

Scottish Burden of Disease (SBOD) study

Inequalities in population health loss by multiple deprivation: COVID-19 and pre-pandemic all-cause disability-adjusted life years (DALYs) in Scotland

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Study aims and methodology

Aim

Estimate overall, and inequalities, in COVID-19 population health loss

Communicating the scale of pre-pandemic inequalities combined across all causes by scaling against COVID-19 population health loss

How

Use disability-adjusted life years (DALYs) to comprehensively incorporate the full impact of ill-health and premature mortality

Internationally agreed consensus method for COVID-19 DALYs (burden-eu) – using Scottish data inputs – with pre-pandemic (2018) estimates sourced from the Scottish Burden of Disease study

Inequality measured – absolute/relative difference; relative/slope index of inequality; population attributable risk – using the (area-based) Scottish Index of Multiple Deprivation



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Inequalities in COVID-19 infection DALYs

AD

COVID-19 DALYs rate was 2.6 times higher in Scotland's most, compared to least, deprived areas

RII

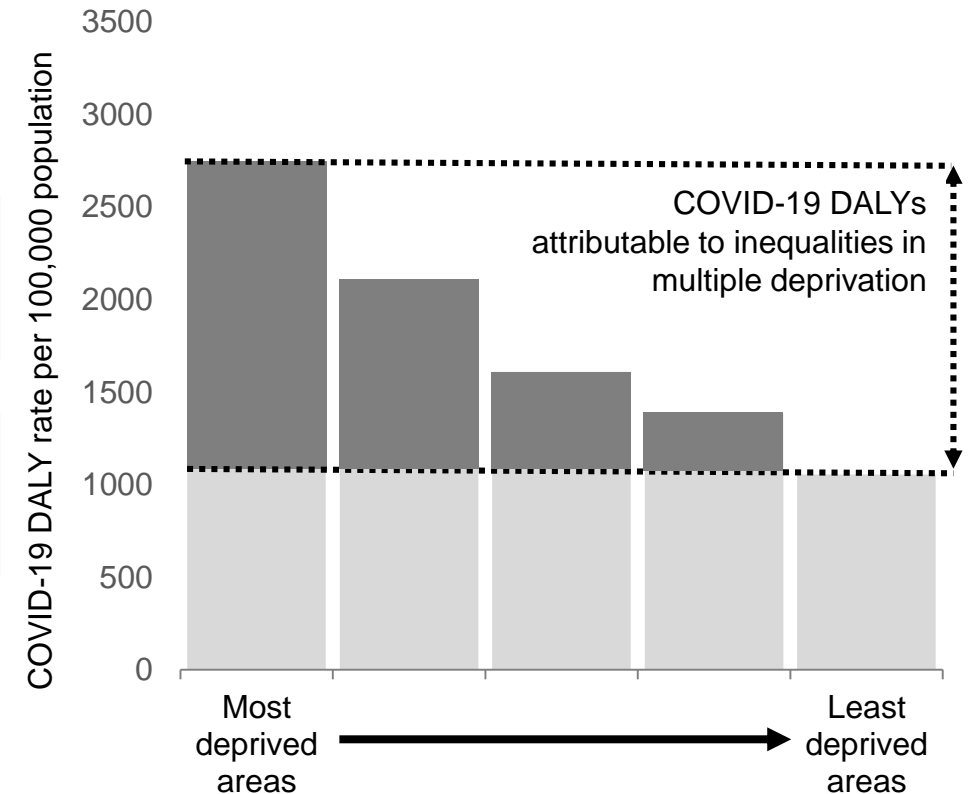
COVID-19 DALYs rate in Scotland's most deprived areas was 58% higher than the mean rate (RII = 1.16)

SII

SII = 2,048 to 2,289 per 100k population

PAF

40% of COVID-19 DALYs were attributable to inequalities in multiple deprivation



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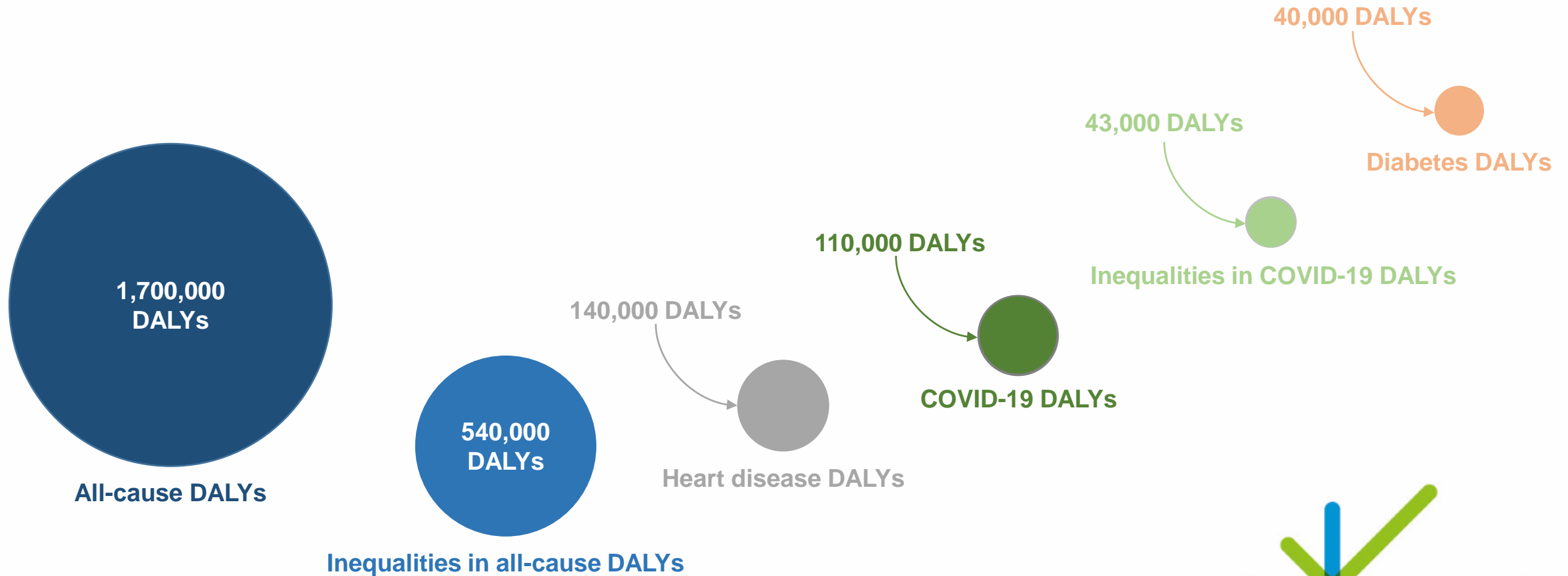


Scaling overall, and inequalities in, COVID-19 DALYs

COVID-19 infection was a leading cause of DALYs in 2020 – second only to heart disease

40% of COVID-19 infection DALYs were attributable to inequalities in multiple deprivation – similar to annual diabetes DALYs

Pre-pandemic all-cause DALYs attributable to inequalities in multiple deprivation were approximately five times higher than COVID-19 infection DALYs



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Putting these findings into context

Population health impact of COVID-19 infection in Scotland was not shared equally

High proportion of DALYs are likely to be attributable to pre-existing exposure to metabolic, and behavioural risk factors – where increased exposure is driven by increasing deprivation

Health loss due to pre-existing inequalities is >5 times higher than the 2020 health loss due to COVID-19 infection – communicating this against COVID-19 may be an effective means to retain, and improve, public and policy empathy and engagement over tackling inequality

Implementing effective policy interventions (including continued vaccination) to improve overall public health and reduce health inequalities must be at the forefront of recovery planning

Pursuing this will not only improve people's lives, but will ensure increased preparedness against any direct or indirect harms from future disasters, or epidemics



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