



Public Health
England

Public Health Knowledge and Intelligence

Barbara Coyle, Associate Director

Local Knowledge and Intelligence Service (Yorkshire and the Humber)

Public Health England

Public Health Intelligence

- What is Public Health Intelligence
- PHI within PHE
- Look at some routine outputs

Definitions of Public Health Intelligence (PHI)

- “surveillance, monitoring and assessment of health and the determinants of health, plus the development of the public health evidence base and knowledge”

Source: FPH, Functions of the local public health system

- “The public health knowledge and intelligence function underpins the delivery of public health practice”

Source: Healthy Lives, Healthy People: A Public Health Workforce Strategy, Public Health Policy & Strategy Unit, 2014

PHI runs from data to decisions

There were almost 700,000 births and over half a million deaths in England and Wales in 2016..
..and over 17 million hospital admissions just in England in 2017/18



Key lines of enquiry in Public Health Intelligence:

- Population, geography and demographics
- Health inequalities and Life Expectancy
- Data sources
- Statistics and methods
- *Data Science techniques?*
- Application of PHI eg JNSA, HNA
- Getting the message across

Why do we need public health information?

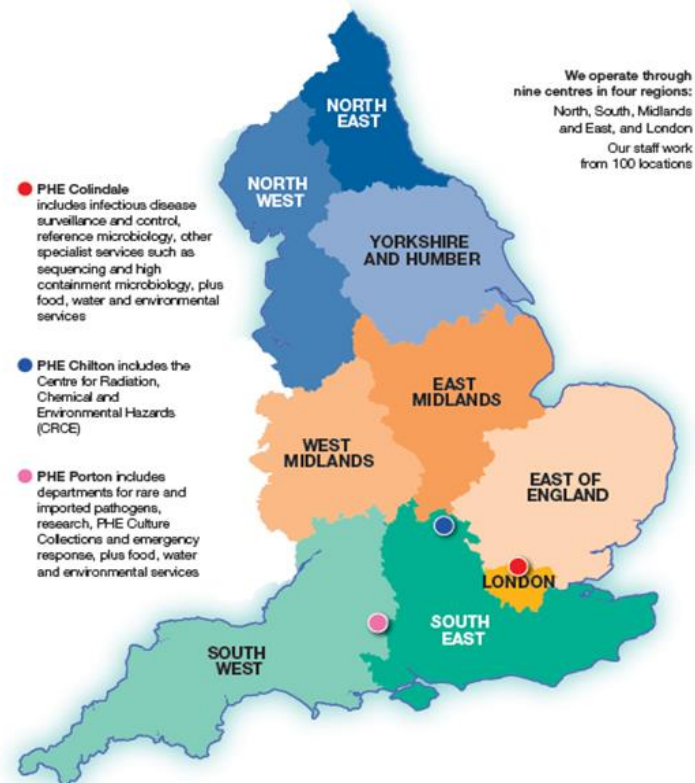


PHE has over 5000 staff distributed across nine regions, 300 in Knowledge & Intelligence (K&I)

To deliver a broad range of products and services we employ approximately 5,600 staff:

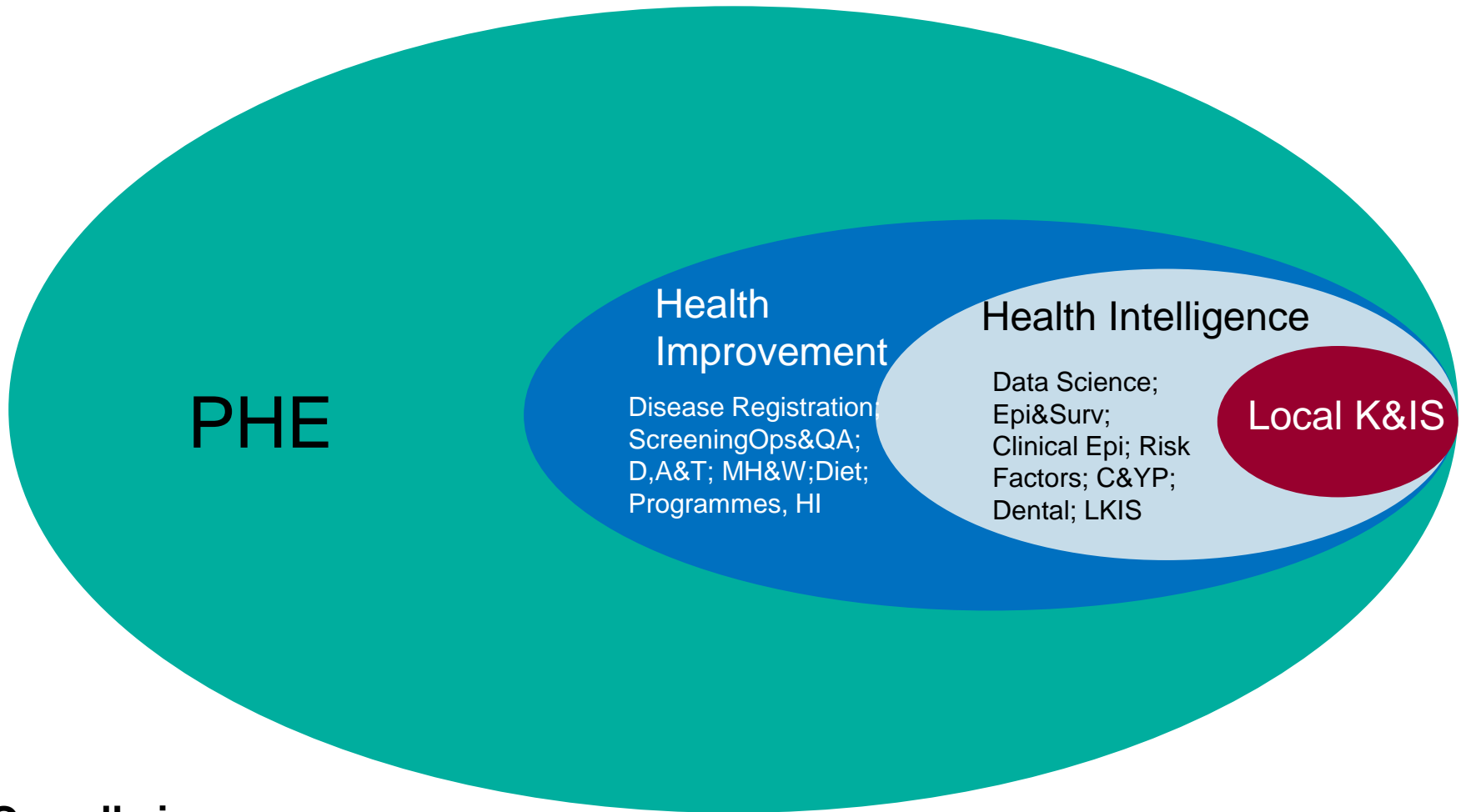
<p>2397 Protection from infectious diseases</p> <p>National centre, regional network and capability to identify infectious disease, surveillance and management of outbreaks</p>	<p>517 Protection from environmental hazards</p> <p>Including chemical, radiation and environmental hazards, emergency response</p>	<p>1075 Local/regional</p> <p>includes:</p> <ul style="list-style-type: none"> • health protection - 539 • screening and immu - 243 • health improvement and population healthcare - 277 	<p>322 Knowledge, intelligence and digital</p> <p>Translating data, research and experience into practical guidance for local decision making; digital capacity and supporting the use of digital technologies</p>	<p>293 Disease registration</p> <p>Including the world's largest cancer database</p>
<p>264 Screening programmes</p> <p>Developing and quality assuring cancer and noncancer screening programmes</p>	<p>30 Research translation and innovation</p> <p>Enabling rigorous researched evaluation of public health interventions both locally and nationally</p>	<p>199 Health and wellbeing</p> <p>National expertise in public health evidence-based interventions</p>	<p>60 Health marketing</p> <p>Delivering healthy behaviour change campaigns</p>	<p>20 Global health</p> <p>Protecting the UK from emerging international threats, maintaining and developing relations with WHO and other international and national public health agencies</p>
<p>With business support from:</p> <p>Financial and commercial</p> <p>167</p>	<p>Infrastructure (ICT and estates)</p> <p>136</p>	<p>Human resources</p> <p>47</p>	<p>Communications</p> <p>66</p>	<p>Corporate affairs</p> <p>64</p>

Our national and local presence



PHE has eight regional public health laboratories based in large NHS hospitals

Public Health Intelligence within PHE



Overall aim:

To support & advocate for effective local public health action through the delivery of high quality tools and products, analysis, expert advice & training.

Routine K&I products

Smoking puts 10 Hull people in hospital every day

Latest figures have revealed Hull has a higher rate of people going to hospital because of smoking than anywhere else in the country



Local stakeholders in Hull have seen an article suggesting smoking is causing more hospital admissions than anywhere else in the country

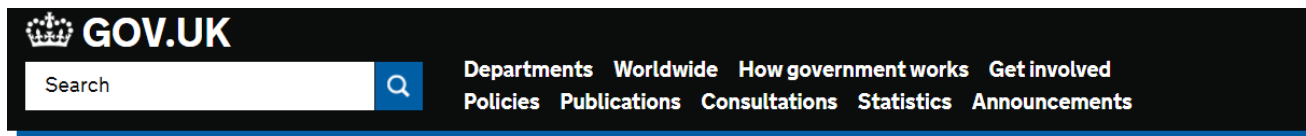
Is this true?

How big an issue is smoking in Hull?

What information do we need to know?

A full list of data and analysis tools can be found here

www.gov.uk/guidance/phe-data-and-analysis-tools



The screenshot shows the GOV.UK website header. On the left is the GOV.UK logo with a crown icon. Next to it is a search bar with the word "Search" and a magnifying glass icon. To the right of the search bar is a navigation menu with links: Departments, Worldwide, How government works, Get involved, Policies, Publications, Consultations, Statistics, and Announcements.

[Home](#)

Guidance

PHE data and analysis tools

From: [Public Health England](#)
Part of: [PHE Yorkshire and Humber: advice, support and services](#), [PHE North East: advice, support and services](#), [PHE East of England: advice, support and services](#), [PHE South East: advice, support and services](#), [PHE North West: advice, support and services](#)
[+ 4 more](#)
Published: 1 April 2013
Last updated: 3 August 2017, [see all updates](#)

A single point of access to data and analysis tools from across Public Health England (previously known as the 'Data and knowledge gateway').

Contents
— [About this resource](#)
— [A to Z list](#)

This resource is in development and will be added to over time, so please [let us know](#) if you do not find the information you need or if you would like to give feedback.

Public Health Profiles

Highlighted Profiles

- Cardiovascular disease, diabetes and kidney disease
- Mental Health, Dementia and Neurology
- Child and Maternal Health
- National General Practice Profiles
- Local Authority Health Profiles
- Public Health Dashboard
- Public Health Outcomes Framework

National Public Health Profiles

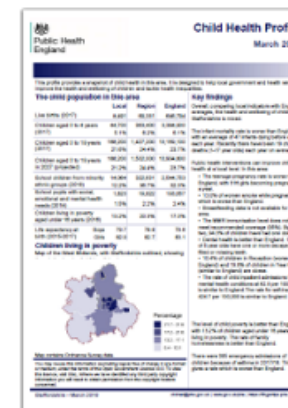
- Adult Social Care
- Mental Health, Dementia and Neurology
- AMR local indicators
- Modelled prevalence estimates
- Atlas of Variation
- Mortality Profile
- Cancer Services
- Musculoskeletal Diseases
- Cardiovascular disease, diabetes and kidney disease
- National General Practice Profiles
- Child and Maternal Health
- NCMP and Child Obesity Profile
- End of Life Care Profiles
- NHS Health Check
- Health Protection
- Older People's Health and Wellbeing
- Inhale - Interactive Health Atlas of Lung conditions in England
- Physical Activity
- Learning Disability Profiles
- Public Health Dashboard
- Liver Disease Profiles
- Public Health Outcomes Framework
- Local Alcohol Profiles for England
- Segment Tool
- Local Authority Health Profiles
- Sexual and Reproductive Health Profiles
- Local Tobacco Control Profiles
- TB Strategy Monitoring Indicators
- Marmot Indicators
- Technical Guidance
- Wider Determinants of Health

User Guide

Latest News

March 2019

New Child health profiles published



January 2019

Personalise what you see - create your own area lists using 'Your data' (top right)

Local Tobacco Control Profiles

Indicator keywords

Key Indicators

Smoking prevalence in adults

Smoking prevalence in young people

Smoking related mortality

Smoking related ill health

Impact of smoking

Smoking quitters

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Area type:
 Areas grouped by:
 Benchmark:

Area:
 Region:

[Search for an area](#)
[CIPFA nearest neighbours to Kingston upon Hull](#)
[Filter indicators](#)

Compared with benchmark: Better Similar Worse Not compared

• a note is attached to the value, hover over to see more details

Quintiles: Best Worst Not applicable

Display [Values](#) [Trends](#) [Values & Trends](#)
[Export table as image](#)
[Export table as CSV file](#)

Indicator	Period	England	Yorkshire and the Humber region	Barnsley	Bradford	Calderdale	Doncaster	East Riding of Yorkshire	Kingston upon Hull	Kirklees	Leeds	North East Lincolnshire	North Lincolnshire	North Yorkshire	Rotherham	Sheffield	Wakefield	York
Smoking Prevalence in adults (18+) - current smokers (APS)	2017	14.9	17.0	18.2	18.9	17.1	19.7	10.8	23.1	17.1	16.7	20.0	20.8	15.6	16.2	17.0	17.9	9.0
Smoking prevalence in adults (18-64) - socio-economic gap in current smokers (APS)	2017	2.44	2.49	1.92	2.88	2.54	3.00	2.11	1.79	2.51	2.24	2.57	2.55	2.60	1.60	2.26	2.93	5.31
Smoking prevalence age 15 years - regular smokers (SDD survey)	2016	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Smoking prevalence age 15 years - occasional smokers (SDD survey)	2016	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Smokers that have successfully quit at 4 weeks	2017/18	2070	1582	2828	*	2742	3097	2387	2348	914	788	2008	884	1379	3076	1397	2528	*
Smoking status at time of delivery	2017/18	10.8	14.2	18.8	14.4	13.5	15.6	13.9	20.4	12.6	10.5	22.1	19.2	11.7	19.9	12.0	17.7	10.4
Smoking attributable mortality	2015-17	262.6	299.7	333.9	336.2	310.6	346.6	247.6	474.7	286.9	311.7	327.7	294.0	227.0	325.4	279.5	338.5	220.9
Smoking attributable hospital admissions	2017/18	1630	1823	2753	2026	1818	1984	1492	2767	1754	1419	2064	1926	1388	2171	1908	1978	1505

Local Tobacco Control Profiles

Indicator keywords

Key Indicators

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Impact of smoking

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Area type

Areas grouped by

Benchmark

Area

[Search for an area](#)

Region

[CIPFA nearest neighbours to Kingston upon Hull](#)

[Filter indicators](#)

Indicator

* a note is attached to the value, hover over to see more details

Compared with benchmark: ■ Better ■ Similar ■ Worse ■ Not compared

Areas

All in Yorkshire and the Humber region

All in England

Display

Table

Table and chart

Smoking Prevalence in adults (18+) - current smokers (APS) ²⁰¹⁷

Proportion - %

[Export table as image](#)

[Export table as CSV file](#)

Area	Recent Trend	Count	Value	95% Lower CI	95% Upper CI
England	–	6,496,890	14.9	14.6	15.1
Yorkshire and the Humber region	–	729,578	17.0	16.2	17.7
Kingston upon Hull	–	47,111	23.1	20.0	26.2
North Lincolnshire	–	28,259	20.8	17.9	23.7
North East Lincolnshire	–	25,073	20.0	17.4	22.6
Doncaster	–	47,956	19.7	17.1	22.4
Bradford	–	74,189	18.9	15.9	21.9
Barnsley	–	35,069	18.2	15.3	21.1
Wakefield	–	48,286	17.9	15.3	20.6
Calderdale	–	27,852	17.1	14.5	19.6
Kirklees	–	57,538	17.1	14.4	19.7
Sheffield	–	78,285	17.0	14.3	19.7
Leeds	–	103,249	16.7	14.0	19.4
Rotherham	–	33,542	16.2	13.8	18.7
North Yorkshire	–	77,211	15.6	12.9	18.3
East Riding of Yorkshire	–	29,779	10.8	8.5	13.1
York	–	15,460	9.0	7.3	10.7

Source: Annual Population Survey (APS)

Local Tobacco Control Profiles

Indicator keywords

Key Indicators

Smoking prevalence in adults Smoking prevalence in young people Smoking related mortality Smoking related ill health Impact of smoking Smoking quitters

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Kingston upon Hull and its CIPFA nearest neighbours (2018)

[Filter indicators](#)

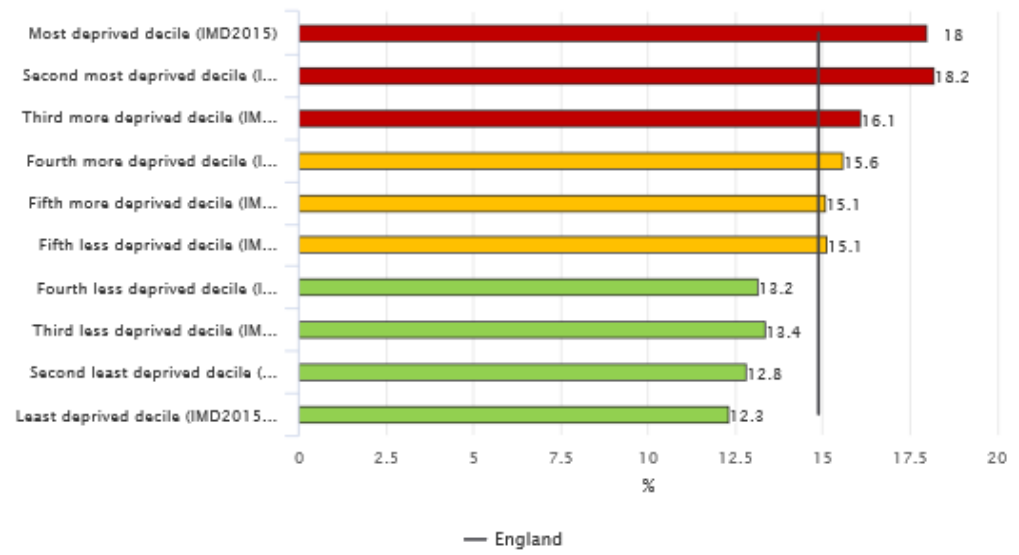
Indicator

Compared with benchmark: ■ Better ■ Similar ■ Worse ■ Not compared

Display [Latest values](#) [Trends](#) Inequalities for [England](#) [Kingston upon Hull](#)

Smoking Prevalence in adults (18+) - current smokers (APS) England, 2017 Proportion - %

[Export chart as image](#) [Export chart as CSV file](#)



- Partition data by:
- Ethnic groups
 - Religion - 8 categories
 - Health status
 - County & UA deprivation deciles in England (IMD2015)**
 - District & UA deprivation deciles in England (IMD2015)**
 - Country of birth
 - Socioeconomic group (18-64 yrs)
 - Age
 - Sex

Public Health Outcomes Framework

Indicator keywords

Overarching indicators | **Wider determinants of health** | Health improvement | Health protection | Healthcare and premature mortality | Supporting information

Overview | Compare indicators | Map | Trends | Compare areas | **Area profiles** | Inequalities | England | Population | Box Plots | Definitions | Download

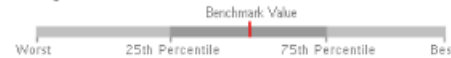
Area type: Areas grouped by: Benchmark:

Area: Region: [CIPFA nearest neighbours to Kingston upon Hull](#) [Filter indicators](#)

* a note is attached to the value, hover over to see more details

Compared with benchmark: ● Better ● Similar ● Worse ○ Not compared

Recent trends: - Could not be calculated ↑ Increasing / Getting worse ↑ Increasing / Getting better ↓ Decreasing / Getting worse ↓ Decreasing / Getting better ↔ No significant change ↑ Increasing ↓ Decreasing



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Indicator	Period	Kings uHull		Region England			England		Best
		Recent Trend	Count	Value	Value	Value	Worst	Range	
1.01i - Children in low income families (all dependent children under 20) New data	2016	↓	16,345	27.1%	19.5%	17.0%	32.5%		6.3%
1.01ii - Children in low income families (under 16s) New data	2016	↓	14,430	27.4%	19.7%	17.0%	31.8%		6.4%
1.02i - School Readiness: the percentage of children achieving a good level of development at the end of reception New data	2017/18	↑	2,259	65.9%	69.5%	71.5%	63.9%		80.5%
1.02i - School Readiness: the percentage of children with free school meal status achieving a good level of development at the end of reception New data	2017/18	↑	426	57.4%	54.1%	56.6%	43.0%		72.1%
1.02ii - School Readiness: the percentage of Year 1 pupils achieving the expected level in the phonics screening check New data	2017/18	↑	2,872	80.0%	80.3%	82.5%	76.3%		88.2%
1.02ii - School Readiness: the percentage of Year 1 pupils with free school meal status achieving the expected level in the phonics screening check New data	2017/18	↑	604	70.2%	66.9%	70.1%	56.2%		83.4%
1.03 - Pupil absence	2016/17	↓	609,878	5.12%	4.86%	4.65%	5.74%		3.15%
1.04 - First time entrants to the youth justice system	2017	↓	121	560.4	319.0	292.5	687.0		104.4
1.05 - 16-17 year olds not in education, employment or training (NEET) or whose activity is not known - current method New data	2017	-	300	5.5%	5.8%	6.0%	24.4%		1.9%
1.05 - 16-18 year olds not in education employment or training - historical method	2015	↓	570	6.2%	4.8%	4.2%	7.9%		1.5%
1.06i - Adults with a learning disability who live in stable and appropriate	2017/18	↑	506	75.3%	80.9%	77.2%	32.2%		97.0%

Wider Determinants of Health

Indicator keywords

Natural and built environment
Work and the labour market
Vulnerability
Income
Crime
Education
Marmot indicators
Health outcomes
Health assets

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Area type: County & UA
 Areas grouped by: Region
 Benchmark: England

Area: Kingston upon Hull
 Region: Yorkshire and the Humber
 CIPFA nearest neighbours to Kingston upon Hull
 Filter indicators

* a note is attached to the value, hover over to see more details

Compared with benchmark: Green Better Yellow Similar Red Worse White Not compared

Quintiles: Best Worst Not applicable













Recent trends: Grey Could not be calculated Red Increasing / Getting worse Green Increasing / Getting better Red Decreasing / Getting worse Green Decreasing / Getting better Orange No significant change Blue Increasing Red Decreasing

Export table as image

Export table as CSV file



Indicator	Period	Kings uHull		Region England			England		
		Recent Trend	Count	Value	Value	Value	Worst	Range	Best
Gender pay equality	2015	-	-	75.9%	-	79.4%	65.0%		96.3%
Housing affordability ratio	2016	-	-	4.6	-	7.2	26.4		3.4
Employment rate (aged 16-64)	2017/18	↑	118,400	70.8%	-	75.2%	58.6%		84.5%
Income deprivation	2015	-	-	25.7%	-	14.7%	27.6%		5.2%
Income deprived older people (60+)	2015	-	-	28.4%	-	16.2%	49.7%		6.6%
IDACI (Income Depr. - Children)	2015	-	16,581	34.0%	21.6%*	19.9%	39.3%		6.8%
GCSE achieved 5A*-C including English & Maths	2015/16	-	1,145	48.2%	-	57.8%	44.8%		74.6%
School readiness: Year 1 pupils achieving the expected level in the phonics screening check	2017/18	↑	2,872	80.0%	-	82.5%	76.3%		88.2%
School readiness: Good level of development at age 5	2017/18	↑	2,259	65.9%	-	71.5%	63.9%		80.5%
Proportion of people who use services who feel safe	2015/16	-	-	69.5%	-	69.2%	55.1%		80.4%
Access to NHS dental services - successfully obtained a dental appointment	2015/16	-	1,121	96.7%	-	94.7%	86.3%		98.8%
Percentage of people who said they had good experience when making a GP appointment	2015/16	-	2,584	68.5%	-	73.4%	58.6%		85.3%
Social Isolation: adult social care users who have as much social contact as they would like	2017/18	-	-	49.7%	-	46.0%	34.3%		55.1%
1.18ii - Social Isolation: percentage of adult carers who have as much social contact as they would like	2016/17	-	123	32.0%	-	35.5%	21.5%		55.0%
Proportion of people who use services who have control over their daily life	2015/16	-	-	80.0%	-	76.6%	60.5%		90.2%
Self-reported well-being - high happiness score: % of respondents	2015/16	-	-	70.0%	-	74.7%	66.0%		80.8%
Self-reported well-being - high satisfaction score: % of respondents	2015/16	-	-	78.8%	-	81.2%	67.3%		88.1%
Sports club membership: % of population aged 16+	2015/16	-	-	19.9%	-	22.0%	13.0%		32.1%
Percentage of physically active adults - historical method	2015	-	-	54.9%	-	57.0%	44.8%		69.8%
Utilisation of outdoor space for exercise/health reasons	Mar 2015 - Feb 2016	-	-	18.0%	-	17.9%	5.1%		36.9%

 Overview
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Area type

Indicator

Indicator Definitions and Supporting Information

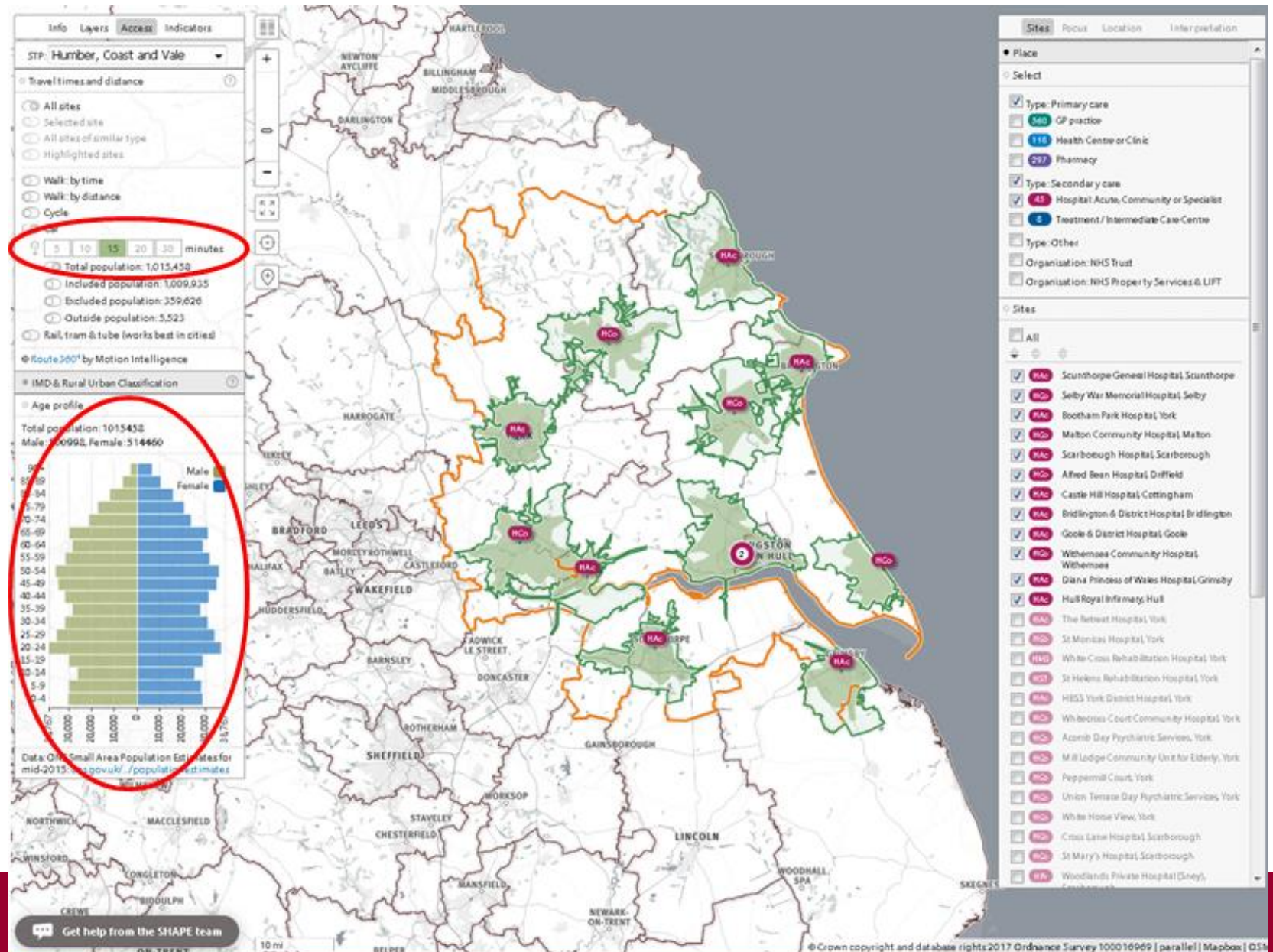
Indicator ID	92443
Date updated	05 Mar 2019
Indicator full name	Smoking Prevalence in adults - current smokers (APS)
Rationale	<p>Smoking is the most important cause of preventable ill health and premature mortality in the UK. Smoking is a major risk factor for many diseases, such as lung cancer, chronic obstructive pulmonary disease (COPD) and heart disease. It is also associated with cancers in other organs, including lip, mouth, throat, bladder, kidney, stomach, liver and cervix.</p> <p>Smoking is a modifiable lifestyle risk factor; effective tobacco control measures can reduce the prevalence of smoking in the population.</p> <p>The Government's Tobacco Control Plan (Towards a Smokefree Generation: A Tobacco Control Plan for England, https://www.gov.uk/government/publications/towards-a-smoke-free-generation-tobacco-control-plan-for-england) published in July 2017 sets out the Government's strategy to reduce smoking prevalence among adults and young people, and to reduce smoking during pregnancy.</p> <p>In 2013 several survey modules were removed from the Integrated Household Survey (IHS) to leave a dataset solely based upon the Annual Population Survey (APS). Therefore the ONS announced it would no longer produce the IHS. Instead the questions formerly regarded as the IHS core will continue to be asked in the APS.</p> <p>The APS is a designated as a National Statistic and provides a consistent time series of data. Users should therefore replace their previously published historical IHS-based estimates with APS equivalents.</p> <p>Some differences in survey coverage, imputation and weighting methodology may result in some discontinuity for certain 'core' variables compared to estimates previously provided as part of the IHS and as a result the IHS and APS should not be directly compared. ONS have drafted a note (available here) to explain the differences further.</p>
Definition	Prevalence of smoking among persons 18 years and over
Data source	Annual Population Survey (APS)
Indicator source	Annual Population Survey
Indicator production	Risk Factors Intelligence Team, Public Health England
Definition of numerator	The number of persons aged 18 + who are self-reported smokers in the Annual Population Survey. The number of respondents has been weighted in order to improve representativeness of the

Health economics tools draw on the evidence

The screenshot shows the GOV.UK website interface. At the top, there is a search bar and navigation links for Departments, Worldwide, How government works, Get involved, Policies, Publications, Consultations, Statistics, and Announcements. A blue banner prompts users to provide feedback on GOV.UK. The main content area is titled 'Guidance' and features the heading 'Health economics: a guide for public health teams'. Below the heading, a paragraph describes resources for local commissioners to estimate ROI and cost-effectiveness. Metadata includes the publication date (14 May 2017), the last update (8 March 2018), and the source (Public Health England). A 'Contents' section lists 'Calculating return on investment' and 'Comparing spend and outcomes'. A 'Related content' section is partially visible, showing a 'Collection' link.

www.gov.uk/guidance/health-economics-a-guide-for-public-health-teams

SHAPE <https://shapeatlas.net>



PHE provides some evidence-search support for LA public health teams

The screenshot shows the Public Health England website. At the top, there is a header with contact information: 020 368 20600, libraries@phe.gov.uk, and Updates: Updates coming soon. Below this is the Public Health England logo and a search bar containing 'practice examples'. A navigation menu includes Home, How do I...?, Resources, Local Authority Public Health, FAQs, and Contact Us. The main content area is titled 'PHE Support for Local Authority public health teams' and includes a sub-header 'Knowledge & Library Services > PHE Support for Local Authority public health teams'. The text explains that the page and resources are part of PHE's remit to work collaboratively and support the wider public health agenda. It provides a 'Jump to:' section with links to 'Information and guidance about how public health local authority teams can access the journals', 'A list of the journal titles which PHE have made available for public health local authority teams', and 'Frequently asked questions'. Below this, it states 'For instant access to the journals, click the icons below.' and provides a link to a 'LA guide on Open Athens'. Two icons are shown: 'EBSCO Discovery Service for LAPH' and 'Journals and Databases via NICE'. On the right side, there are three call-to-action buttons: 'Request a literature search', 'Search our EDS (PHE Staff)', and 'Our Service Offer'. The 'Request a literature search' button is followed by text stating 'PHE staff can request a literature search using our online form.' and 'For more information of the levels of search that KLS provides, please view our Literature Search page.' The 'Search our EDS (PHE Staff)' button is followed by the 'EBSCO Discovery Service' logo and text stating 'Click the icon to perform a single search across multiple information resources.' and 'LAPH staff can find out more about their EDS here.' A note below this states 'NOTE: For the best experience use Internet Explorer 11 or later, or an alternative browser such as Chrome.'

<https://phelibrary.koha-ptfs.co.uk/laph/>

Case studies are available as practice examples

020 368 20600 | libraries@phe.gov.uk | Updates: **Updates coming soon**

Public Health England

Search... Search

Home | How do I...? | Resources | Local Authority Public Health | FAQs | Contact Us

Knowledge & Library Services > Practice Examples

Practice Examples

Current collections:

- Community-centred and asset-based approaches
- Screening programmes
- Provider Public Health Network

If you have any questions, queries, or would like to submit a practice example, please get in touch with Rachel Gledhill (rachel.gledhill@phe.gov.uk)

[Print Friendly](#)

Request a literature search

PHE staff can request a literature search using our [online form](#).

For more information of the levels of search that KLS provides, please view our [Literature Search](#) page.

Search our EDS (PHE Staff)

EBSCO Discovery Service

Click the icon to perform a single search across multiple information resources.

LAPH staff can find out more about their EDS [here](#).

NOTE: For the best experience use Internet Explorer 11 or later, or an alternative browser such as Chrome.

Our Service Offer

» [Expert literature searching](#)

You can contribute too!

<https://phelibrary.koha-ptfs.co.uk/practice-examples/>

Want to know more about PHI?

- PHINE Knowledge Hub group: 'PHE Yorkshire and Humber'
<https://khub.net/group/pheyorkshireandhumber>
- Monthly newsletter on recent intelligence products and releases. Email Charlotte.Bamford@phe.gov.uk to get added to the distribution list.
- One day Foundations in Population Health Intelligence. Run quarterly
- E-learning modules:

The screenshot shows the e-LH website interface. At the top left is the e-LH logo with the tagline 'e-Learning for Healthcare'. At the top right is the NHS Health Education England logo. Below these is a navigation menu with links for Home, Programmes, About, News, Support, Demo, and Contact us. A search bar is located on the right side of the navigation menu. Below the navigation menu are three e-learning module cards:

- Public Health Intelligence**
Using data and information to understand the health and wellbeing of the public
- Health Economics and Prioritisation in Public Health**
To provide the underlying economic theory to support prioritisation and decision making in the local health and social care system
- Community-centred approaches to health improvement**
Building knowledge and making plans for community-centred approaches to health and wellbeing