



Public Health
England

Implementing a public health approach to MSK

Professor John Newton
Chief Knowledge Officer, PHE

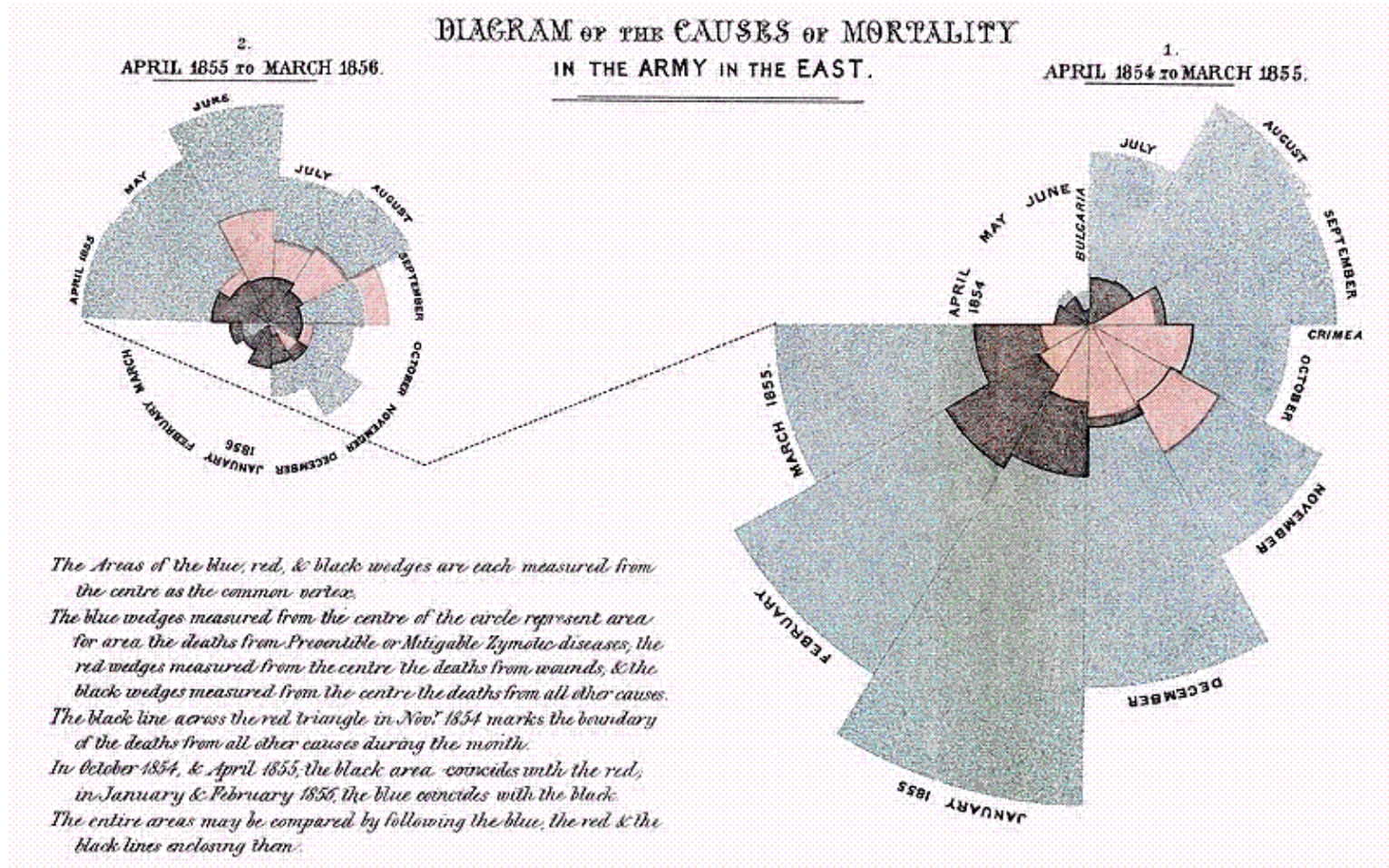


Burden of MSK is huge

- Each year 20% of the general population consult a GP about a musculoskeletal disorder.
- Fourth largest area of spending in the NHS (accounting for £5.06 billion in 2011/12)
- Major cause of disability and time off work, accounting for 11.6 million working days lost each year
- Associated with a large number of co-morbidities, including depression and obesity
- Has an enormous impact on the quality of life of millions of people in England



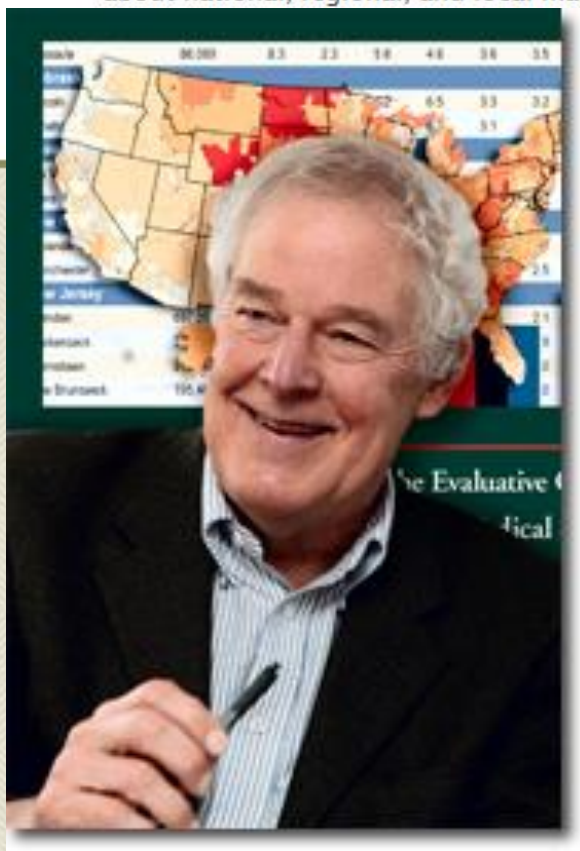
Florence Nightingale: a public health exemplar from 1856





Understanding of the Efficiency and Effectiveness of the Health Care System

For more than 20 years, the Dartmouth Atlas Project has documented glaring variations in how medical resources are distributed and used in the United States. The project uses Medicare data to provide information and analysis about national, regional, and local markets, as well as hospitals and their affiliated physicians. This research has helped health care analysts and others improve their understanding of our health care system and many of the ongoing efforts to improve health and health systems across the country.

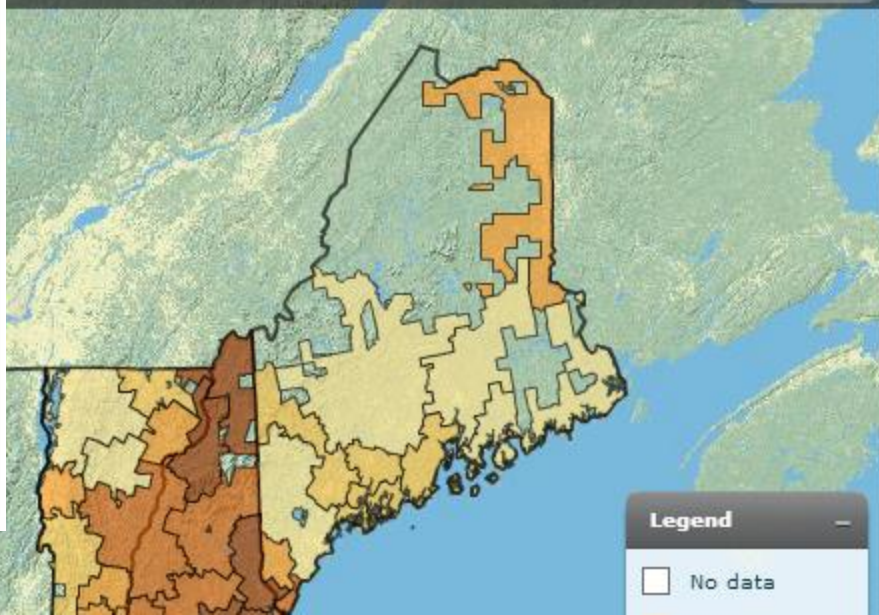


LDREN, 2007-10

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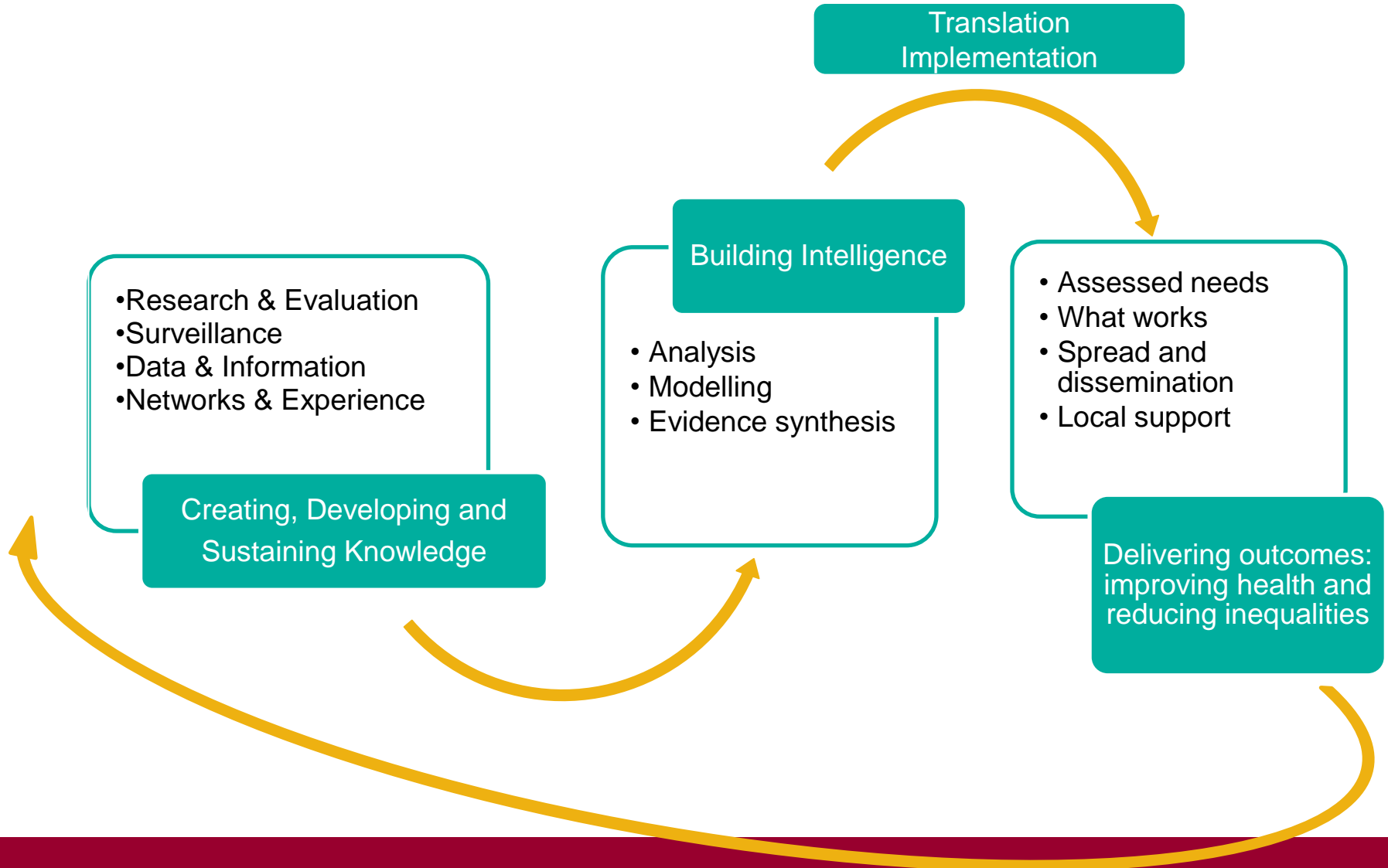
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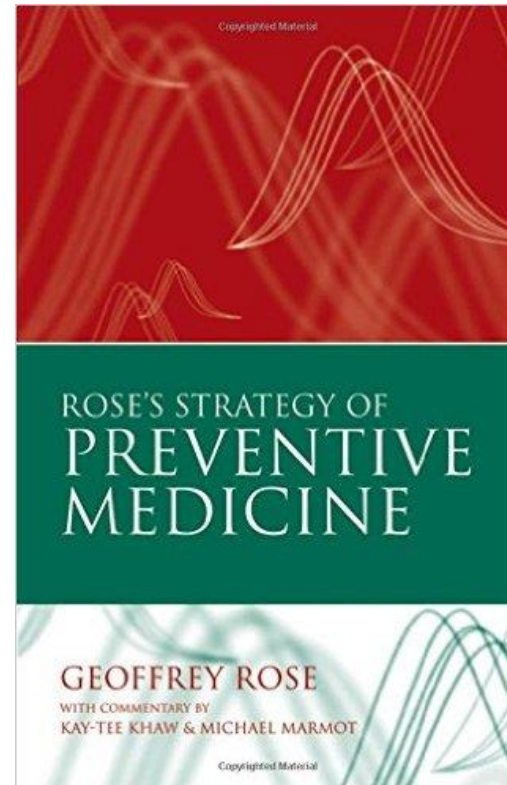
Knowledge Pathway





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Geoffrey Rose

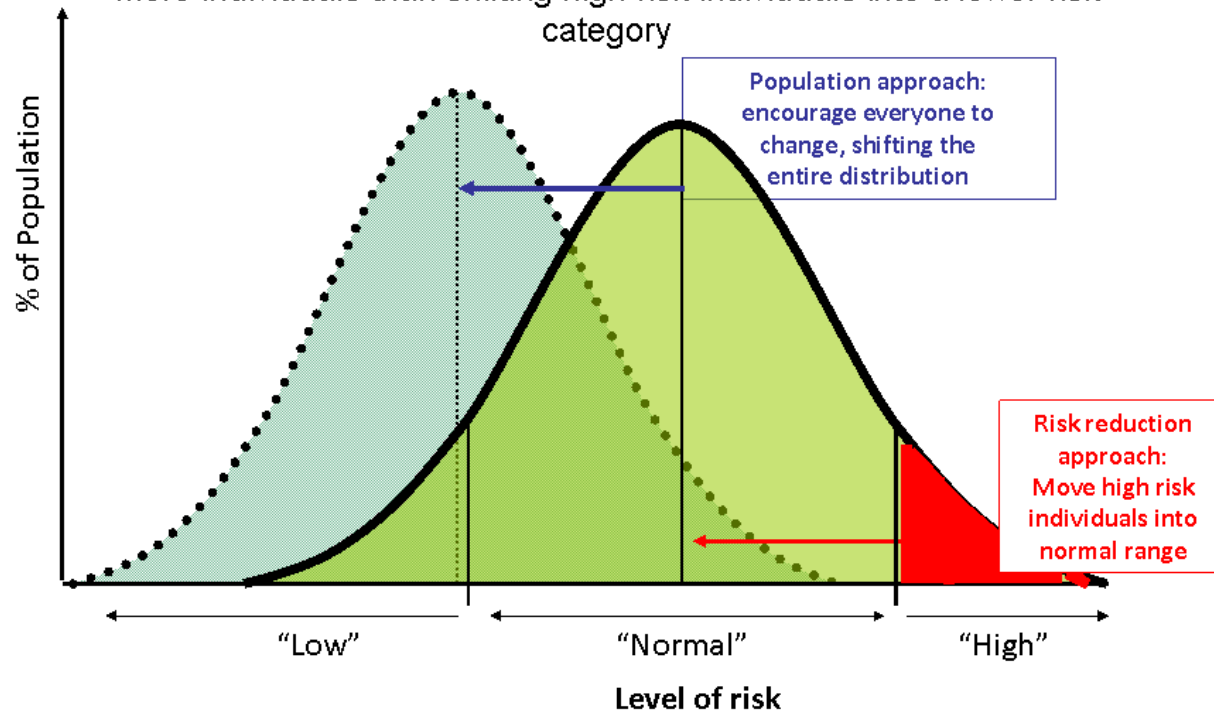




The population approach to prevention

The Bell-Curve Shift in Populations

Shifting the whole population into a lower risk category benefits more individuals than shifting high risk individuals into a lower risk category



Source: Rose G. Sick Individuals and sick populations. *Int J Epidemiol.* 1985; 12:32-38.



Overview of the Global Burden of Disease project

- Collaborative effort of over 1,000 researchers in more than 100 countries
- Updated annually
- Covers 21 regions, 188 countries, and more than 300 diseases, injuries, and risk factors
- Draws on civil registration and vital statistics, disease surveillance, surveys, and verbal autopsies
- Uses the most up-to-date statistical estimation methods to create time series and fill data gaps
- Methods published in peer-reviewed journals, including *The Lancet*, *JAMA*, and the *New England Journal*

Comment

GBD 2.0: a continuously updated global resource



The Global Burden of Disease Study 2010 (GBD 2010) provides a comprehensive and coherent assessment of the state of the world's health from 1990 to 2010.^{1,2} With consistent definitions, standardised approaches to data quality, and consistent modelling strategies, GBD 2010 assesses mortality, premature mortality, and disability caused by a detailed list of diseases, injuries, and risk factors. The analysis is undertaken in great detail, covering 187 countries, two decades, both sexes, and 20 age groups. The findings point to rapid changes in patterns of health outside sub-Saharan Africa, with large shifts in many regions towards non-communicable diseases, chronic disability, and risk factors related to behaviours. In sub-Saharan Africa, mortality of children younger than 5 years decreased substantially and maternal mortality also fell; since 2005, major progress has been made for HIV, and for malaria since 2004. Despite this progress, GBD 2010 also shines a spotlight on the challenges that many of the poorest countries continue to face, where several infectious diseases, such as diarrhoea, pneumonia, and neonatal conditions, continue to dominate as major causes of premature child death. Substantial investments by developing countries and US\$28.1 billion in 2012 in development assistance for health, focusing on the Millennium Development Goals, are contributing to accelerated transitions.³ Countries are experiencing a complex set of changes in health problems and their underlying causes, which need more and more contextualised policy responses.

For several reasons, national, regional, and global actors need to have access to the best available evidence for patterns of health and how they are changing. Although it is an enormous resource, GBD 2010 needs to be regularly and systematically revised and improved to reflect new evidence and new methods as they accumulate for at least five reasons. First, new data sources for a country—eg, a Demographic and Health Survey, a census, a local survey, or national vital registration data—can substantially change understanding of health trends. Demographic and Health Surveys in several sub-Saharan African countries have shown accelerated decreases in child mortality in the past decade.⁴ Trends in mortality can change abruptly: from 2008 to 2010, adult male mortality in Ukraine dropped about 22%; and scale-up of

antiretroviral therapy (ART) has radically reduced adult mortality since 2005 in several countries (eg, Botswana).

Second, multicentre studies, such as the Global Enterics Multi-Center Study⁵ or Pneumonia Etiology Research for Child Health Study,⁶ will provide much-needed high-quality information about the aetiology of diarrhoea and pneumonia. Additionally, proposed studies of the risks of death associated with malaria parasitaemia in adults would potentially change understanding of malaria mortality when completed. Multicentre investigations will probably change detailed understanding of disease patterns. Burden estimates should be quickly revised to reflect this type of new knowledge. New studies will also affect understanding of the hazards associated with different risk factors.

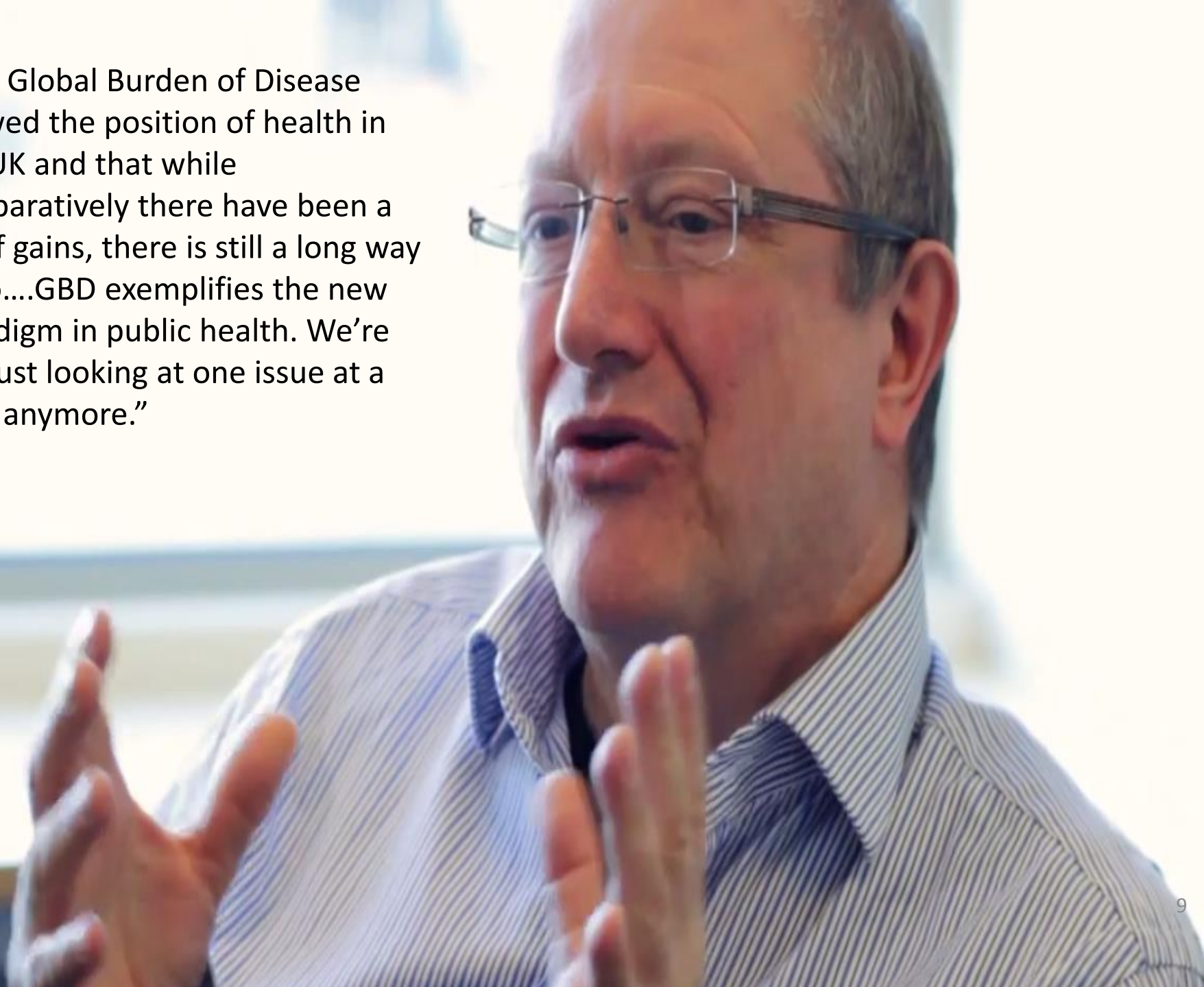
Third, expanded use of the GBD 2010 results will probably lead local analysts to identify data sources that have not been used and could strengthen the analysis for a specific country. For example, collaborative work with the University of Zambia and the Ministry of Health of Zambia on district-level health outcomes was able to make use of many data sources not used in international assessments of child health.⁷

Fourth, careful reflection on the GBD 2010 results and future iterations of GBD will probably suggest alternative interpretations of the biases and necessary corrections in many data sources. This type of assessment is iterative and benefits from repeated assessments. The development of the UNAIDS

Published Online
May 12, 2011
[http://dx.doi.org/10.1016/S0140-6736\(11\)60225-1](http://dx.doi.org/10.1016/S0140-6736(11)60225-1)

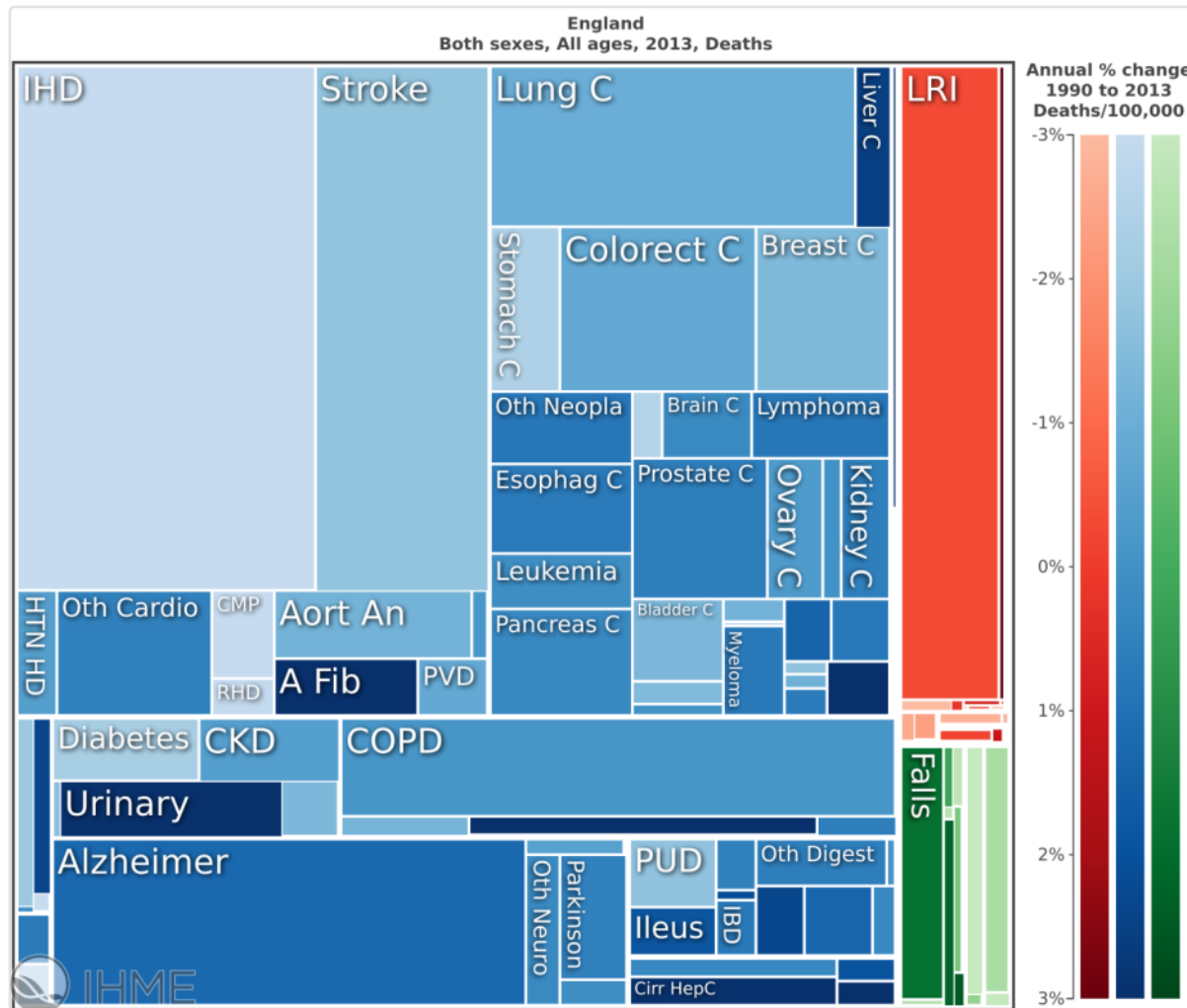


“The Global Burden of Disease showed the position of health in the UK and that while comparatively there have been a lot of gains, there is still a long way to go...GBD exemplifies the new paradigm in public health. We’re not just looking at one issue at a time anymore.”





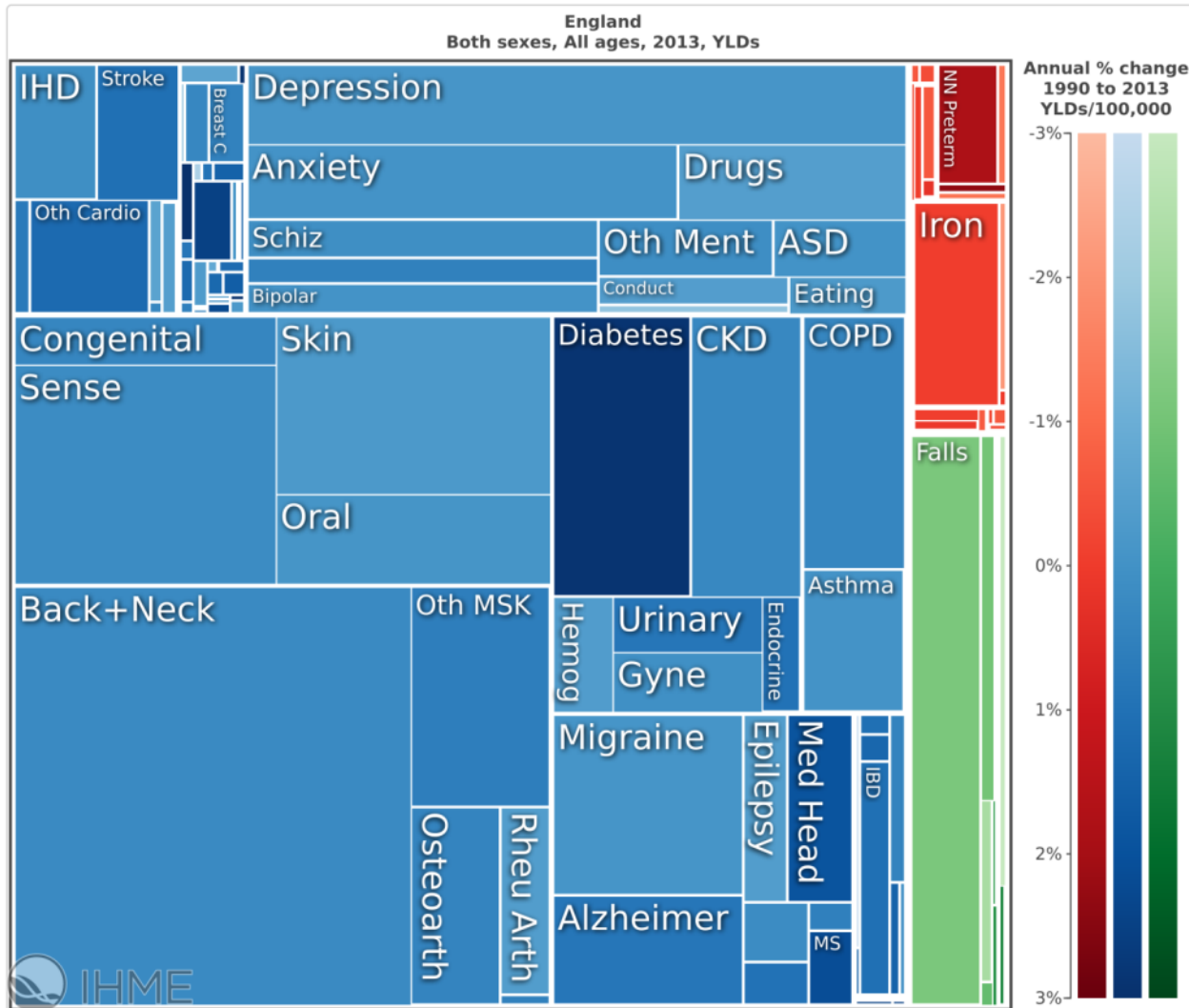
GBD England 2013: deaths by cause



MSK →

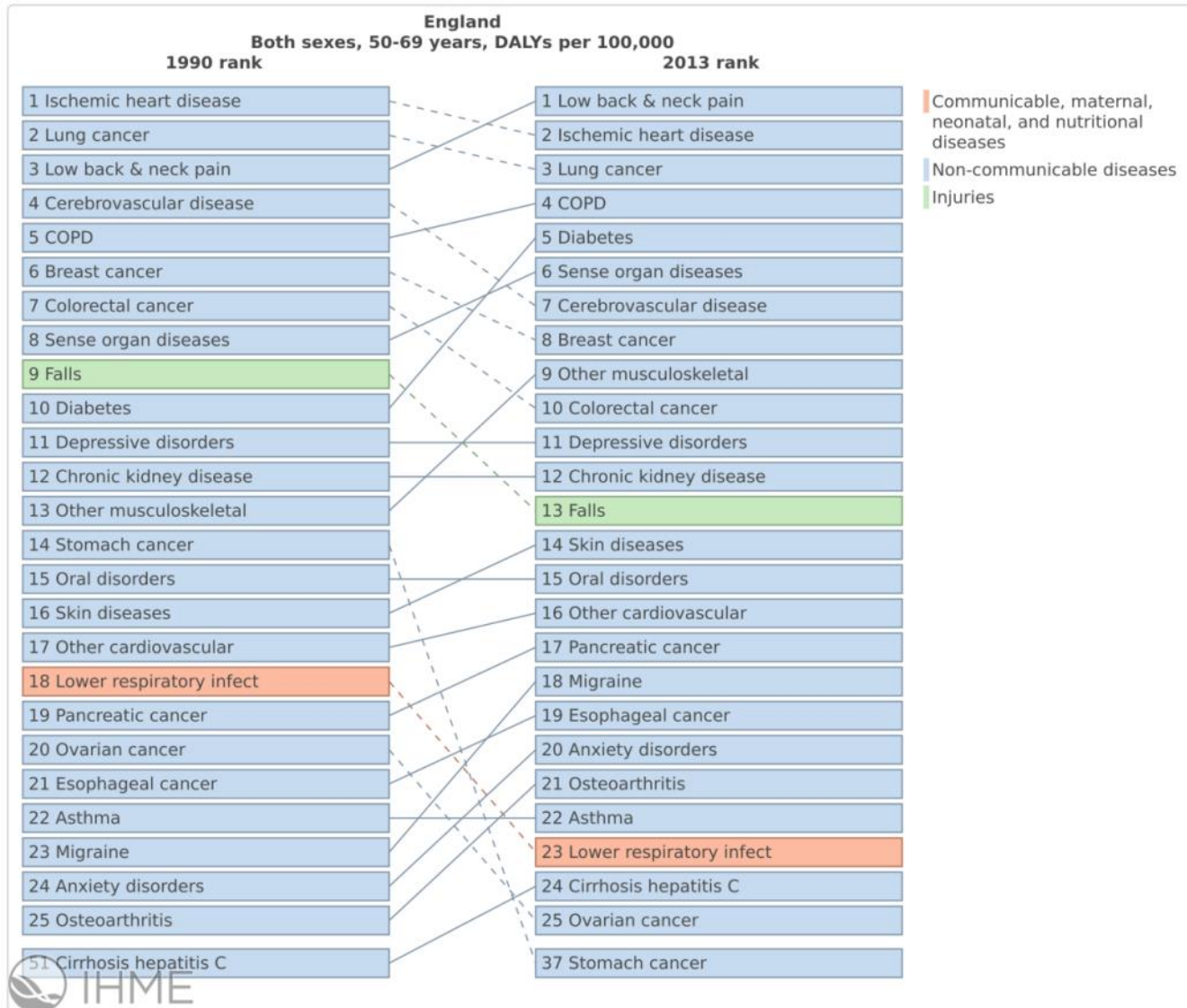


GBD England 2013: Years lived with disability



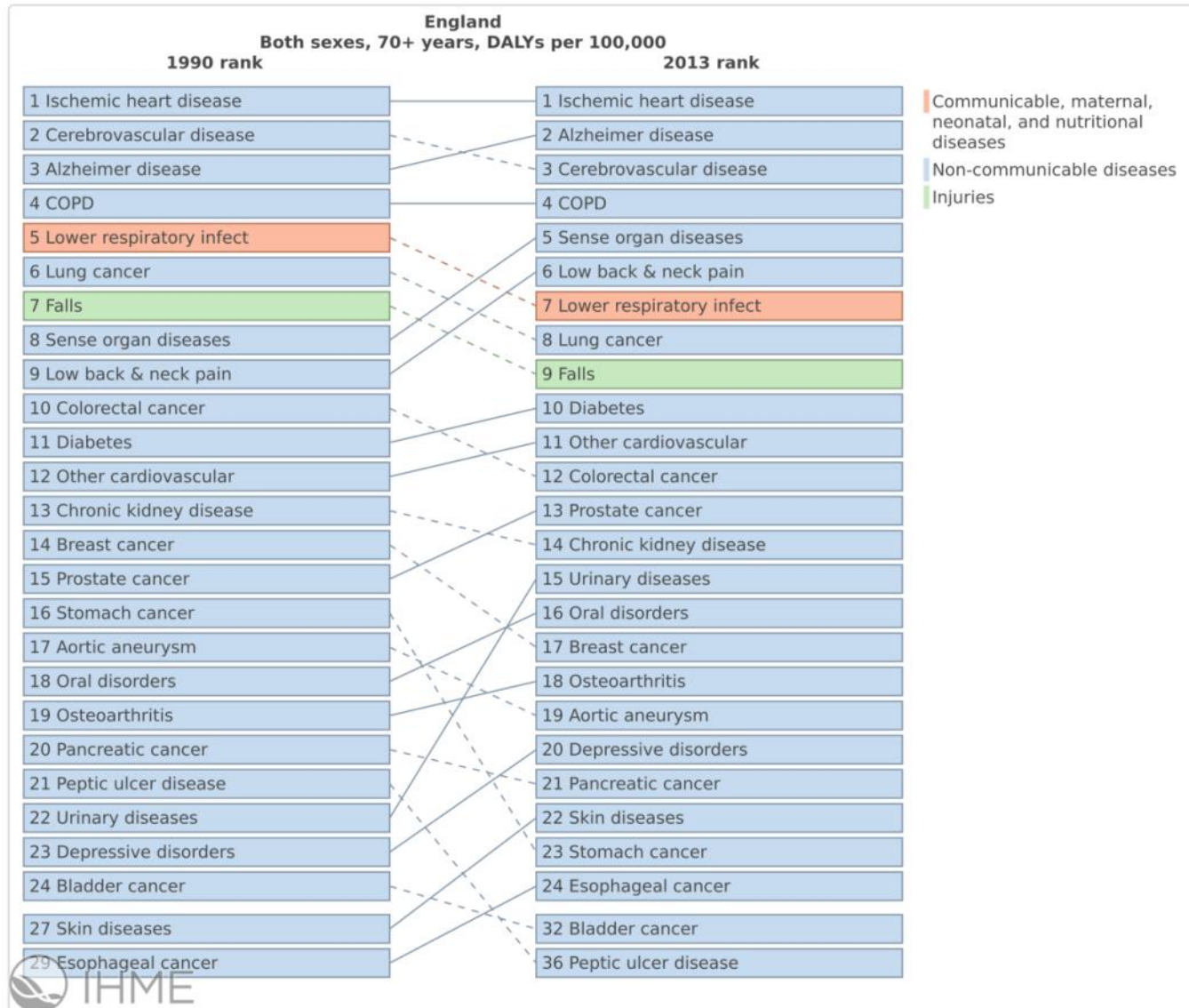


GBD England 2013: 50-69 years causes of DALYs



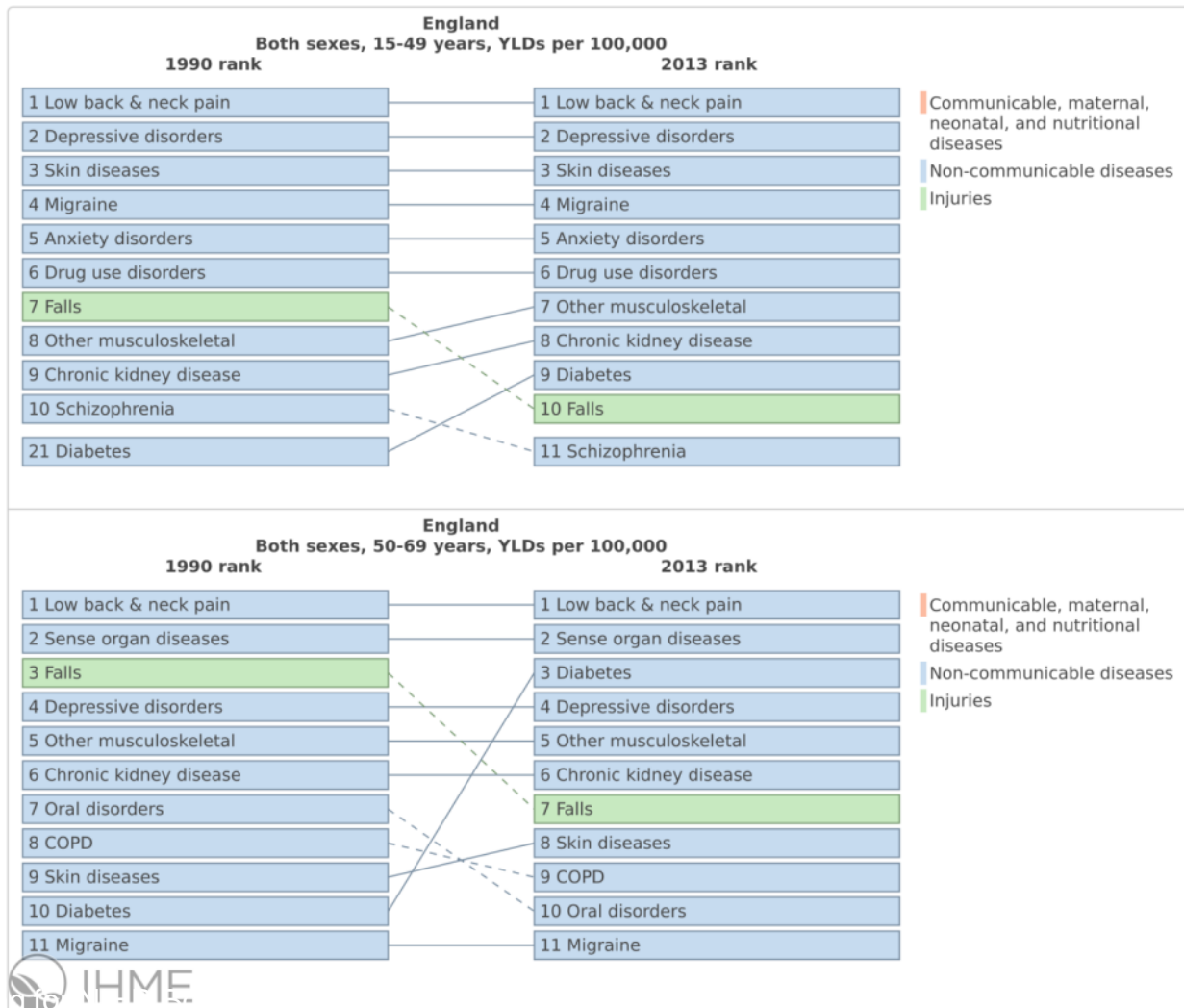


GBD England 2013: 70+ years causes of DALYs



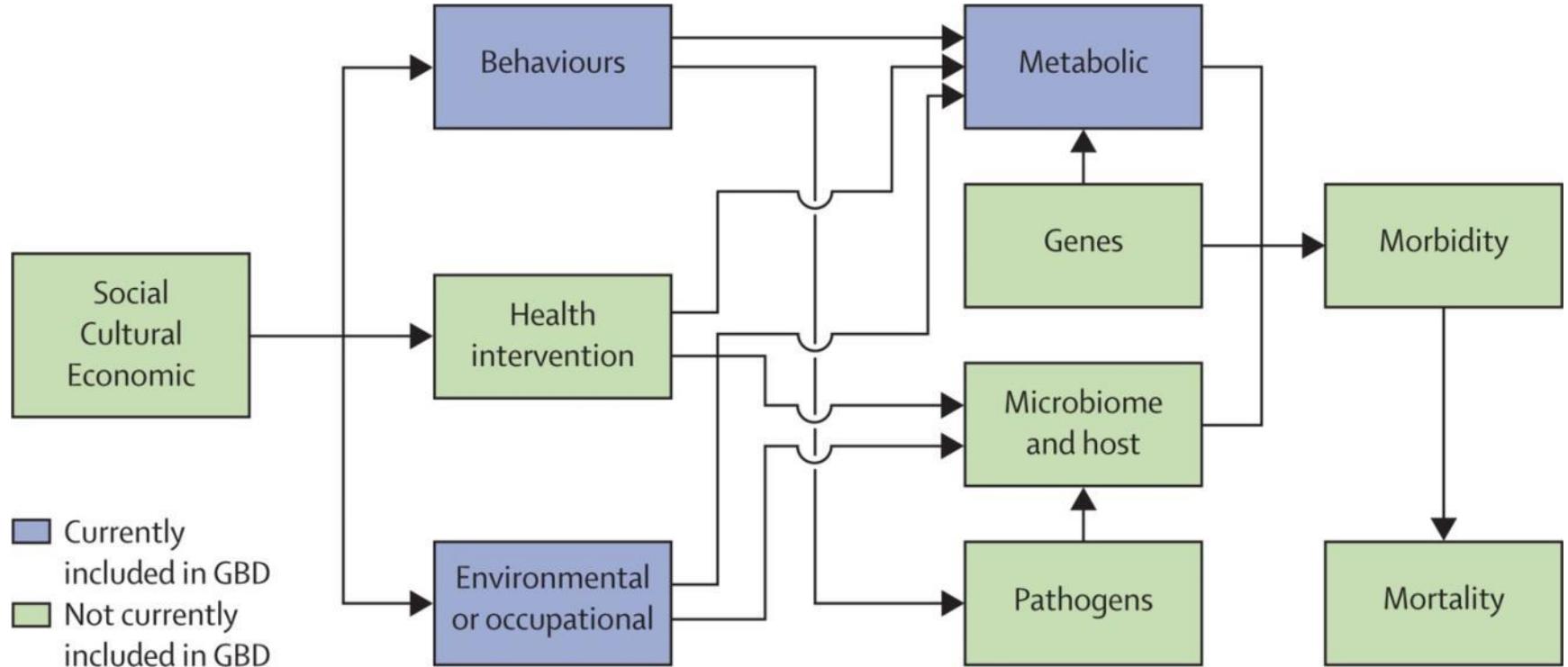


GBD England 2013: causes of YLDs by age group





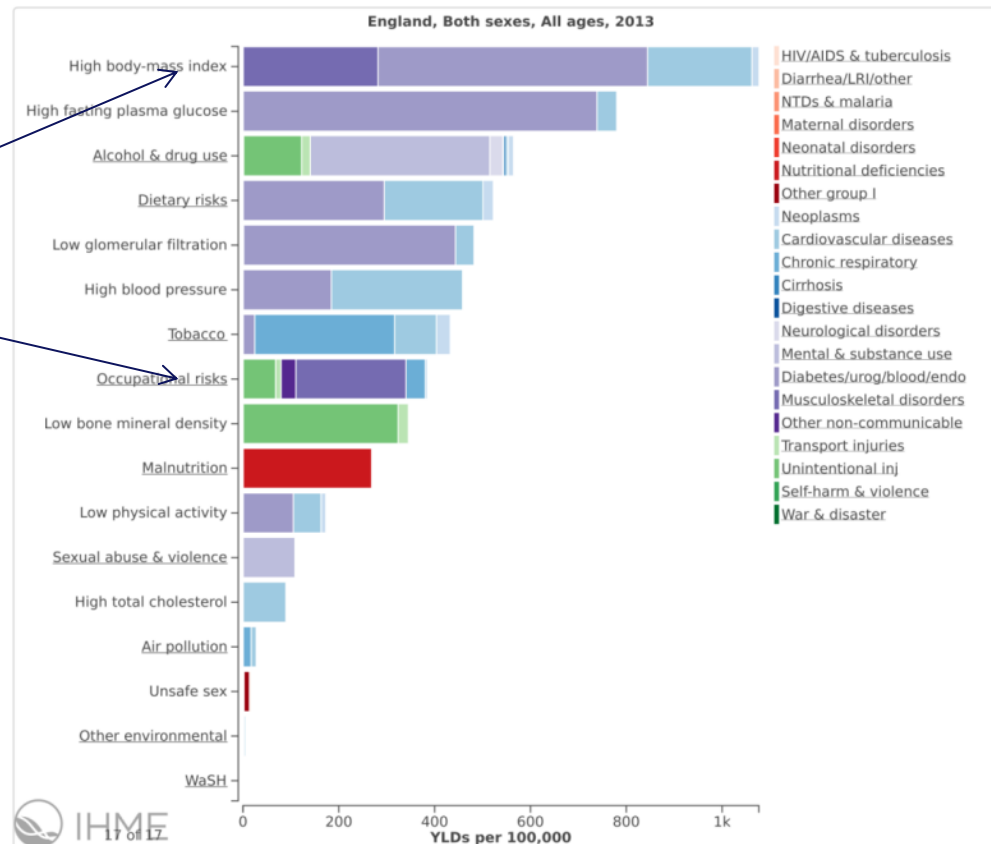
Risk factors currently included in GBD





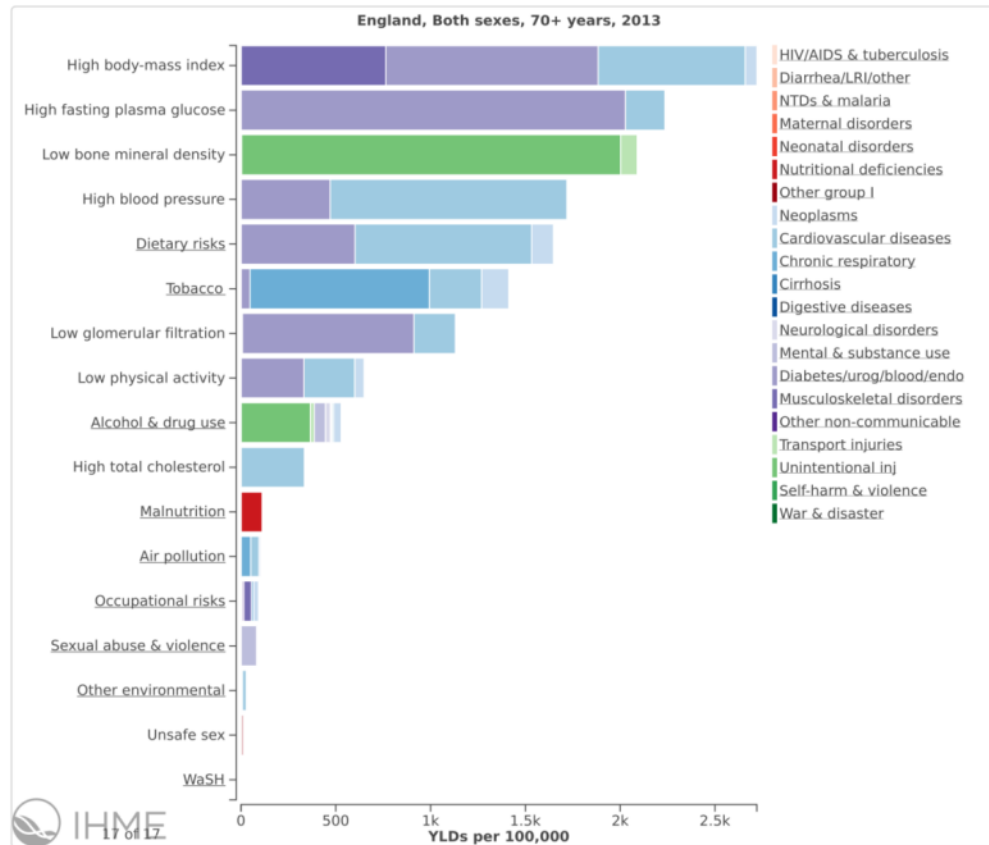
GBD England 2013: attributable risks Years Lived with Disability

MSK

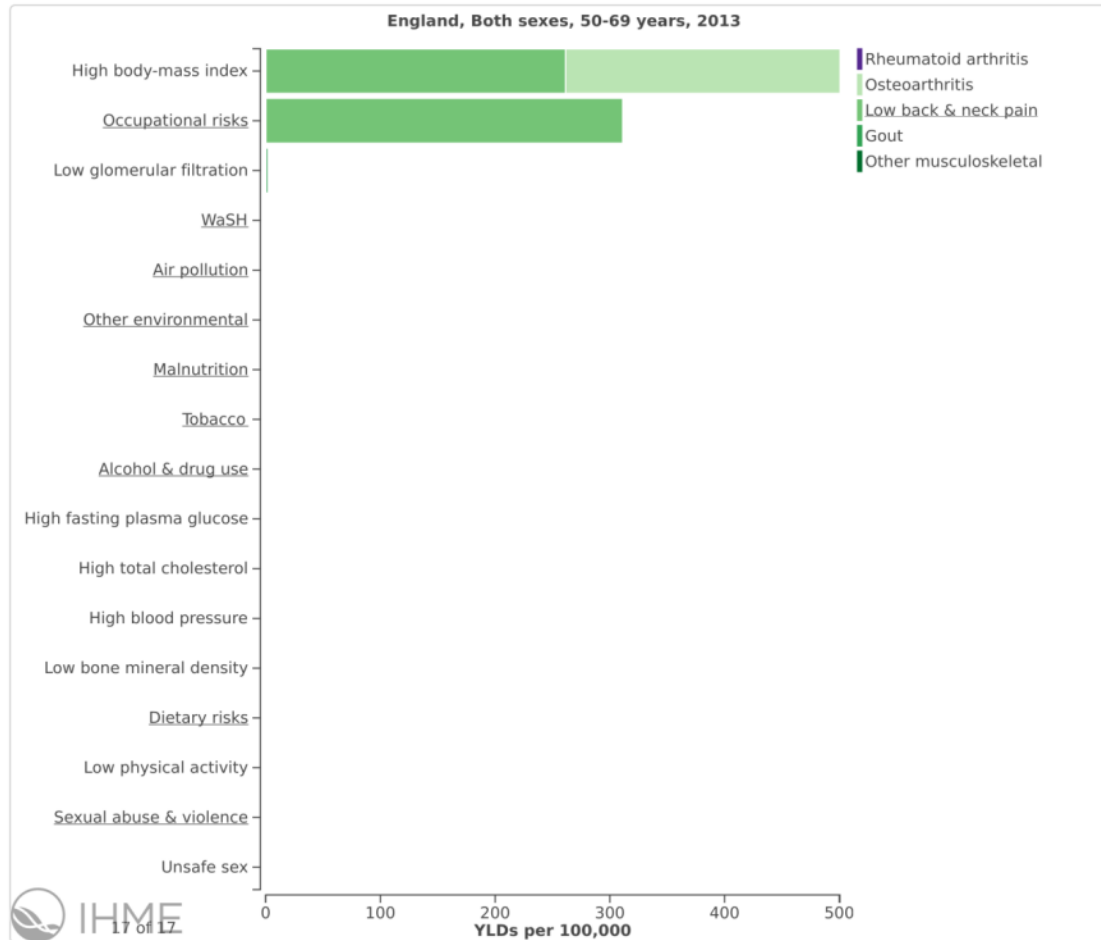




GBD England 2013: attributable risks Years Lived with Disability – over 70 years

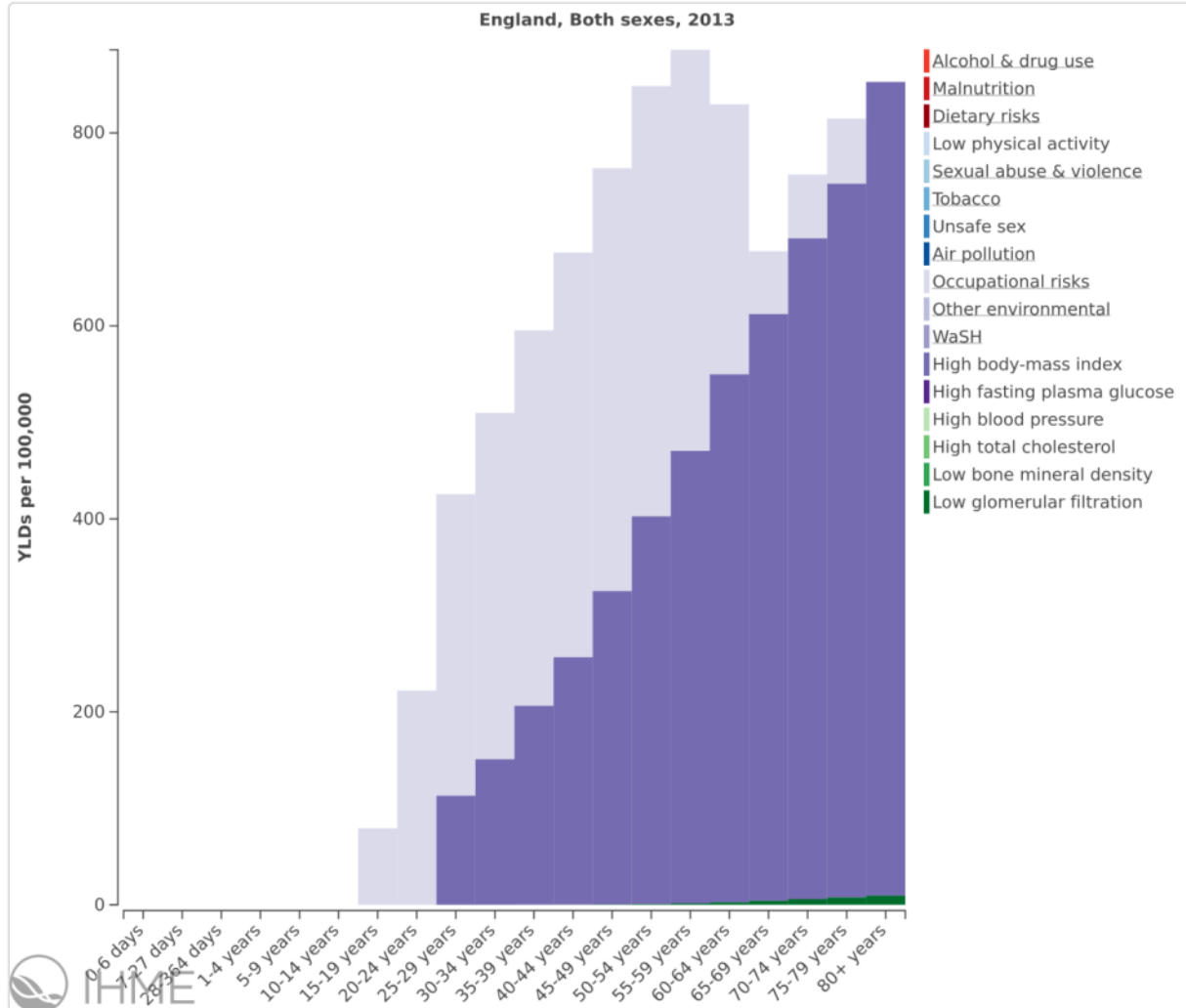


GBD England 2013: attributable risks for MSK conditions





GBD England 2013: attributable risks for MSK conditions





Advocacy for a population approach



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Public health

Arthritis Research UK is seeking to transform the conversation about musculoskeletal conditions.

For too long, the focus has been on the end stages of musculoskeletal disease – treating them when they're at their most severe. We'd like to see a change: promotion of lifelong healthy bones, muscles and joints.

We must address how we reduce the risk of developing a musculoskeletal condition, alongside how we reduce the impact of these painful conditions once they've developed.

Awareness of the link between healthy lifestyles and musculoskeletal health is low, particularly for people already living with the pain and disability of arthritis or back pain.

We need to challenge these misconceptions and explode the myth that nothing can be done about arthritis.

Our guide, [Musculoskeletal health – a public health approach](#) (PDF 3 MB), presents a new way of thinking about musculoskeletal conditions. Everyone can do something to improve and maintain the health of their bones, joints, muscles and spine, at every age:

- Increasing physical activity and keeping a healthy weight can markedly reduce the risk of developing a musculoskeletal problem.
- For those with a musculoskeletal condition, lifestyle changes can substantially reduce the impact of the condition, at every stage of the disease.

Arthritis Research UK is calling for those responsible for health nationally and locally to transform the information, resources, facilities and support people need so they can take steps to improve their musculoskeletal health.

At the core of our public health approach to musculoskeletal health is physical

Arthritis Research UK is committed to a world free from the pain of arthritis. Something can be done, at every age and at every stage.

Information for:

- > People with arthritis
- > Health professionals and students
- > Researchers
- > Fundraisers
- > Policy makers

[Musculoskeletal health – a public health approach \(PDF 3 MB\)](#)

Related information

- Exercise and arthritis >
- Diet and arthritis >



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ARUK Recommendations on MSK public health (2014)

- Population health assessments to include MSK health
- Programmes on lifestyle risk factors to explicitly include MSK health as an outcome
- Health promotion to emphasise benefits of physical activity for people with MSK conditions
- Activity to be underpinned by high-quality data on MSK health



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Components of a public health approach (e.g. to MSK)

- Surveillance and monitoring data and evidence review
- National and local advocacy
- Public engagement: campaigns, Apps, participation
- Primary and secondary prevention activity: obesity, occupational health, diet and nutrition, physical activity
- Population based commissioning
- Service improvement / redesign
- Research and evaluation



Raising public awareness



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Public Health England pilots rheumatoid arthritis awareness campaign

Published: 2 Feb 2015

Public Health England, in partnership with the Department of Health, NHS England and Nottingham City and Hardwick CCGs will run a Rheumatoid Arthritis (RA) campaign from 2 February 2015 for four weeks.



**Swollen joints
Stiffness
Pain**



This local pilot will follow the approach for piloting previously used in the cancer and breathlessness symptom awareness campaigns, i.e. the message will be disseminated via a range of media channels, for example press, posters and radio advertisements. Nottingham City CCG and Hardwick CCG are hosting this pilot campaign.

The campaign will identify the key three symptoms of RA: stiffness, swollen joints and



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- › October 2015
- › September 2015
- › August 2015
- › July 2015
- › June 2015
- › May 2015
- › April 2015
- › March 2015
- › February 2015
- › January 2015
- › December 2014
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- › October 2014
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- › August 2014

News

Let's dispel the myth that "not much can be done" to treat Musculoskeletal disorders – Dr Martin McShane

🕒 13 November 2015 - 09:55

NHS England's National Medical Director for Long Term Conditions says a whole system approach is needed for patients with these agonising conditions:

Sometimes we don't appreciate how important something is until we haven't got it.

Musculoskeletal health and mobility is one of those things. There's nothing like needing to do a series of stretches each morning before you can even put your socks on to fully appreciate how important it is to be able to move freely and without pain.

There is hardly a more widespread, expensive set of conditions than musculoskeletal (MSK) disorders, from back pain to osteoporosis to inflammatory arthritis. This is all the more striking given the enormity of their impact.



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🕒 20 November, 2015

Real change is underway – Dr Jacqueline Cornish

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NHS action on staff health

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- About us
- Our work
- News**
- Events
- Publications
- Resources
- Statistics
- Contact us

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- › November 2015
- › October 2015
- › September 2015
- › August 2015
- › July 2015
- › June 2015
- › May 2015
- › April 2015
- › March 2015
- › February 2015
- › January 2015
- › December 2014
- › November 2014
- › October 2014
- › September 2014
- › August 2014
- › July 2014
- › June 2014
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News

Simon Stevens announces major drive to improve health in NHS workplace

🕒 2 September 2015 - 00:01

NHS England Chief Executive Simon Stevens will today (Wednesday 2 September) kick-start a major drive to improve the health and wellbeing of 1.3m health service staff, in a bid to benefit both staff and taxpayers.

Speaking at the [NHS Innovation Expo conference](#), Mr Stevens will set out how NHS organisations will be supported to help their staff to stay well, including serving healthier food, promoting physical activity, reducing stress, and providing health checks covering mental health and musculoskeletal problems – the two biggest causes of sickness absence across the NHS.

Estimates from [Public Health England](#) put the cost to the NHS of staff absence due to poor health at £2.4bn a year – accounting for around £1 in every £40 of the total budget. This figure is before the cost of agency staff to fill in gaps, as well as the cost of treatment, is taken into account.

Today's new £5 million initiative has three pillars:

- First, a major drive for improved NHS staff health, spearheaded by a group of leading NHS hospital, mental health, ambulance, community and clinical



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🕒 20 November, 2015

[Real change is underway – Dr Jacqueline Cornish](#)
🕒 20 November, 2015

[We need to educate patients on antibiotics – Dr Martyn Diaper and Philip Howard](#)
🕒 20 November, 2015



Obesity work plan: five pillars for action

Where future generations live in an environment, which promotes healthy weight and wellbeing as the norm and makes it easier for people to choose healthier diets and active lifestyles

1. Systems Leadership

- Influence local & national leaders
- raise the national debate
- influence political ambition
- maximise communication

2. Community Engagement

- enable behaviour change through social marketing
- drive social investment through local action
- support communities with tools on healthy eating & getting active to help reduce health inequalities

3. Monitoring & Evidence Base

- enhance surveillance, analysis & signposting of data
- tailor evidence to meet local needs – Public Health Outcomes Framework
- support effective commissioning & evaluation
- develop & communicate research to inform strategy
- promote evidence of good practice

4. Supporting Delivery

- support the obesity care pathway
- work with Directors of Public Health & Clinical Commissioning Groups
- support commissioning
- practical tools to help deliver healthier places; enable active travel

5. Obesogenic Environment

- develop long term, evidence based strategy to deliver a whole system approach to tackle the root causes of obesity and address health inequalities

Tackle obesity, address the inequalities associated with obesity and improve wellbeing



Information for commissioning



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- Musculoskeletal Calculator**
- > Map
- > Analysis
- > FAQs

Musculoskeletal Calculator

Welcome to our Musculoskeletal Calculator, the first tool of its type which allows you to compare the prevalence of musculoskeletal conditions in different areas.

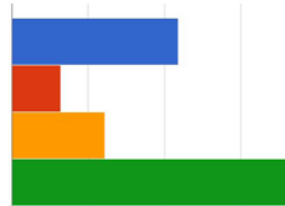
This tool will be useful for those conducting research into musculoskeletal conditions, policy makers at a local and national level and members of the public.

In particular we hope that local authorities will use these figures to ensure that the impact of musculoskeletal conditions is fully considered in their Joint Strategic Needs Assessment (JSNA) and Joint Health and Wellbeing Strategy.



Map

> Find out more



Analysis

> Find out more



FAQ

Frequently asked questions

> Find out more



Integrated commissioning



A case study of an Integrating Pathway Hub – Pennine Musculoskeletal Partnership

Home

Delivering an integrated Musculoskeletal Service in Oldham

Contents

Introduction – Why Act?

What do we mean by commissioning?

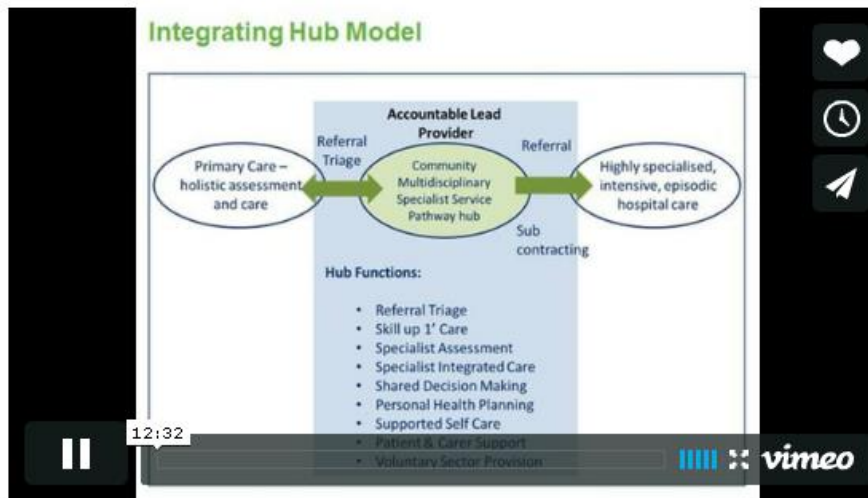
From Insights to Action

Engaging for Success

Case studies – Who’s doing it now?

Integrating Pathway Hub model – MSK

Commissioning for Value on Northern & Yorkshire



A case study of an Integrating Pathway Hub – Prime Contractor – population healthcare online learning from Right Care on [Vimeo](#). Download the slides

Pennine MSK partnership Ltd is a specialist Personal Medical Services partnership that has been commissioned by NHS Oldham to provide a comprehensive services to the population of Oldham in Rheumatology, Orthopaedics and Chronic Musculoskeletal pain

Related Links

Related Casebooks

Somerset Community-Based Self-Care Support Service for Adults with Persistent Pain

What organisation is necessary for commissioners to develop outcomes based contracts? The COBIC case study

Integrated GP led diabetes care in Bexley – The role of ‘an active integrator’ in developing integration in NHS services

The Accountable Lead Provider – Developing a powerful disruptive innovator to create integrated and accountable programmes of care

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Atlas of variation: case studies in MSK

1. The regional Right Care programme identified large variations in rates of un-cemented hip replacement across Lincolnshire. Local clinicians cited high levels of trauma as being the explanation, despite low levels of hip fractures shown in the Atlas of Variation. An in-depth review of activity was undertaken to explain variation against regional and national norms.
2. A review of waiting lists, originally intended to identify numbers of trauma-related cases, identified large scale non-compliance with prior approval processes especially in Spinal Surgery and for other musculoskeletal conditions. This involved undertaking review of procedures of limited clinical value and also reviewing the range of procedures already available in the community within primary care. This revealed the fact that much highly specialist orthopaedic time was being spent undertaking simple procedures easily performed in Primary Care settings; both closer to the patients' homes and at lower cost.



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Treating arthritis: right first time

The [National Institute for Health Research \(NIHR\)](#) Manchester Musculoskeletal Biomedical Research Unit (BRU) brings together leading researchers from [Central Manchester University Hospitals NHS Foundation Trust](#) and [The University of Manchester](#), to take promising early biomedical research and translate it into patient benefit.



Challenges

- Priority fatigue – MSK rarely appears in the top five
- LTCs in general still not politically a high priority
- Data and information gaps – e.g. on inequalities
- Lack of a focus for MSK public health activity
- Specialist public health workforce unfamiliar with MSK
- Modest research funding and capacity in MSK
- SR period likely to be tough for any new programme



Beyond the ARUK list?

- National leadership, co-ordination and advocacy
- Major public engagement on health and illness behaviour for MSK
- Improved surveys, data from routine sources with economic evaluation and consider registers
- Dedicated national and local MSK health promotion programmes – asset based, physical environment, occupational health, holistic
- MSK networks to work with commissioners, AHSNs and local providers of new models of care
- Health system and Implementation research to guide change



Public Health
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Importance of remaining optimistic ..

Amy: What are you doing?

The Doctor: Making a phone call.

Amy: Who to?

The Doctor: No one yet. It's on delay.

Amy: Right. Not getting it. Why exactly are you making a phone call?

The Doctor: Because, Amy, I am and always will be the optimist. The hoper of far-flung hopes and dreamer of improbable dreams. The wheels are in motion. Done.



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Thank you ...