

The Northumbria Local Health Index

What we did

The Health Index was developed by the Office for National Statistics (ONS) with an initial experimental version in December 2020 and updated version in March 2022. The Health Index was first recommended by the former Chief Medical Officer, Professor Dame Sally Davies in her 2018 annual report, [Health 2040 - Better Health Within Reach](#). The Health Index aims to produce a more holistic measure of health, recognising health as an asset to the nation and communities. It is a composite measure of 56 indicators across three over-arching domains – healthy people which covers health outcomes, healthy lives which includes behavioural risk factors and healthy places which captures social and wider determinants of health. The composite index tracks the stock of health and can be disaggregated into component indicators in order to identify drivers of variation and inequalities in health and health outcomes across England. The ONS national Health Index is published at lower tier local authority level which each covers approximately 250,000 people.

As a healthcare provider, Northumbria Healthcare Trust recognises that health, and the drivers of health, vary across our population which is why we have partnered with the ONS to develop and publish an experimental version of the Local Health Index. The aim is to further develop the national tool so that the diverse range of health indicators can be applied to smaller geographical areas through a more, lower super output area (LSOA) level (typically covering 1,500 residents). Our 'Northumbria' population across Northumberland and North Tyneside local authorities comprises 328 LSOAs. The current release is experimental, identifying several challenges with using very small area statistics for population health measures and aims to demonstrate the art of the possible as a data framework to track and address small area population health and inequalities. All methodologies have leveraged the ONS approaches and methods, which can be found [here](#). We have used the same data source for the Local Health Index at LSOA level as the ONS have at local authority level wherever possible but in 12 (out of 56 indicators) instances we have had to adopt substitutes. Our full methodology is outlined here.

What we found

Despite being an experimental version there are two major groups of findings from the Local Health Index.

First, the Northumbria Local Health Index demonstrates the feasibility of integrating a diverse set of datasets from across the health system into a population health framework to enable identification of inequalities in local health and respective contributors to that. There are several challenges in gathering, curating and integrating datasets of such varied indicators which has required close collaboration across local partners including local authority analytics teams while pragmatic statistical approaches are required to manage imperfect data with varying levels of geographic granularity. We outlined the various limitations in the methods document

but this highlights the potential to develop health, rather than illness, composite metrics that could track the public’s health and key drivers of inequalities across local populations and become a framework for adoption of place-based health systems such as Integrated Care Boards.

Second, the experimental Local Health Index highlights substantial inequalities in the stock of health across the Northumbria population and the drivers of inequalities vary substantially across LSOAs. The Health Index was set to 100 for the Northumbria average for 2019 yet there is a vast range of composite scores, from 107.6 and 107.1 in areas such as Whitley Sands and Darras Hall, to 93.3 and 91.7 in areas such as Wallsend West and Blyth Cowpen. Those differences persisted and were even larger when looking across the three domains (Figure 1) with the overall ranges being 102.7 to 83.6, 117.7 to 92.6 and 109.3 to 90.4 respectively across the healthy people, healthy lives and healthy places domains. When the composite Health Index and domains are broken down into the 56 indicators the richness of the varied data demonstrates the complex and multi-faceted contributors to the overall inequalities in health within and across populations (Figure 2). Overall, we found that the Health Index score of a LSOA area was generally correlated with the deprivation score of that area with areas of greater deprivation generally having lower Health Index Scores (Figure 3).

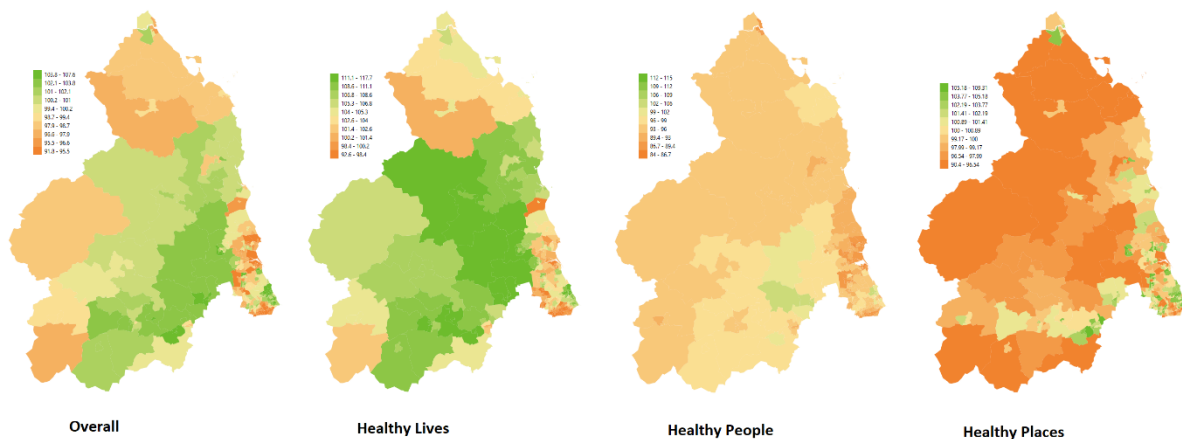


Figure 1. Local Health Index scores for the Northumbria population and for each of the three domains.

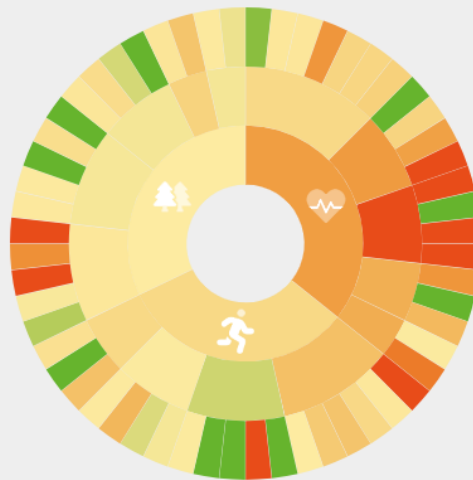
Search

Northumberland 023D

Blyth Town

in comparison to

Northumbria



Here you can see the score for Northumberland 023D in all areas of the index. Areas shown in green are above the Northumbria average, areas in red are below the Northumbria average. Click on any area to see more about it.

Figure 2. Still of the [Northumbria Local Health Index Explorer](#) showing the 56 indicators contributing to each of the three domains that comprise the Health Index. Indicators in red are less healthy than the Northumbria average while indicators in green are more healthy than the Northumbria average.

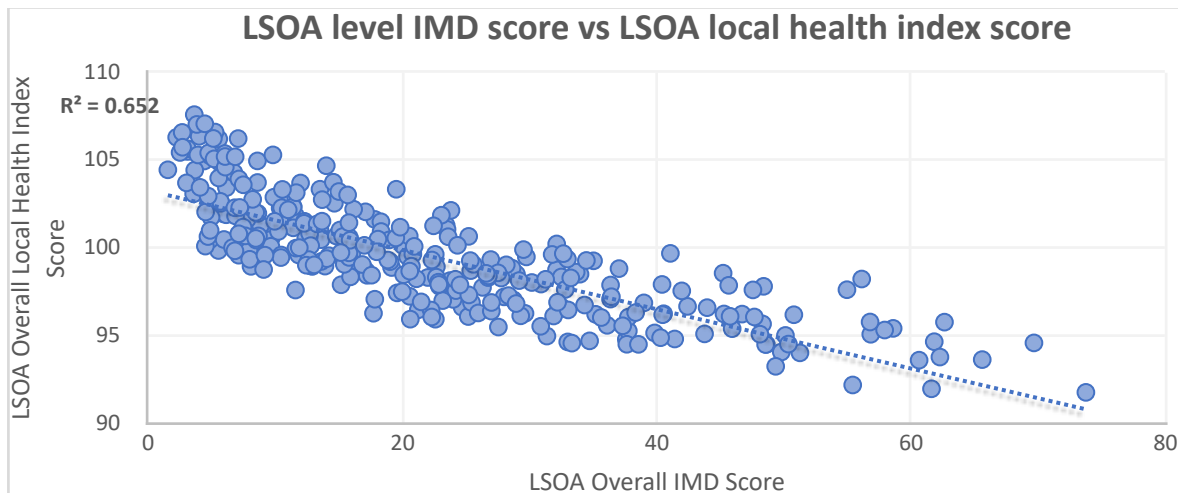


Figure 3. Correlation between overall Health Index score of each LSOA and their Index of Multiple Deprivation Score

What next

The Northumbria Local Health Index shows the potential for the Health Index to become a ‘small area’ health tool for planning health and healthcare provision. The analysis has created a deeper understanding of how health and the drivers of health differ between areas within the local authorities of Northumberland and North Tyneside and provides a data driven framework that has the potential to enable effective and holistic addressing of inequalities in health in a targeted and collaborative way going forward. With data drilling down to neighbourhood level, improvements can be planned for those areas and communities where they are needed most, not only increasing impact but also value for money.

This is however an experimental version with work required both in identifying more robust data and methods to overcome the challenges of small area data. We plan to consult on how the Local Health Index could be used for local health planning and identifying priorities for improving population health and reducing inequalities across our local partners and stakeholders including identifying key challenges that must be addressed. We then plan to work with the ONS to develop the Local Health Index further into a useable framework that addresses some of the challenges we have identified.

We look forward to hearing your views and you can contact us [here](#).

The Local Health Index Team

The Northumbria Local Health Index has been a collaborative effort in partnership with the Office for National Statistics across a range of collaborators including:

Northumbria Healthcare NHS Foundation Trust: Kara Baines, Christopher Wilcockson, Dr Jonny Pearson-Stuttard and Lisa Nevens

North Tyneside Council: Neil Tate & Pam Colby

Northumberland County Council: Julian Osei-Bonsu, Pamela Forster