

# Indicator specification:

## PLDR collection of population health indicators

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Experimental Measures – Small Area Mental Health Index (SAMHI\_21\_01)



Version: 1.00

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## Overview

### Indicator title

Experimental Measures – Small Area Mental Health Index (SAMHI\_21\_01).

### Indicator family name

Experimental Measures.

### Summary

The SAMHI is a composite annual measure of population mental health for each Lower Super Output Area (LSOA) in England. The SAMHI combines data on mental health from multiple sources (NHS-Mental health related hospital attendances, GP Patient Survey – Q34 Best describe your own health state today, Prescribing data – Antidepressants, QOF - depression, and DWP - Incapacity benefit and Employment support allowance for mental illness) into a single index.

### Technical description

Each indicator was individually standardised by ranking LSOAs from best to worst and its direction of association to mental health and then transformed to the standard normal distribution by using the Rankit method which is a rank-based inverse normal transformation. Maximum likelihood factor analysis is used as a method for combining indicators (by finding appropriate weights) into a single score based on the inter-correlations between all the indicators.

### Unique Identifier

SAMHI\_21\_01

## Construction

This section provides numerator & denominator details and sources for each of the 5 indicators included in the SAMHI Index. This index has been based on data for the period of 2011 - 2017 at the LSOA level. For the missing GP Patient Survey indicator in 2011, measures have been imputed using the measures of period 2012-2017.

### Data sources

- Mental health related hospital attendances

Numerator: Count of all emergency and elective admissions X60\*–X84\*, Y10\*–Y34\*, F00–F99, E244, F10, G312, G621, G721, I426, K292, K70, K852, K860, Q860, R780, T510, T511, T519, X45, X65, Y15, Y90, Y91 but excluding Y33.9\*, and Y87\*. PLUS: A count of all A&E

attendances for self-harm - where AEPATGROUP==30 and DIAG\_NN: 141-144, 35, 37  
(Safeguarded data provided by NHS digital).

Denominator: Mid-year population estimates for England, provided by the Office for National Statistics (ONS). Population estimates are released in the summer following year end.

- GPPS- Q34 Best describe your own health state today

Numerator: Count of people reporting moderate/severe/extreme anxiety or depression (GP Patient Survey data from here: [www.gp-patient.co.uk](http://www.gp-patient.co.uk)).

Denominator: Total number of registered patients per LSOA and year, provided by NHS Digital.

- Prescribing data – Antidepressants

Numerator: The number of antidepressants that are prescribed on a quarterly basis by all practices in England at the LSOA level (NHS Digital, longitudinal source: PLDR, <https://pldr.org>).

Denominator: Mid-year population estimates for England, provided by the Office for National Statistics (ONS). Population estimates are released in the summer following year end.

- QOF - Depression

Numerator: Estimated number of patients with a diagnosis of depression (QOF data from here: [www.gp-patient.co.uk](http://www.gp-patient.co.uk)).

Denominator: Total number of registered patients per LSOA and year, provided by NHS Digital.

- DWP - Incapacity benefit and Employment support allowance for mental illness

Numerator: Estimated number of people claiming Incapacity benefit and Employment support allowance for mental illness.

Denominator: Mid-year population estimates for England, provided by the Office for National Statistics (ONS). Estimated total number of people aged 16–64 years.

## Presentation

### Breakdowns

#### Time period

Yearly data: 2011 – 2017

#### Demographic

Person

## Geographic

Lower Super Output Areas (LSOA) level in England

### Disclosure control

This indicator has been produced using a combination of safeguarded and publicly available datasets.

### Output: samhi\_21\_01\_2011\_2017\_LSOA.csv

Column name	Description
lsoa11	LSOA 2011 code
samhi_index.2011	Index scores (2011)
samhi_dec.2011	Deciles (2011)
samhi_index.2012	Index scores (2012)
samhi_dec.2012	Deciles (2012)
samhi_index.2013	Index scores (2013)
samhi_dec.2013	Deciles (2013)
samhi_index.2014	Index scores (2014)
samhi_dec.2014	Deciles (2014)
samhi_index.2015	Index scores (2015)
samhi_dec.2015	Deciles (2015)
samhi_index.2016	Index scores (2016)
samhi_dec.2016	Deciles (2016)
samhi_index.2017	Index scores (2017)
samhi_dec.2017	Deciles (2017)

### Output: samhi\_21\_01\_2011\_2017\_LSOA\_tall.csv - Long file format

Column name	Description
lsoa11	LSOA 2011 code
year	Year
samhi_index	Index scores
samhi_dec	Deciles

### Revision history

Version	Date	Summary of changes
1.00	Jan 2020	First release