

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

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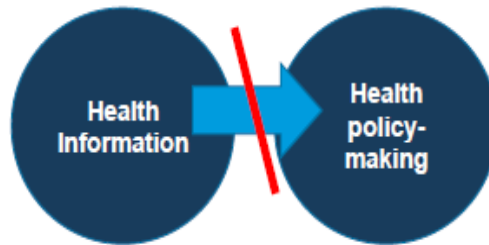
# Burden of disease and knowledge transfer

## Background

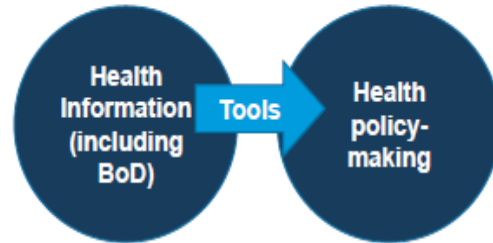
The availability of health information does not inherently lead to its increased use in policy- and decision-making/ evidence informed policy-making (EIP).

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](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



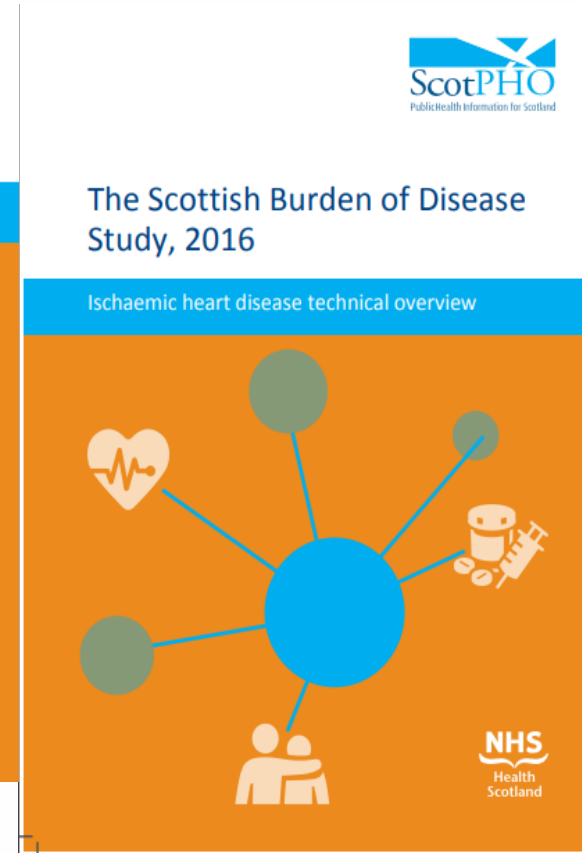
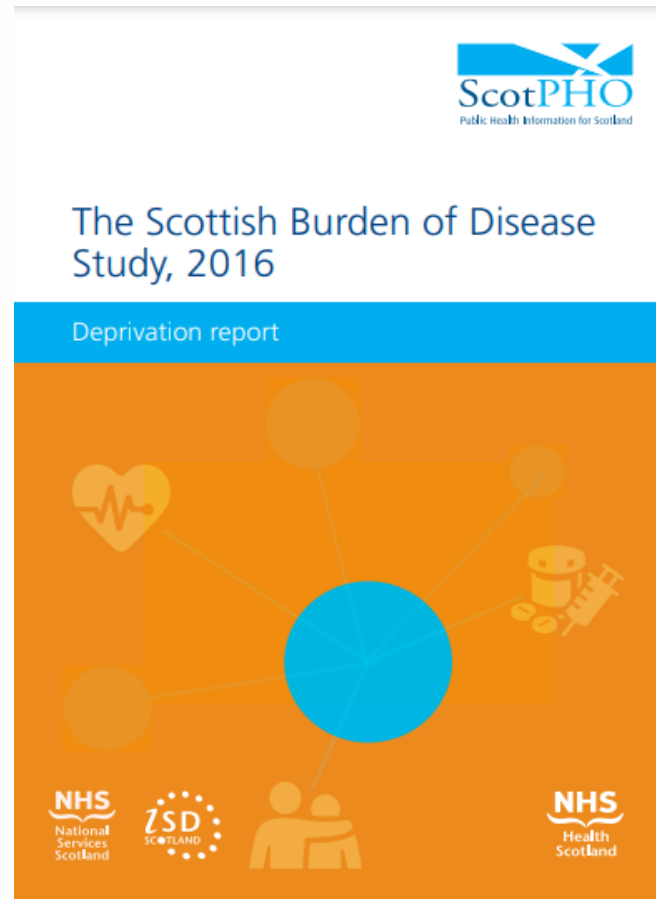
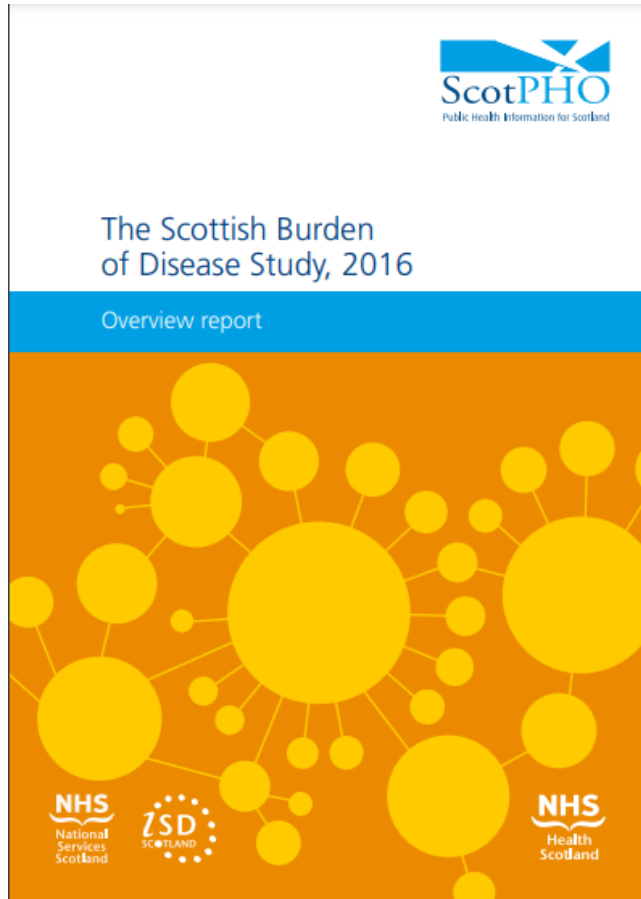
# SBOD 'PUSH EFFORTS'

<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 the 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-menu on the left with options like 'Overview', 'Why burden of disease?', 'National burden of disease', 'Local area burden of disease', 'COVID-19 burden of disease', 'European Burden of Disease Network', and 'Archive'. The main text describes the SBOD study as a national and local population health surveillance system. A red circle highlights the 'Why burden of disease?' section, which contains the link 'Insights into the Scottish Burden of Disease methodology'. Other sections include 'National burden of disease and inequalities', 'Sub-national burden of disease - data visualisation', 'COVID-19 burden of disease', 'Sub-national area burden of disease - reports', and 'European burden of disease network'.



# SBOD 'PUSH EFFORTS'



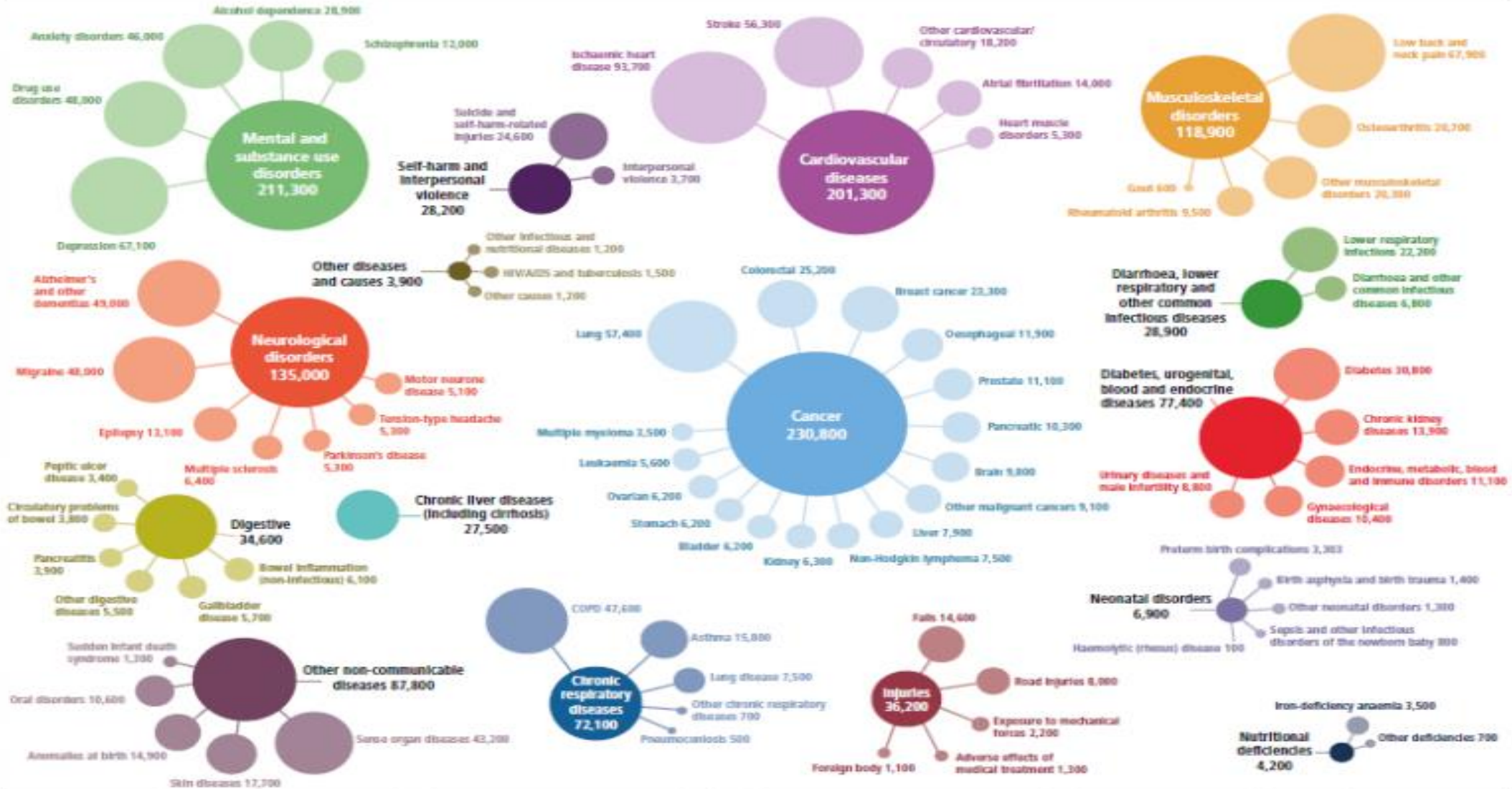
- Ischaemic heart disease
- Neck and lower back pain
- Depression
- Lung cancer
- Stroke)
- Alzheimer's and other dementias
- Migraine(
- Drug use disorders
- COPD
- Anxiety disorders
- Sense organ diseases
- Diabetes
- Alcohol dependence
- Chronic liver diseases
- Colorectal cancer
- Suicide/self-harm 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



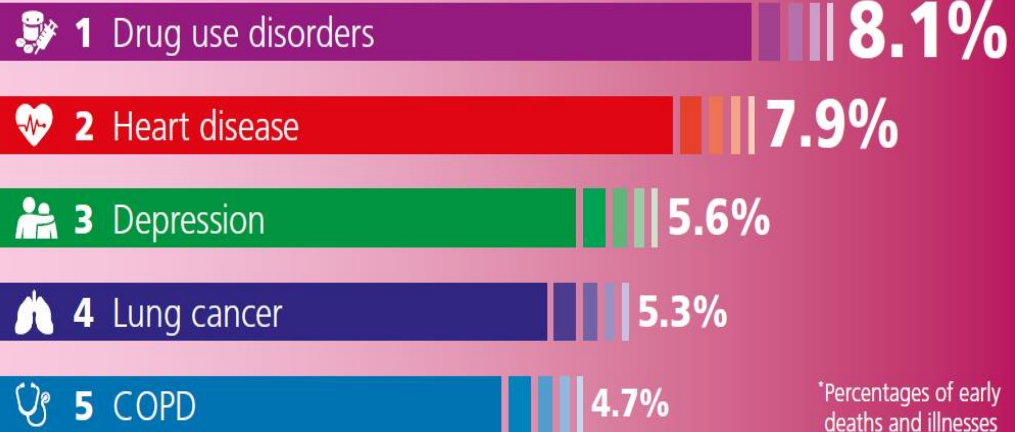
- Just seven diseases account for over half of socio-economic inequalities in burden in Scotland



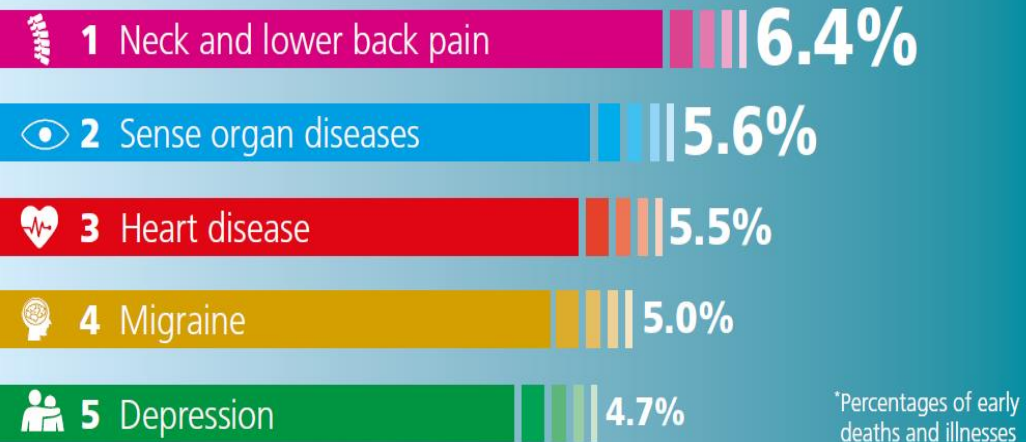
# Push efforts: Infographics and synergies with national and local public health strategies

- 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

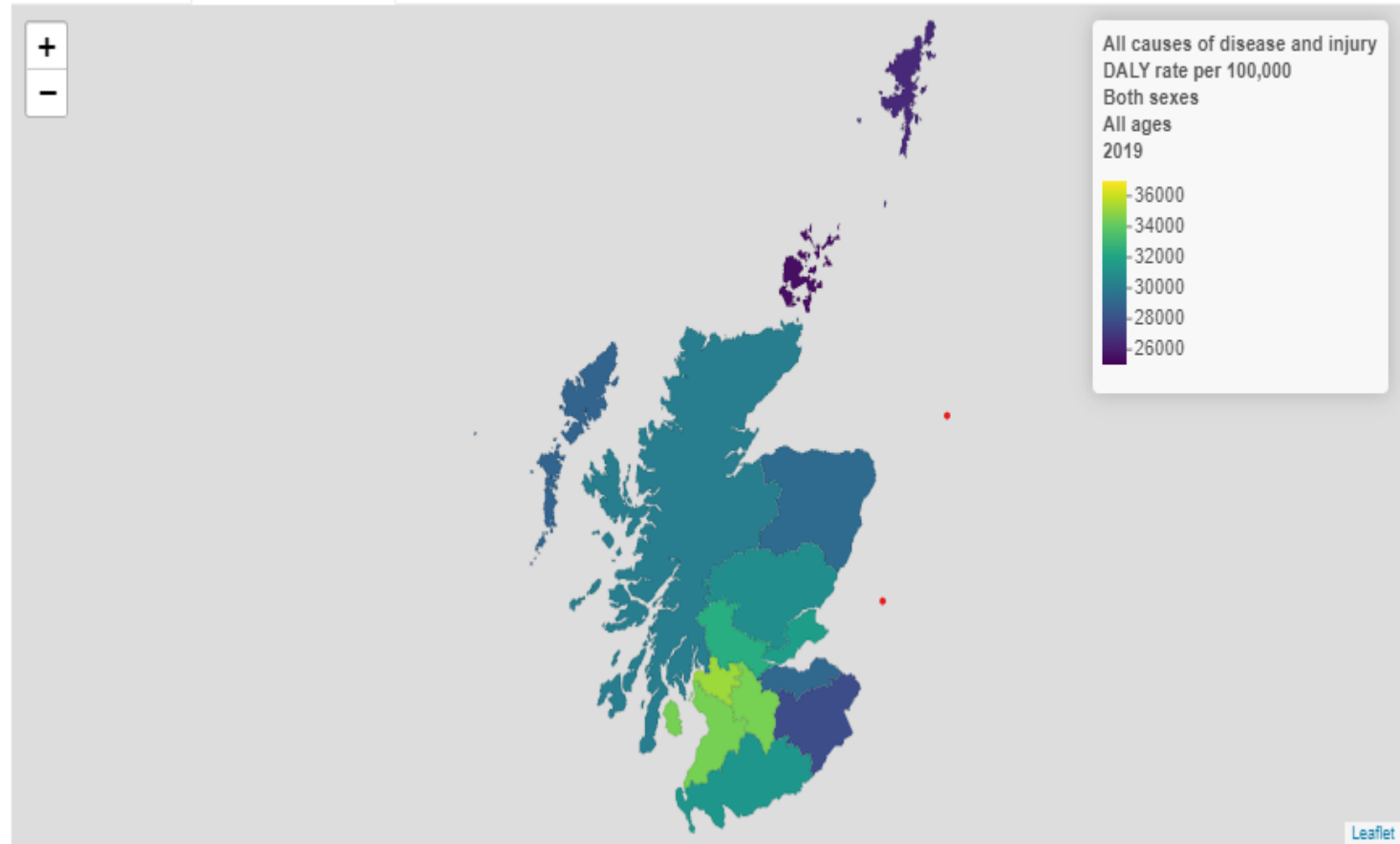
Local area maps

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

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Select year

2019

Please select area

Local authority

Please select

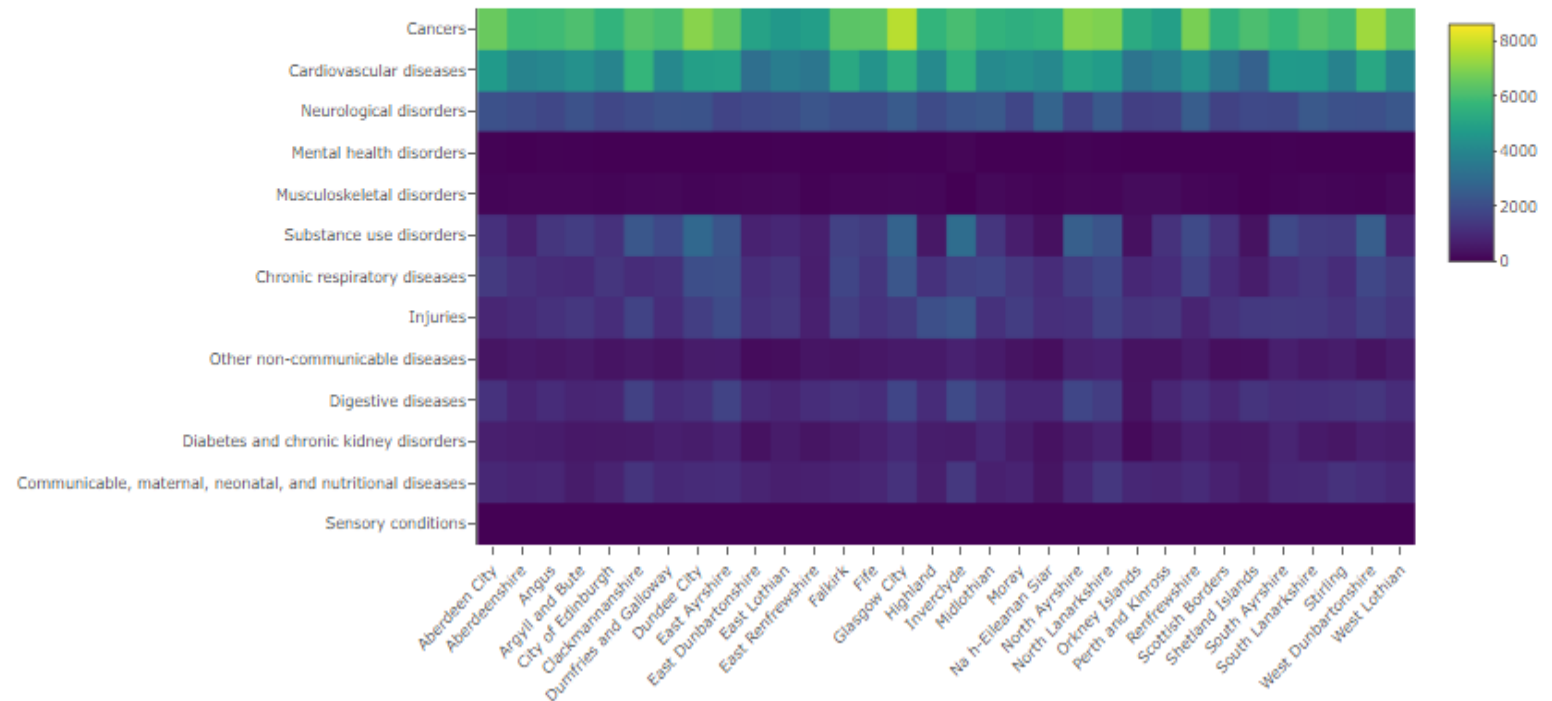
Broad disease group

Individual causes of disease

Please select measure:

YLL rate

Broad disease group; 2019  
Age-standardised YLL rate per 100,000 by Local authority



<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 (PHS) titled 'Grant's Blog: Years of healthy life lost in Scotland's communities', dated September 20, 2021. The blog post discusses the Scottish Burden of Disease (SBOD) study and includes an infographic. The infographic shows a bar chart of 'Years lost to ill-health and early death' across the life course from birth to the end of lifespan. It highlights that the largest loss of healthy life occurs in the final years of life, with a significant portion of this loss being due to injuries and violence. The infographic also notes that the loss of healthy life is not evenly distributed across the population, with some groups experiencing significantly more loss than others.

<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

21<sup>st</sup> June 2018

For further information contact

WDHSCP Health Improvement Team

[wdhscp@ggc.scot.nhs.uk](mailto: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/>)

