

Indicator specification:

PLDR collection of population health indicators

Small Area Frailty Index (SAFI_41_01)



Version: 1.00

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Overview

Indicator title

Small Area Frailty Index (SAFI_41_01).

Indicator family name

Place-based Longitudinal Data Resource.

Summary

The Small Area Frailty Index (SAFI) is a population-level measure of frailty, designed to capture the proportion of frail individuals within small geographic areas, such as Middle Super Output Areas (MSOAs). SAFI is available for each year (post 2014), allowing longitudinal analysis of frailty trends.

Technical description

The creation of the Small Area Frailty Index (SAFI) using the Electronic Frailty Index (eFI) framework is based on a cumulative deficit model, which assesses frailty by accounting for the accumulation of various health deficits. First, data is extracted from the Hospital Episode Statistics (HES) database for patients aged 65 and older, including the past four consecutive years of hospital admissions for each individual to ensure comprehensive coverage.

Next, the frailty is calculated for each patient by identifying and flagging 32 health deficits from their recorded hospital admissions. These deficits span chronic diseases, functional impairments, and social vulnerabilities. The Housebound and Polypharmacy deficits have been excluded because they are not available in HES data and 2 deficits (Hypertension/syncope and Requirement for care) have been combined to existing deficits (Hypertension and Mobility & transfer problems) respectively. The frailty score is computed as the sum of these deficits divided by 32, representing the maximum possible number of deficits.

Once the frailty scores are calculated, they are aggregated at the Middle Super Output Area (MSOA) level to provide a population-based measure of frailty. This aggregation generates the overall SAFI, which reflects the proportion of patients with moderate to severe frailty (eFI > 0.24) across all deficits. Finally, the entire process is repeated annually (post 2014) to enable the analysis of temporal trends in frailty across community levels.

Unique Identifier

SAMHI_21_01

Presentation

Breakdowns

Time period

Yearly data: 2014 – 2022

Demographic

Person

Geographic

Middle Super Output Areas (MSOA) level in England

Disclosure control

This indicator has been produced using safeguarded HES datasets (Data Share Agreement: DARS-NIC-16656-D9B5T).

Output: SAFI_65plus_mod_sev_<YEAR>_MSOA.csv

Column name	Description
msoa11	MSOA 2011 code
efi_num	Patients with moderate to severe frailty (6+ deficits)
efi_pop	Patients with at least 1 deficit
mod_sev_pct	Proportion of moderate to severe frail patients

Revision history

Version	Date	Summary of changes
1.00	Jan 2025	First release