing homes and hospitals
- Virtual integration
  - services share information and ideas electronically

Hospital (Secondary)

Medical Respite (Intermediate)

Community (Primary)

Outreach (Preventive)

Quality of life and prevalence of chronic disease in single homeless people.

Andrew Hayward & Al Story
UCL Centre for Inclusion Health

Health Inequality

- The prevalence of chronic conditions and poor health-related quality of life is known to increase with increasing levels of social deprivation.

- The Health Survey for England is a large national household study measuring the health and quality of life of representative households.

- Geographical indices of social deprivation such as the Index of Multiple Deprivation (IMD) allow analyses demonstrating the social gradient in risk of disease and poor health related quality of life across quintiles of deprivation (IMDQ 1-5).