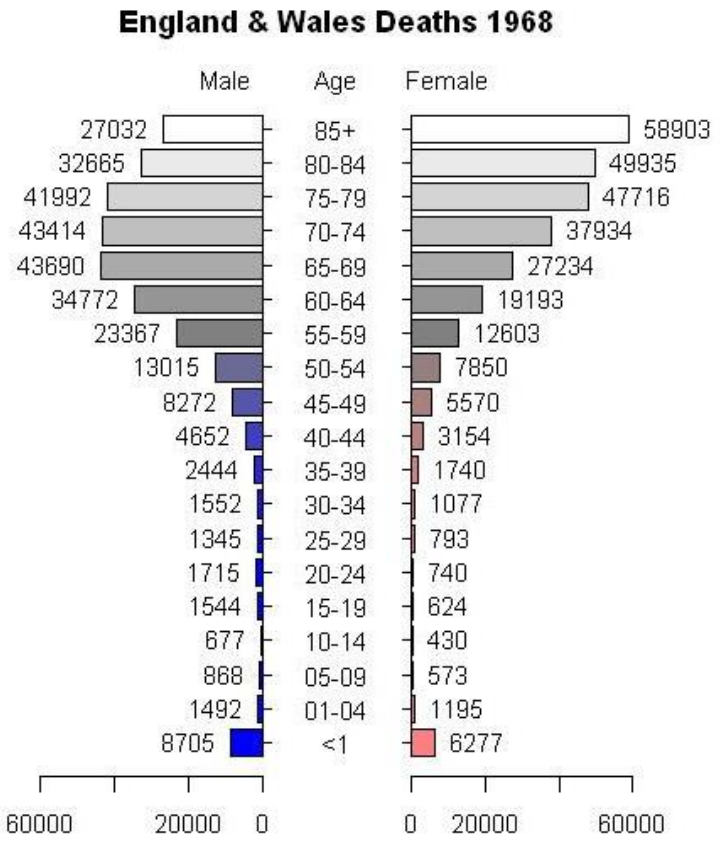
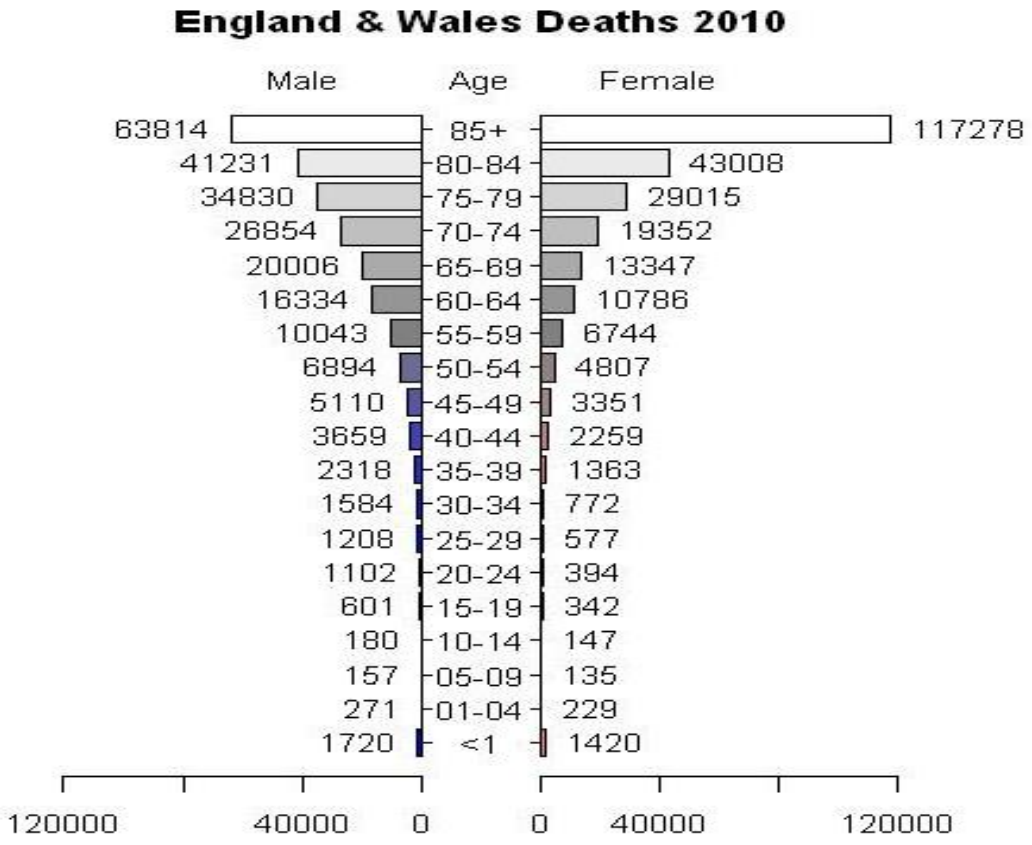
NIHR and research for older people with complex health needs.

Christopher Whitty

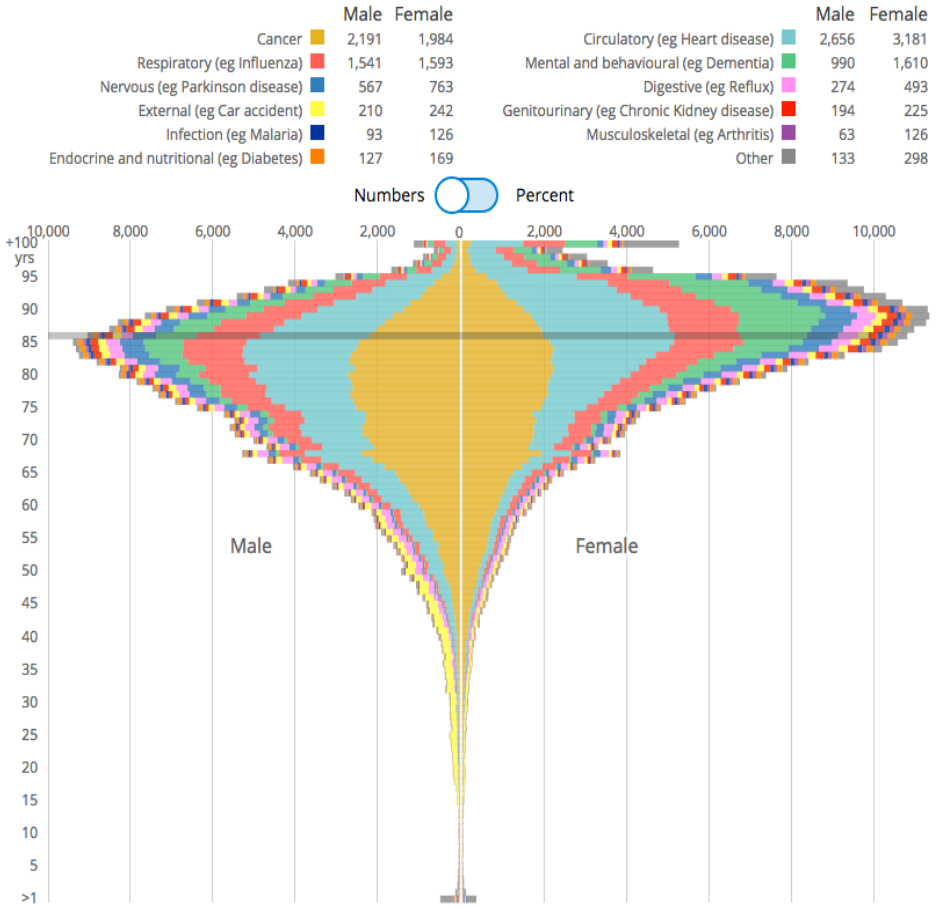
Mortality by age, England and Wales 1968-10

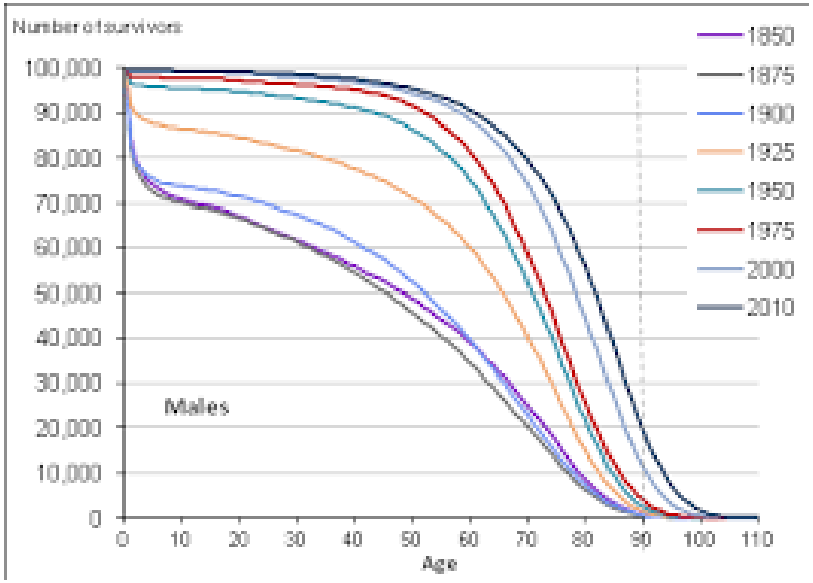
The life expectancy of UK babies 2015 94 (g) and 91 (b)





Age of mortality much more concentrated.

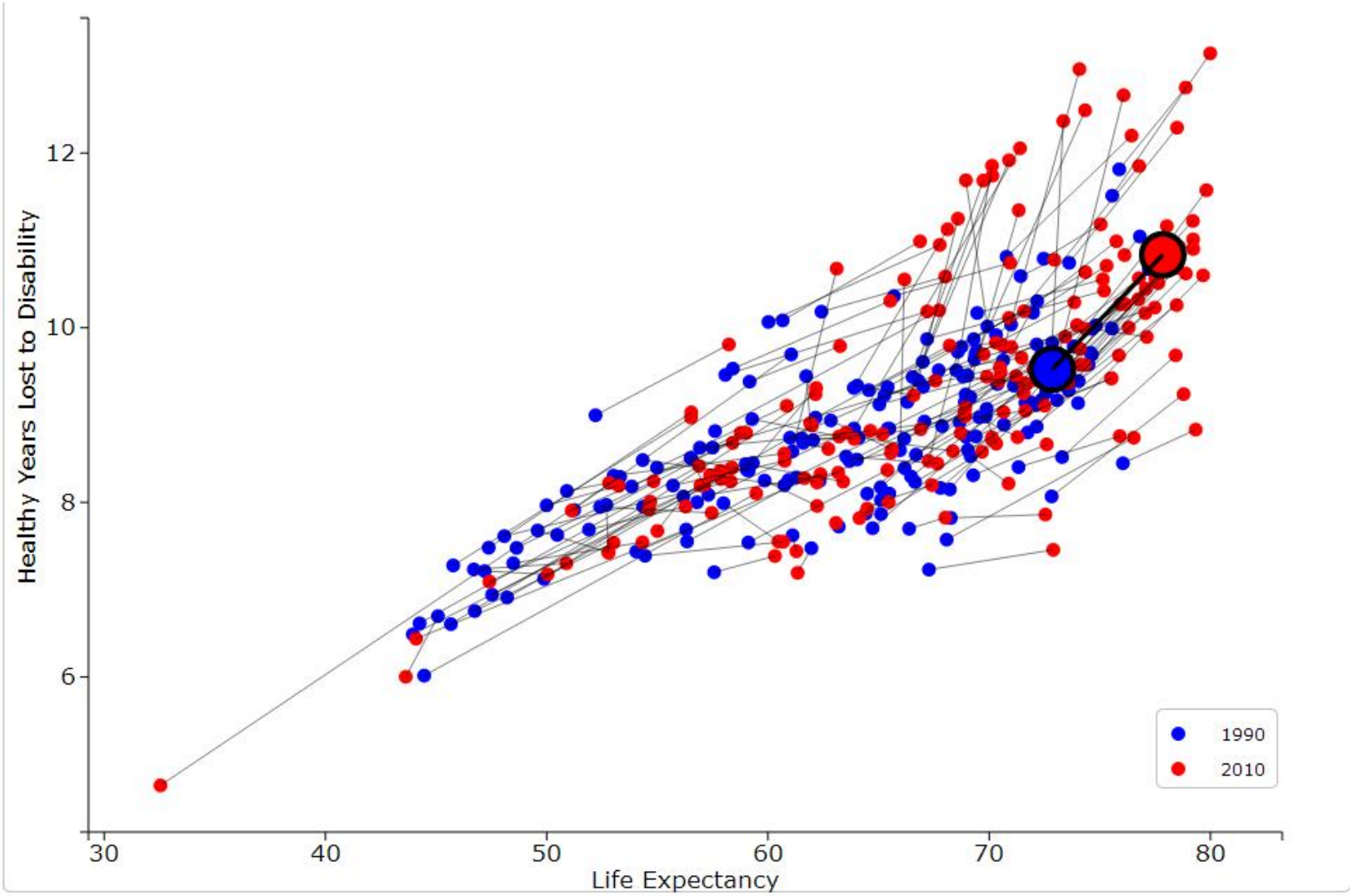




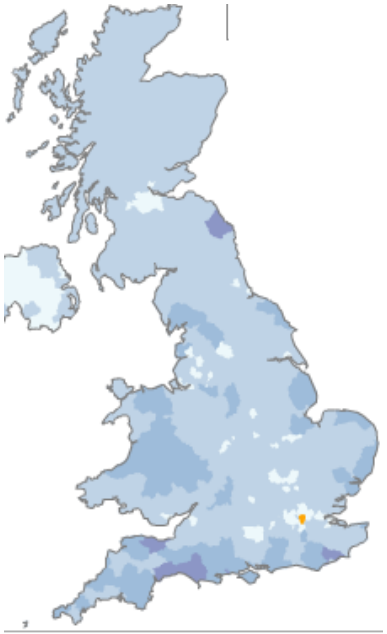
ONS

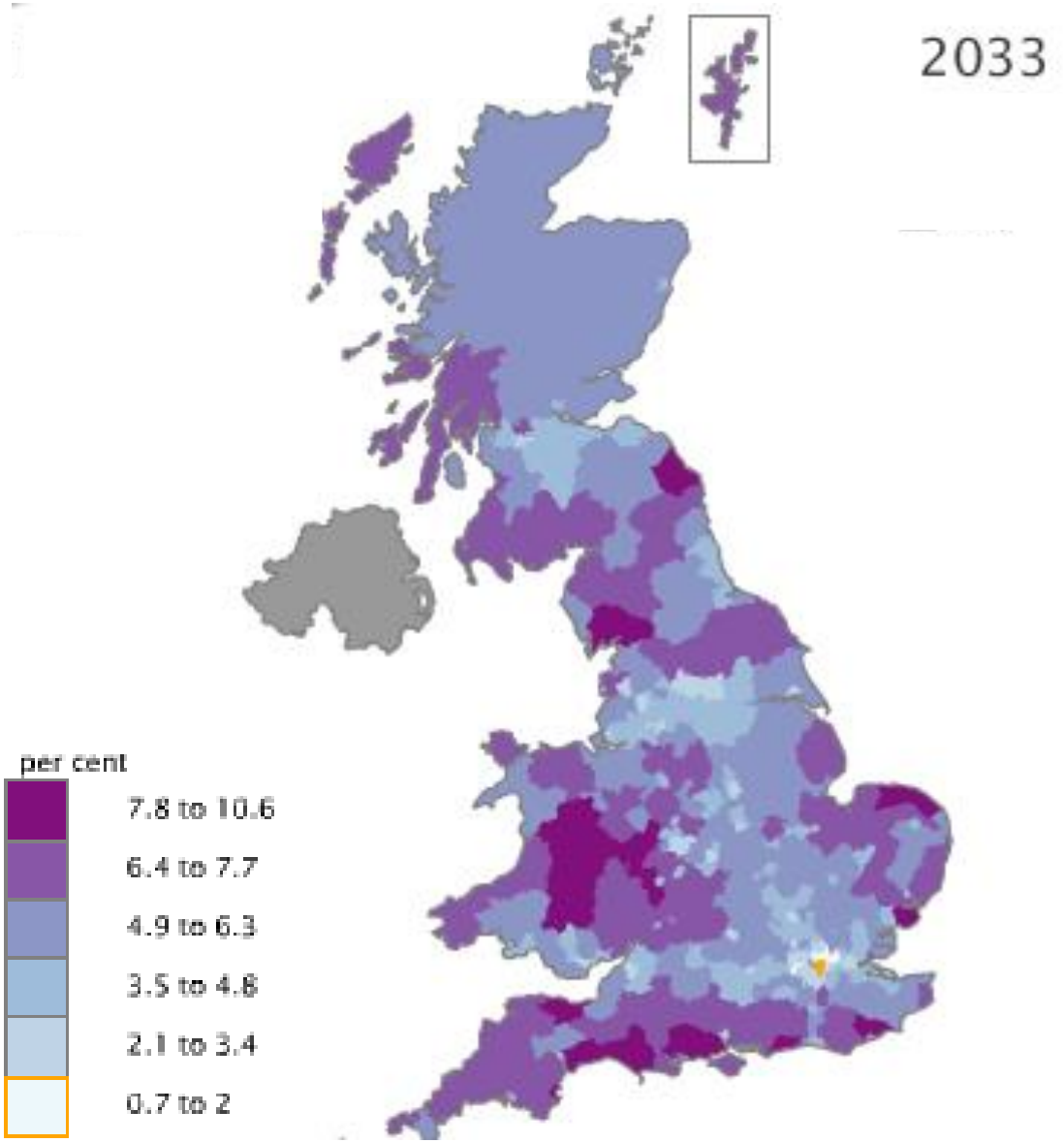
Source: Deaths registered in England and Wales, 2015

As life expectancy increases disability increases: all countries, UK highlighted. *(GBD 2013)*



Population 85 and over: 1992, 2015, 2033 *(ONS).*





Problem statement

- Multi-morbidity (2 or more conditions in one person) is increasing in absolute terms and relative to single morbidity. We must tackle it.
- Science has recently become better at being vertically organised for specific conditions (‘bench to bedside’ etc) but not horizontally between them.
- Current medical specialisation and guideline-based medicine is optimised for dealing with single diseases.
- Research groups, grant-giving bodies, journals all tend to handle multi-morbidity badly.
- Older people and multi-disease often systematically excluded from studies.

We need some organising framework.

- Multi-morbidity often talked of as if (age apart) it is a random assortment of disease but it is not either in cause or effect.

- My *opinion* (ie happy to change it) is we should look in particular at:
- Common clusters, which may be around a risk factor (prevent, concentrate effort).
- Clusters which are especially debilitating (modify).
- Doctor-induced clusters (the easiest to change-probably).

Clusters around risk factor, some unknown.

- Some risk factors are so powerful the clusters are easy to see with minimal effort.
- Smoking: coronary heart disease + COPD + peripheral artery disease + cancer.
- Diabetes: coronary heart disease + peripheral artery disease + renal failure + peripheral neuropathy.

- We should probably be trying to identify common clusters:
- as a minimum they will concentrate our efforts.
- we may identify modifiable risk factors.

Clusters which are synergistic, in a bad way, or especially debilitating.

- Some combinations compound one another; a morbidity is a risk factor for others.
- Modifying one or two may substantially reduce the impact of all the others.
- Identifying synergistic clusters may allow simple interventions.

- Cataracts + proprioceptive loss + reduced muscle + osteoporosis + floral carpet = hip fracture.
- Mild dementia + renal failure + diuretics + osteoarthritis + poor vision = drug over- or underdosing = [stroke etc].

Doctor-induced.

- Current guideline based care tends to polypharmacy in those with multiple morbidities. Once on 3 NICE pathways…
- We have limited knowledge of the effects of age on correct dosing, most trials exclude multi-morbid participants, and identifying drug interactions in people with multiple morbidities is hard. We can assume some polypharmacy useless, some harmful.
- Most GPs and geriatricians undertake multiple N of 1 trials reducing drugs but this is seldom systematised or data captured.

- Society, and therefore NIHR, clearly needs to do more rigorous research in this area.

- It would be great to get some organising framework to help researchers and funders (specifically NIHR).

- Ideally we should publish this to get challenge and feedback, assist others and for transparency.