

Scottish Burden of Disease (SBOD) study: a population health surveillance system for meaningful action

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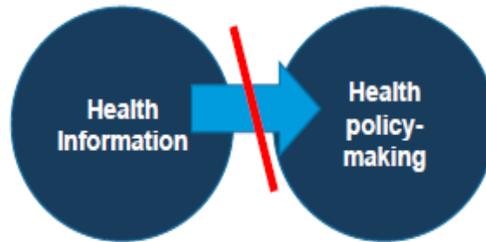
Burden of disease and knowledge transfer

Background

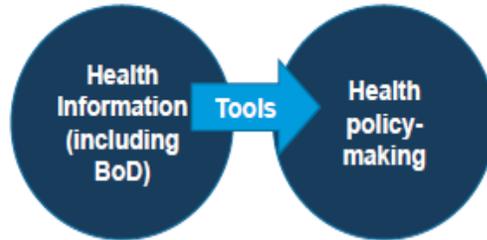
The availability of health information does not inherently lead to its increased use in policy- and decision-making/ evidence informed policy-making (EIP).

Various tools and mechanisms can help to increase the use of health information in policy development by making policy-makers appreciate, understand and incorporate health information into policy decisions.

The issue:



Solution:



Available tools and knowledge transfer mechanisms

- ➔ **Push** efforts: knowledge provided to users in appropriate formats
- ➔ **Facilitated Pull** efforts: enable policy makers to identify relevant information
- ➔ **Pull** efforts: draw relevant evidence into policy making
- ➔ **Linkage and exchange** efforts: aim to build relationships between health information producers and users

https://www.euro.who.int/_data/assets/pdf_file/0011/351947/HEN-synthesis-report-54.pdf



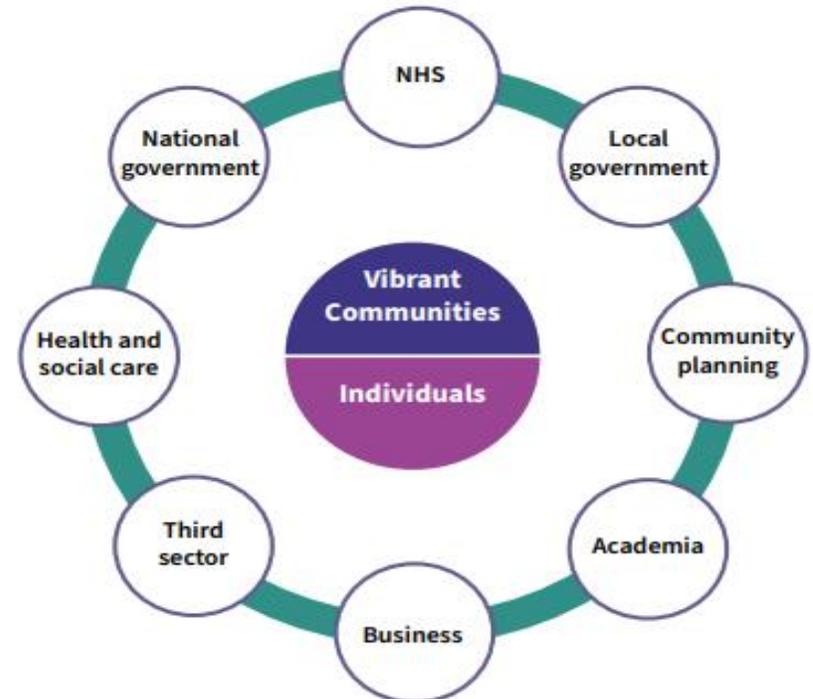
Scottish Burden of Disease Study and Public Health Scotland

Scottish Burden of Disease Study

Started 2012

Our mission!: To monitor the population-level contribution of how health conditions (diseases, injuries, infections), and risk factors, compromise our ability to live longer lives, in better health

Public Health Scotland's mission to support long-lasting good health and wellbeing for all our communities – especially the most disadvantaged



SBOD 'PUSH EFFORTS'

<https://www.scotpho.org.uk/comparative-health/burden-of-disease/overview/>

The screenshot displays the ScotPHO website interface. At the top left is the ScotPHO logo with the tagline 'Public Health Information for Scotland'. To its right is the text 'The Scottish Public Health Observatory' and its mission statement: 'Working to improve Scotland's health and reduce health inequalities'. A search bar is located in the top right corner. Below the header is a navigation menu with categories like Home, Behaviour, Clinical Risk Factors, Life Circumstances, Population Groups, Comparative Health, Population Dynamics, Health, Wellbeing and Disease, and Publications. The main content area is titled 'Burden of disease: overview' and includes a sub-section 'Why burden of disease?' which is circled in red. The page also features a sidebar with a 'Burden of Disease' menu and a grid of related topics.

ScotPHO
Public Health Information for Scotland

The Scottish Public Health Observatory
"Working to improve Scotland's health and reduce health inequalities"

Skip Navigation | Site Map | A to Z

Search... Search

Home | Behaviour | Clinical Risk Factors | Life Circumstances | Population Groups | Comparative Health | Population Dynamics | Health, Wellbeing and Disease | Publications

Home ▶ Comparative Health ▶ Burden of Disease ▶ Overview

Burden of Disease

- Overview
- Why burden of disease?
- National burden of disease
- Local area burden of disease
- COVID-19 burden of disease
- European Burden of Disease Network
- Archive

Coronavirus (COVID-19)

Excess Mortality in Scotland and Glasgow

Health Inequalities

Health Inequalities Tools

Measuring Inequalities

Profiles

Scotland and European HfA Database

Burden of disease: overview

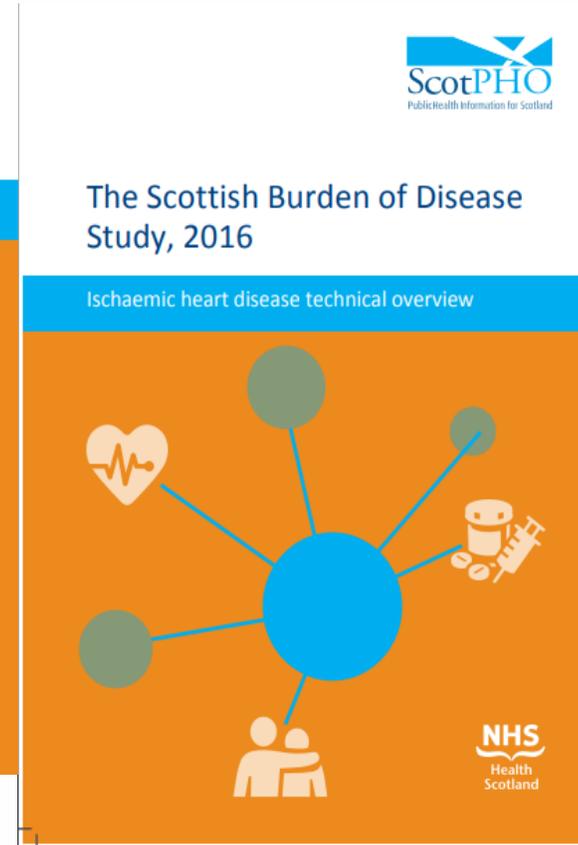
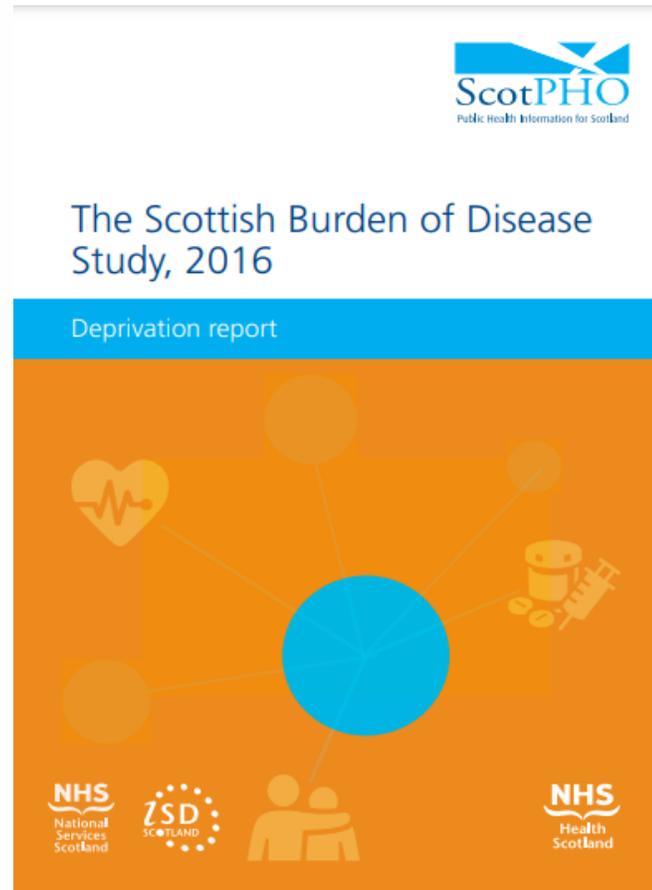
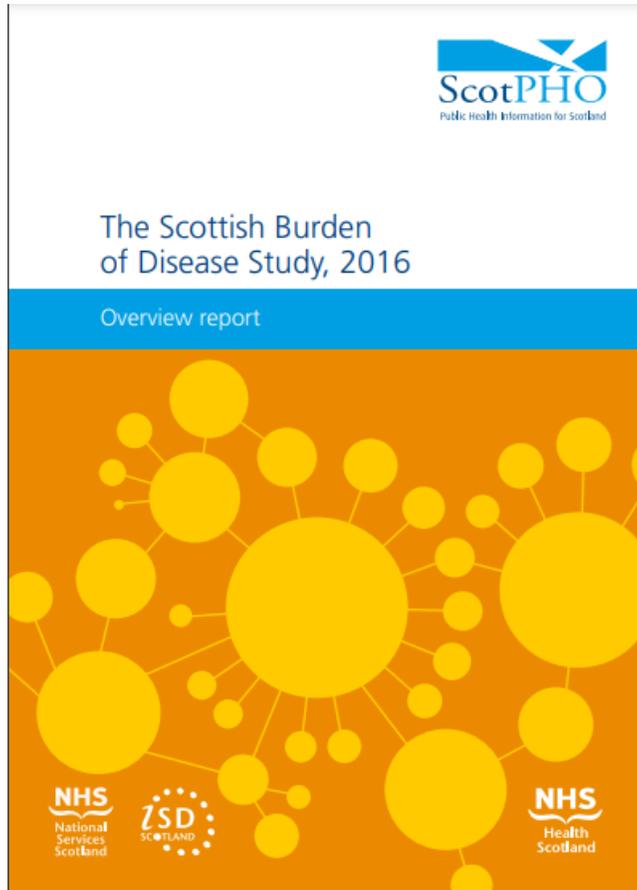
The Scottish Burden of Disease (SBoD) study is a national, and local, population health surveillance system which monitors how diseases, injuries and risk factors prevent the Scottish population from living longer lives in better health.

SBoD standardises estimates of ill-health and early death in a composite measure called Disability-Adjusted Life Years (DALYs), also referred to as health loss. It does this by framing ill-health and premature mortality in terms of health loss as a function of time. Further information on SBoD methodology can be found in our ["Why burden of disease?"](#) section.

Why burden of disease? Insights into the Scottish Burden of Disease methodology	National burden of disease and inequalities What is impacting on the Scottish population's ability to live longer lives in better health?
Sub-national burden of disease - data visualisation Explore the impact of diseases and injuries in sub-national areas	Sub-national area burden of disease - reports What is impacting local populations from living longer lives in better health?
COVID-19 burden of disease Explore our work on the direct and indirect impact of COVID-19 infection	European burden of disease network Learn about our work to support the integration and development of national burden of disease studies



SBOD 'PUSH EFFORTS'

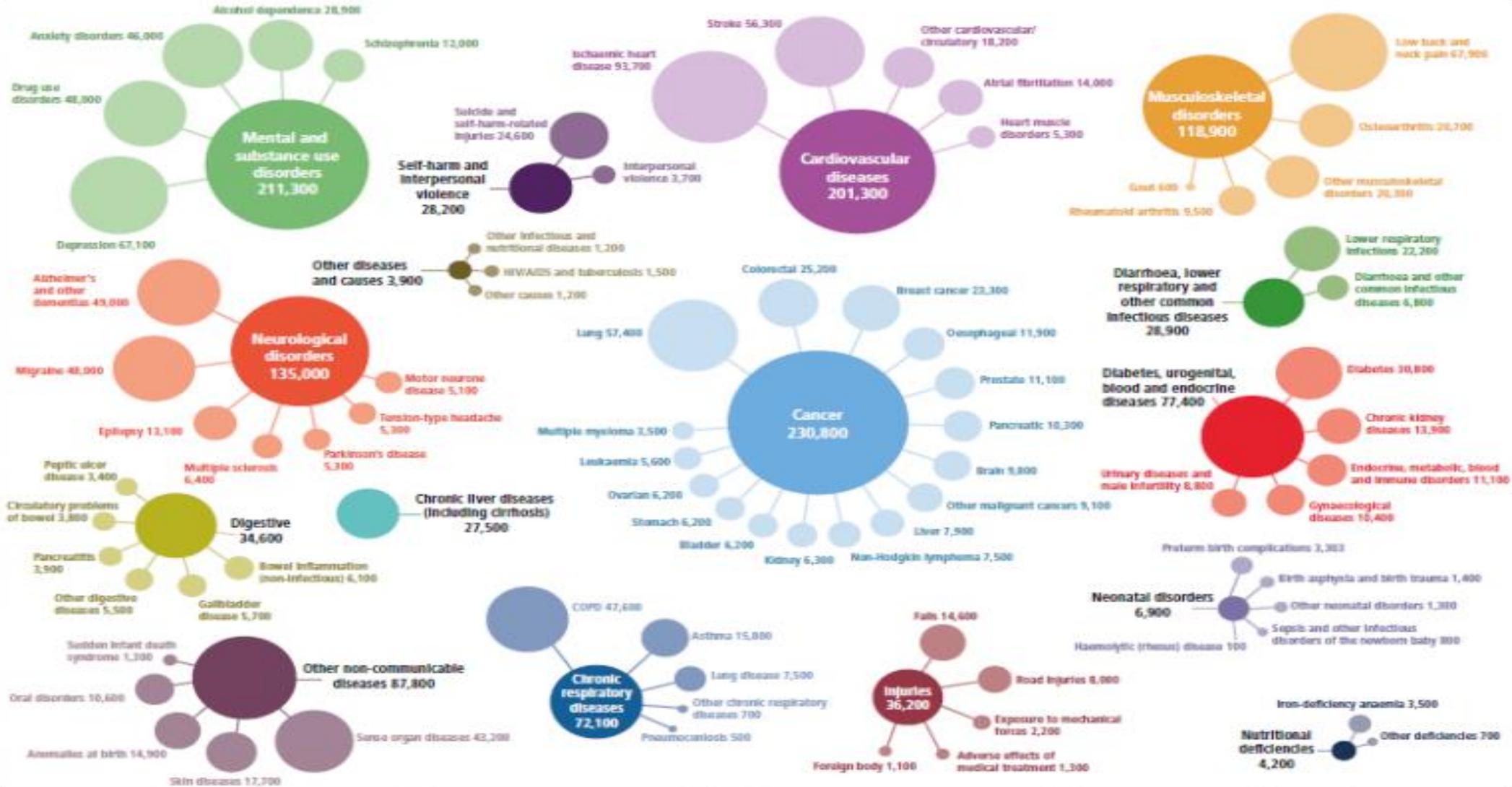


- Ischaemic heart disease
- Neck and lower back pain
- Depression
- Lung cancer
- Stroke)
- Alzheimer's and other dementias
- Migraine(
- Drug use disorders
- COPD
- Anxiety disorders
- Sense organ diseases
- Diabetes
- Alcohol dependence
- Chronic liver diseases
- Colorectal cancer
- Suicide/self-harm related injuries
- Breast cancer
- Lower respiratory infections
- Osteoarthritis
- Other musculoskeletal disorders
- Other cardiovascular/circulatory
- Skin diseases
- Asthma
- Anomalies present at birth
- Falls



SBOD 'PUSH EFFORTS'

Burden of disease in Scotland, 2016



Note: The small bubbles show only the top 5 illnesses/diseases unless 80-90% of the total DALY, or a high-profile illness, was not captured. * DALY rounded to the nearest 100.

SBOD 'Push efforts': Infographics and synergies with national and local public health strategies

- Burden attributable to differences in life circumstances



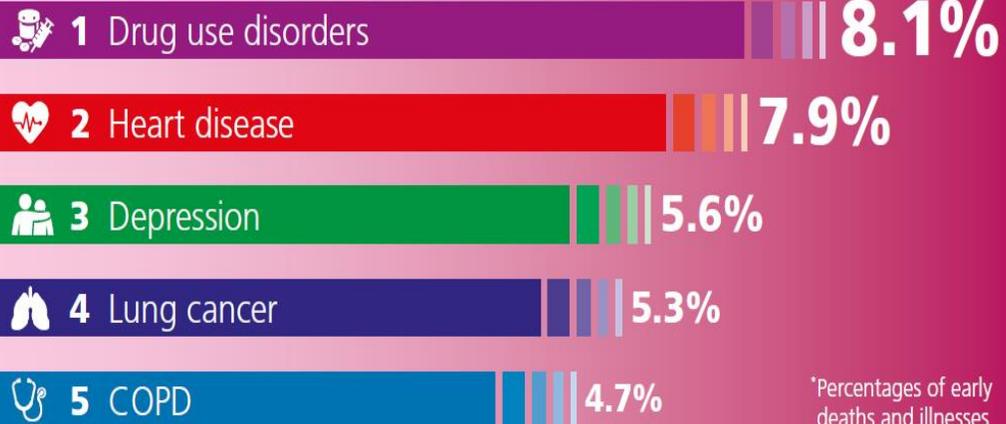
- Just seven diseases account for over half of socio-economic inequalities in burden in Scotland



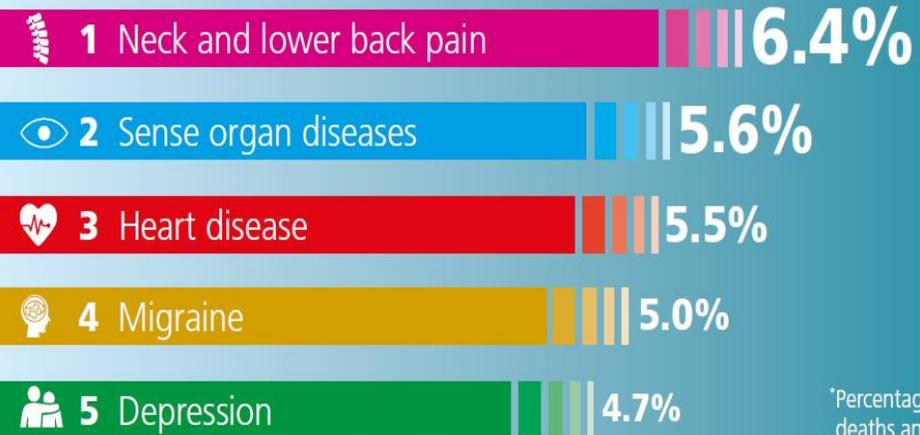
Push efforts: Infographics and synergies with national and local public health strategies

- Different areas have different priorities

Leading causes of ill health or early death in our poorest areas*



Leading causes of ill health or early death in our wealthiest areas*



Pull efforts: Data Visualisations

Scottish Burden of Disease

Sub-national data visualisation

Select year

2019

Select map area

NHS Board

Local authority

Select cause of disease/injury:

All causes of disease and injury

Please select measure:

DALY rate

Select age group (years)

All ages

Please select sex

Both sexes

Introduction

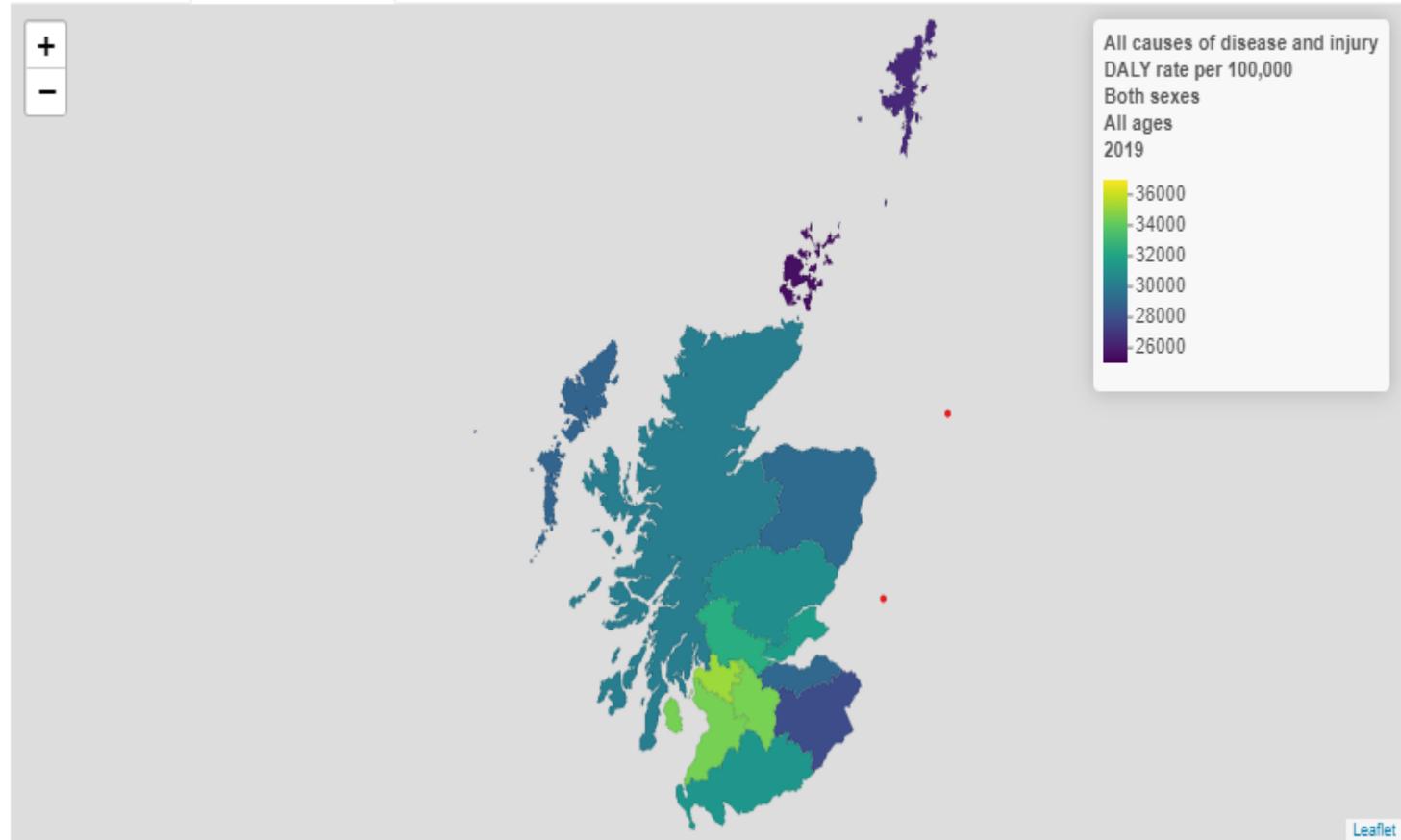
Local area maps

Age-Sex

Cause and local area

Time series

Technical



<https://scotland.shinyapps.io/phs-local-trends-scottish-burden-diseases/>



Pull efforts: Data Visualisations

Scottish Burden of Disease

Sub-national data visualisation

[Introduction](#) [Local area maps](#) [Age-Sex](#) **[Cause and local area](#)** [Time series](#) [Technical](#)

Select year

2019

Please select area

Local authority

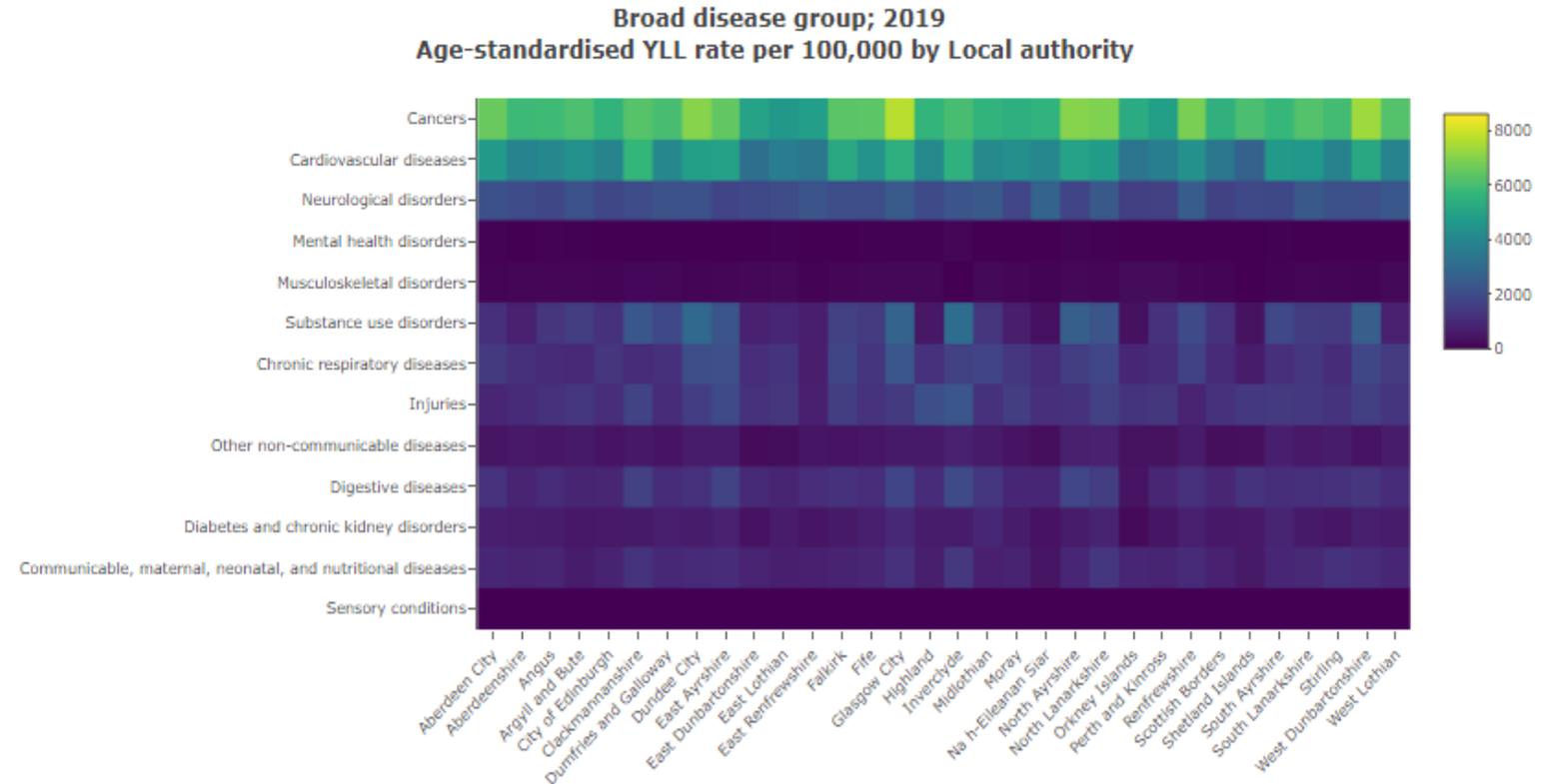
Please select

Broad disease group

Individual causes of disease

Please select measure:

YLL rate



<https://scotland.shinyapps.io/phs-local-trends-scottish-burden-diseases/>

SBoD: integrated approaches

Organisation internal and external networks

- Working with local areas in Scotland through community health and social care partnerships to use SBOD data information to inform needs assessment, health planning and workforce decisions.



SBoD: integrated approaches - engagement with voluntary sector

Scottish Council of Voluntary Organisations

Seminar involving representatives from 20 voluntary organisations across Scotland

“ It would be good to have more infographics and to make the study more accessible”

Voluntary Health Scotland

- Burden of disease blog

Targeted e.g.

- Versus Arthritis
- Bobath (Cerebral Palsy charity)



The screenshot shows the website of Voluntary Health Scotland (VHS) with the tagline 'One Goal Many Voices Unlimited Potential'. The main content is a blog post from Public Health Scotland titled 'Grant's Blog: Years of healthy life lost in Scotland's communities', dated September 20, 2021. The blog text discusses the Scottish Burden of Disease (SBOD) study and includes an infographic. The infographic is a bar chart showing 'Years lost to ill-health and early death' across the life course from birth to the end of lifespan. It features a yellow bar for 'Years lost to ill-health and early death' and a dark blue bar for 'Life expectancy (at birth)'. The chart is annotated with text boxes explaining the components of the study.

Public Health Scotland

Grant's Blog: Years of healthy life lost in Scotland's communities

SEPTEMBER 20, 2021

At Public Health Scotland (PHS) we want to see everyone live long and healthy lives. To work towards achieving this, we need a wide-ranging picture of what causes people in Scotland to die earlier than expected and what harms them – including, how this differs across our communities. We also need to know how these factors have changed, such as due to the recent COVID-19 pandemic or through population ageing, and how they continue to evolve over time. Our Scottish Burden of Disease (SBOD) study was set up to monitor changes to population health, by taking into account differences in harm from causes of disease, injury and death across the entire life course from birth to death (infographic below).



This work underpins the public health surveillance role of PHS and helps us to show where improvements are needed at local and national levels to reduce health inequalities and enable people to live healthier, for longer. Through SBOD, we're able to scale the contribution of health loss from over 100 diseases, injuries and risk factors, alongside each other. By doing this, we can provide insights into where health improvements are required and where

<https://vhscotland.org.uk/event/vhs-annual-conference-2021/>



Measuring 'success' of KT strategies: National



SBOD data used widely to inform and support national and local health policy and planning, for example:

- [Scottish Government Public Health Priorities for Scotland](#)
- [Chief Medical Officer Annual Report for Scotland](#)
- [Audit Scotland](#) (Scottish parliament's watchdog for ensuring propriety and value for money in the spending of public funds)
- [Registrar General's Annual report](#) (to the Scottish Parliament)
- [Scottish Government mental health strategy](#)
- [Scottish Government neurological conditions national action plan](#)
- [Motion in Scottish Parliament in response to SBOD findings](#)
- [Petition into full review of mental health service provision](#)
- [Drug Deaths Taskforce](#)



Measuring 'success' of KT strategies: Local



West Dunbartonshire
Health & Social Care Partnership
Strategic Needs Assessment
2018

Adults & Older People

Summary

21st June 2018

For further information contact

WDHSCP Health Improvement Team

wdhscp@ggc.scot.nhs.uk

01389 776990

Inverclyde
Health and Social Care
Partnership

Strategic Needs
Assessment

Version 5.3 08/01/2019

- Pilot projects
 - West Dunbartonshire HSCP
 - Clyde Gateway
 - NHS Greater Glasgow & Clyde
 - NHS Lanarkshire LTC project
 - Fife ADP
- Local needs assessments
- Workforce planning



SBoD reflections on implementing BoD KT

- Be clear at outset what the aim and objectives are of your BoD study
- At outset, identify key stakeholders and involve them from outset e.g. through steering or advisory group
- Country size/'agency location is important factor in developing effective KT approaches
- It takes time to embed BoD into policy and planning thinking
 - Cultural effects model i.e. 'drip drip' effect
- Make sure you have someone in team (or access too) that is good at 'visualising' BoD data or if you have access to a Comms. or Press team, use them...
- Stay clear of BoD technical terminology to ease KT
- **Join the European Burden of Disease Network!** (<https://www.burden-eu.net/>)

