

ALCOHOL USE

Map 4a: Variation in rate of alcohol-specific admissions in people of all ages per population by CCG (2015/16)

Directly standardised rate per 100,000

NHS Domain 1: Preventing people from dying prematurely

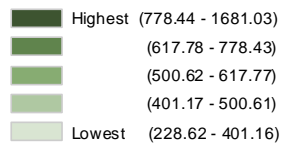
NHS Domain 3: Helping people to recover from episodes of ill health following injury

NHS Domain 5: Treating and caring for people in a safe environment & protecting them from avoidable harm

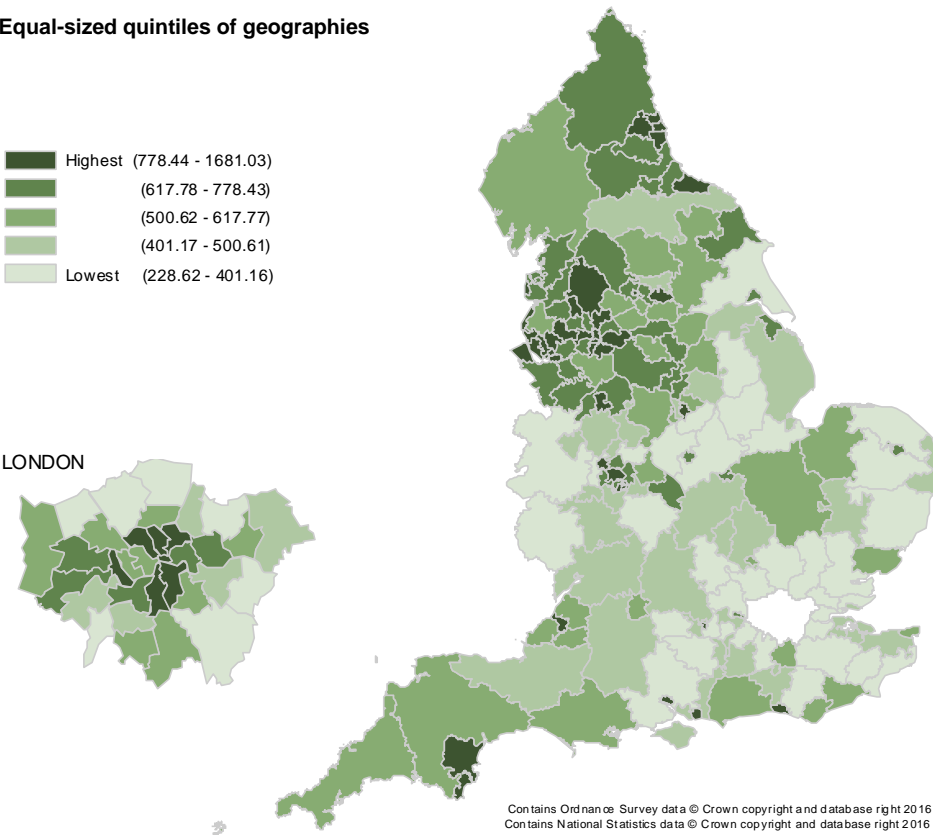
PHOF Domain 4: Healthcare public health and preventing premature mortality

OPTIMUM VALUE: LOW

Equal-sized quintiles of geographies

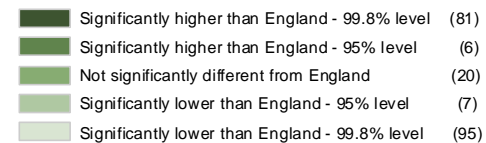


LONDON

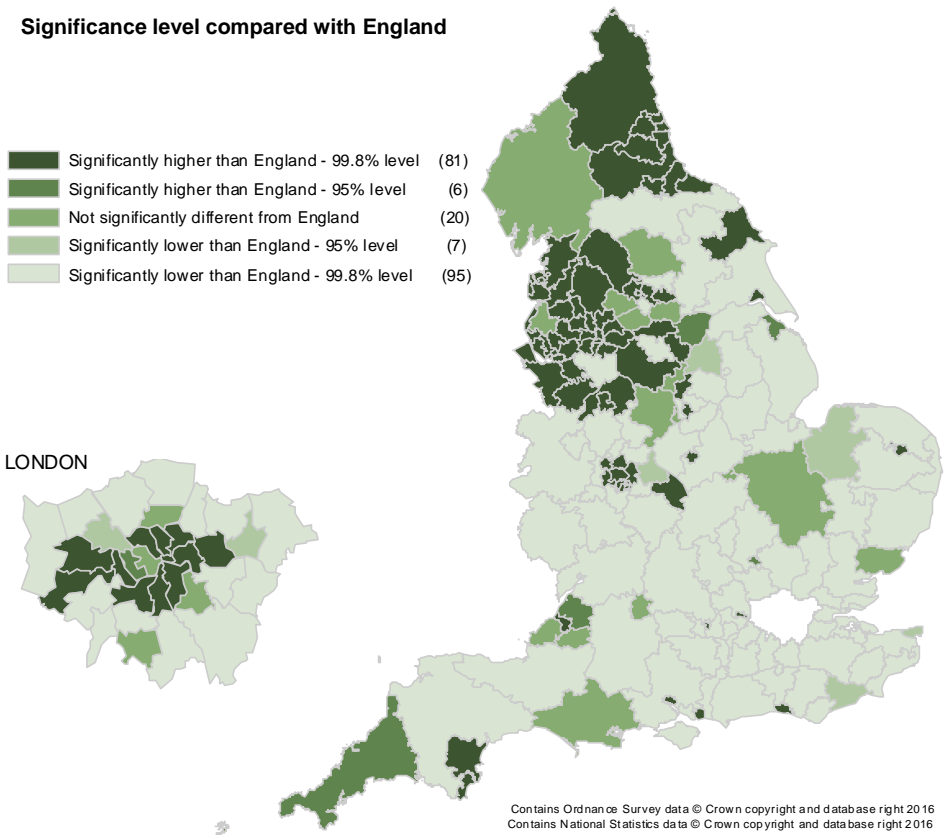


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Significance level compared with England



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ALCOHOL USE

Map 4b: Variation in rate of alcohol-specific admissions in men of all ages per population by CCG (2015/16)

Directly standardised rate per 100,000

NHS Domain 1: Preventing people from dying prematurely

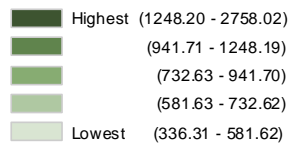
NHS Domain 3: Helping people to recover from episodes of ill health following injury

NHS Domain 5: Treating and caring for people in a safe environment & protecting them from avoidable harm

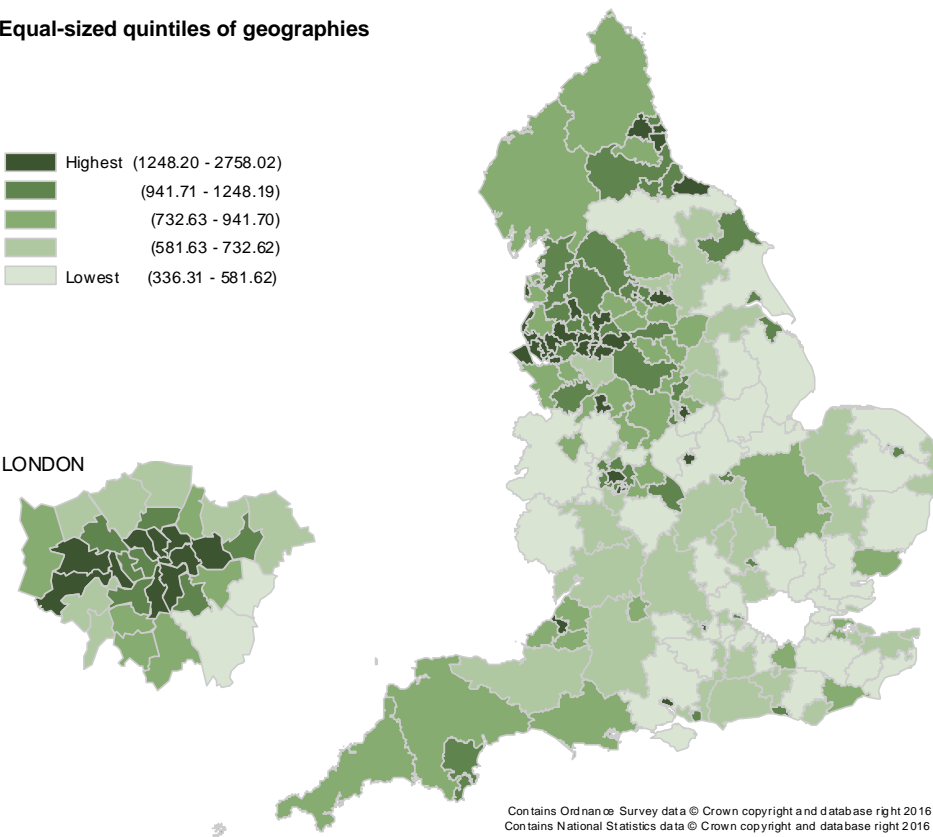
PHOF Domain 4: Healthcare public health and preventing premature mortality

OPTIMUM VALUE: LOW

Equal-sized quintiles of geographies

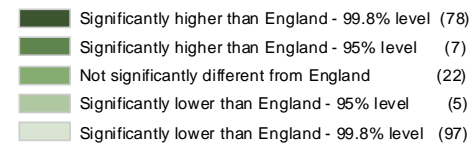


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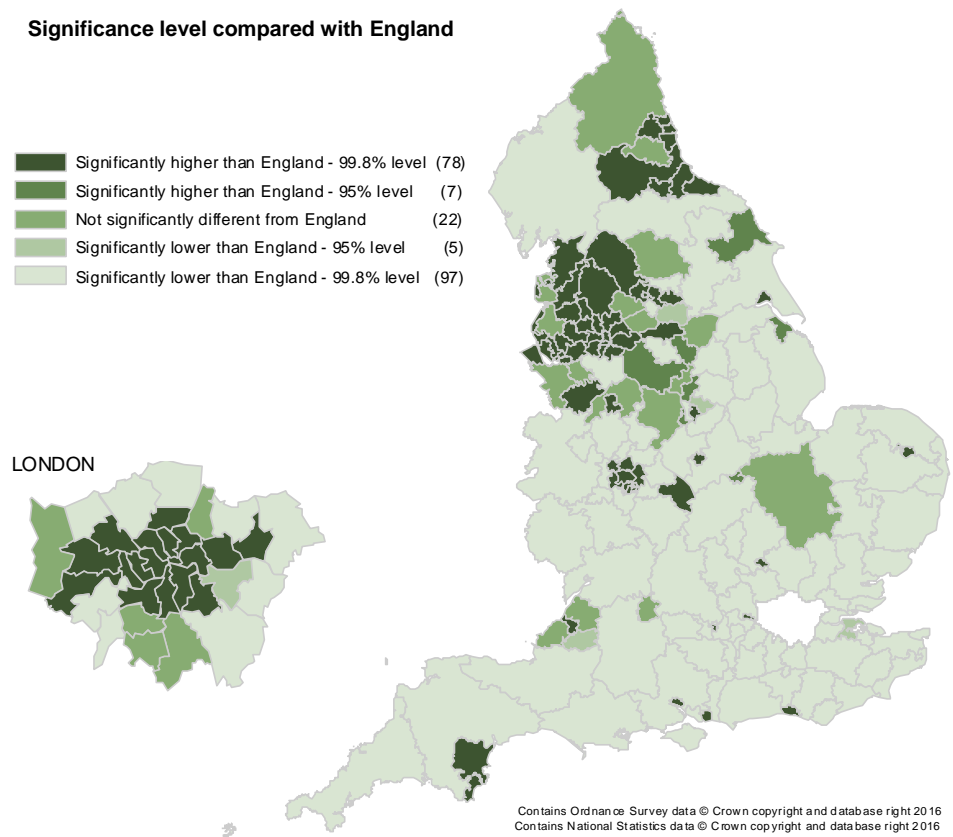


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Significance level compared with England



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ALCOHOL USE

Map 4c: Variation in rate of alcohol-specific admissions in women of all ages per population by CCG (2015/16)

Directly standardised rate per 100,000

NHS Domain 1: Preventing people from dying prematurely

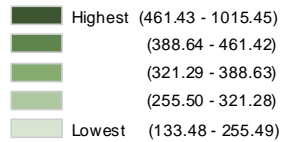
NHS Domain 3: Helping people to recover from episodes of ill health following injury

NHS Domain 5: Treating and caring for people in a safe environment & protecting them from avoidable harm

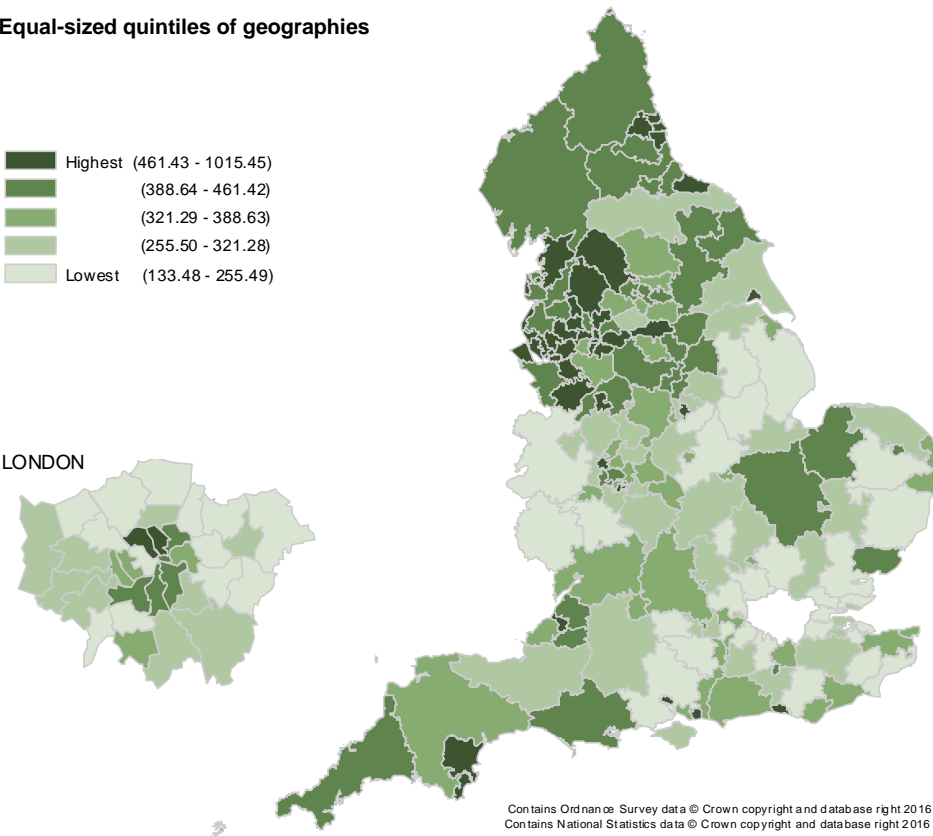
PHOF Domain 4: Healthcare public health and preventing premature mortality

OPTIMUM VALUE: LOW

Equal-sized quintiles of geographies

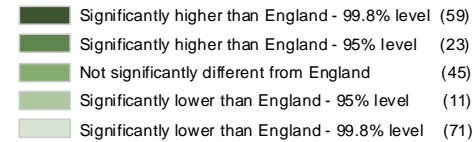


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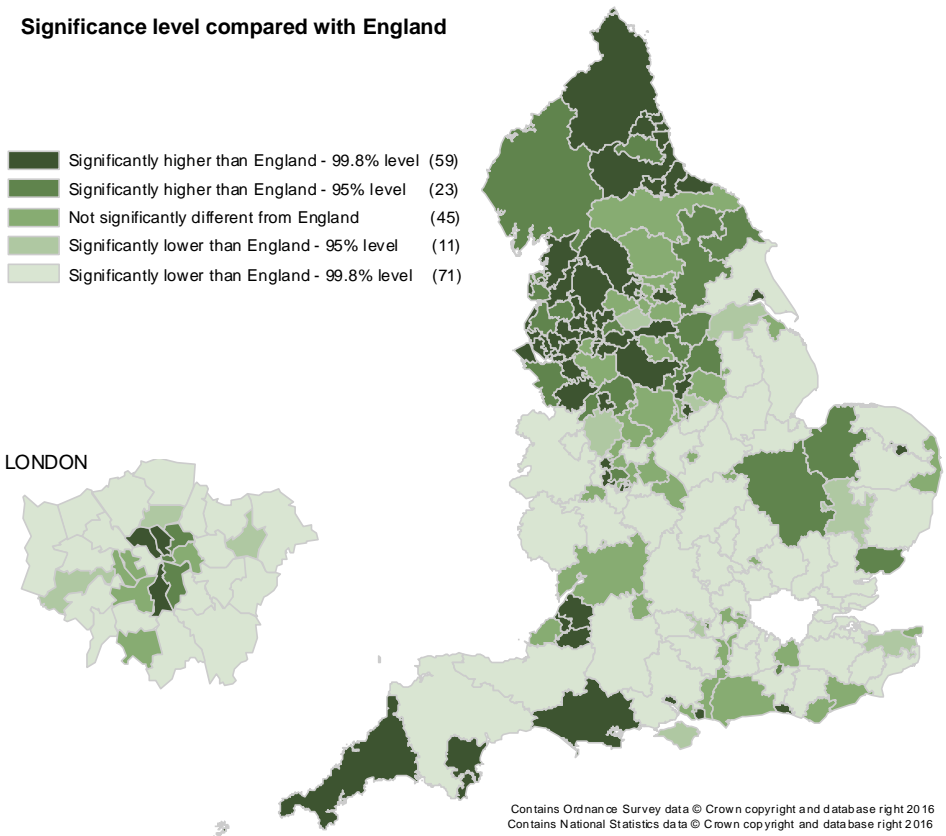


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Significance level compared with England

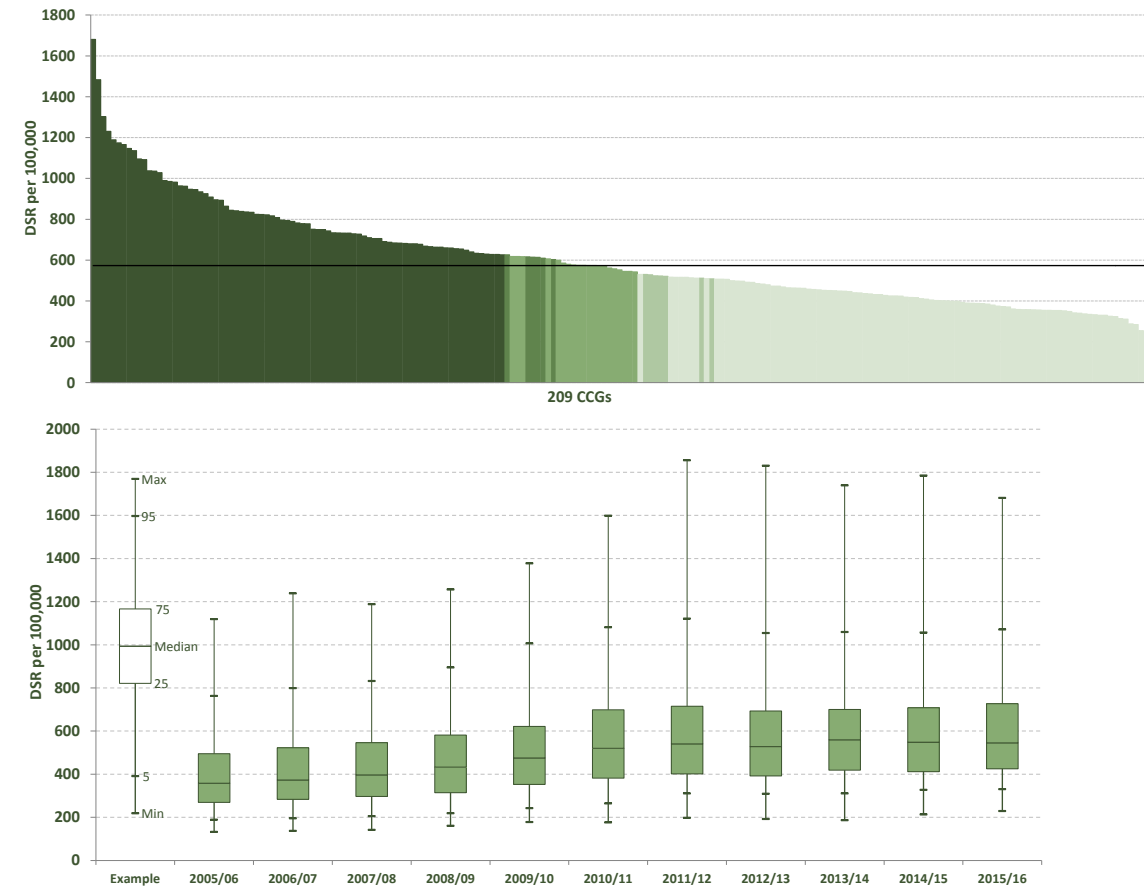


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Variation in rate of alcohol-specific admissions in people of all ages per population by CCG (2015/16)



	Example	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	
Max-Min (Range)		987.0	1101.7	1046.8	1095.7	1199.5	1421.7	1658.4	1639.0	1553.0	1571.1	1452.4	WIDENING Significant
95th-5th percentile		573.9	604.3	626.3	676.0	764.2	816.8	810.9	744.8	748.4	729.3	740.2	WIDENING Significant
75th-25th percentile		225.2	239.1	249.3	267.4	269.2	316.8	313.8	300.9	280.9	296.3	302.1	WIDENING Significant
Median		358.4	373.3	396.5	433.2	475.4	519.9	540.4	528.1	559.8	548.8	545.0	INCREASING Significant

Context

In England for people aged 15 to 49 years alcohol misuse is the leading risk factor for early mortality, ill health and disability; for people of all ages it is the fifth leading risk factor.¹ In 2015 more working years of life were lost in England as a result of alcohol-related deaths than from the 10 leading causes of cancer combined.²

Beyond health consequences for the individual, alcohol use also contributes to considerable economic and human costs to government, society at large and individual drinkers and their associates. Economic estimates have placed the annual cost in high-income countries between 1.4% and 2.7% of gross domestic product,³ equivalent to a cost of between £27 billion and £52 billion in England during 2016.²

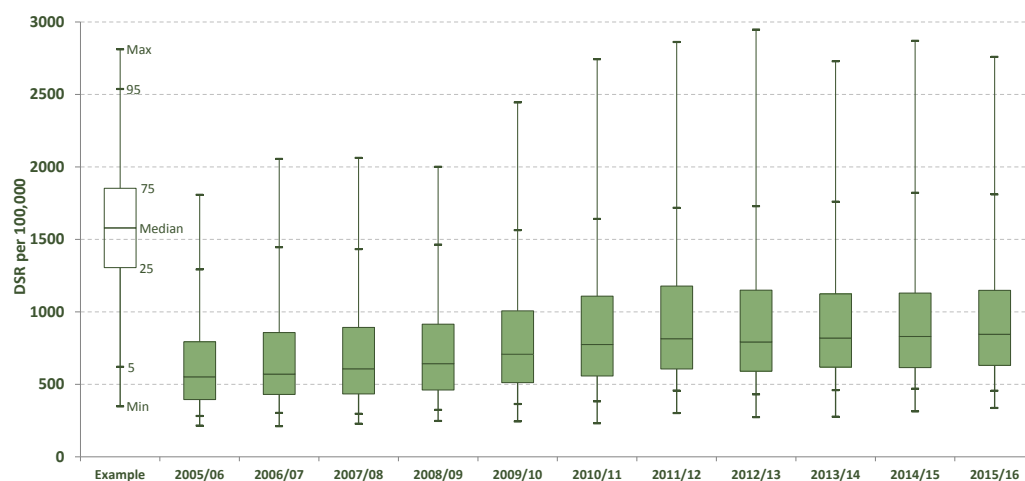
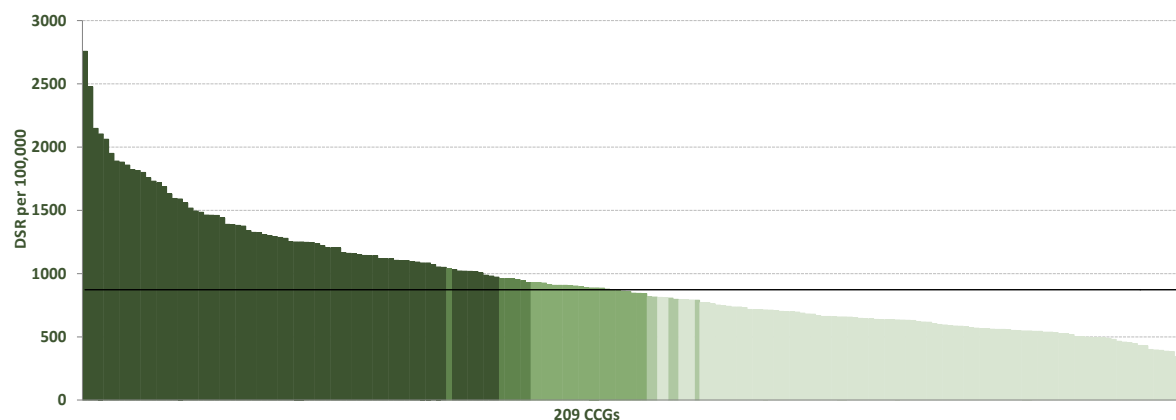
Since 2003/04 alcohol-related hospital admissions have been increasing steadily, accounting for more than 1 million admissions in 2014/15, in about 333,000 of which the main reason for admission was attributed to alcohol.² Hospital admissions tend to be concentrated in the lowest three socioeconomic deciles with almost half (47%) of all admissions occurring in the three lowest socioeconomic groups.

¹ GBD 2013 Risk Factors Collaborators, Forouzanfar MH, Alexander L, Anderson HR, Bachman VF, Biryukov S, Brauer M et al. Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. The Lancet 2015; 386(10010): 2287-2323. doi: 10.1016/S0140-6736(15)00128-2. Epub 2015 Sep 11.

² Burton R, Henn C, Lavoie D, O'Connor R, Perkins C, Sweeney K et al. A rapid evidence review of the effectiveness and cost-effectiveness of alcohol control policies: an English perspective. The Lancet 2016; 389(10078): 1558-1580. DOI: [http://dx.doi.org/10.1016/S0140-6736\(16\)32420-5](http://dx.doi.org/10.1016/S0140-6736(16)32420-5)

³ Rehm J, Mathers C, Popova S, Thavorncharoensap M, Teerawattananon Y, Patra J. Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. The Lancet 2009; 373(9682): 2223-2233. DOI: [http://dx.doi.org/10.1016/S0140-6736\(09\)60746-7](http://dx.doi.org/10.1016/S0140-6736(09)60746-7)

Variation in rate of alcohol-specific admissions in men of all ages per population by CCG (2015/16)



	Example	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	
Max-Min (Range)		1591.9	1844.3	1833.2	1754.5	2200.7	2512.2	2559.6	2674.3	2451.9	2556.5	2421.7	WIDENING Significant
95th-5th percentile		1010.4	1143.1	1135.8	1141.4	1199.9	1259.7	1261.0	1298.7	1301.2	1351.4	1353.6	WIDENING Significant
75th-25th percentile		398.5	426.1	457.8	454.0	495.4	551.4	571.7	559.1	504.5	514.1	518.0	WIDENING Significant
Median		551.5	570.6	606.4	641.9	707.5	774.3	814.1	791.5	818.9	829.2	845.5	INCREASING Significant

The focus of this indicator is alcohol-specific admissions, that is, conditions where alcohol consumption accounts for 100% of the disease, such as alcoholic liver cirrhosis, alcoholic psychosis, alcoholic polyneuropathy, alcoholic cardiomyopathy and alcoholic gastritis.⁴

In 2014 there were an estimated 23,000 deaths related to alcohol use in England,² about 6,000 of which were due to alcohol-specific causes. The rate of alcohol-related mortality for men is more than double that for women (65.4 versus 28.8 per 100,000 population). There is also considerable regional variation with the highest rates in the North East (58.6 per 100,000 population) and the lowest in London (39.0 per 100,000 population).

Magnitude of variation

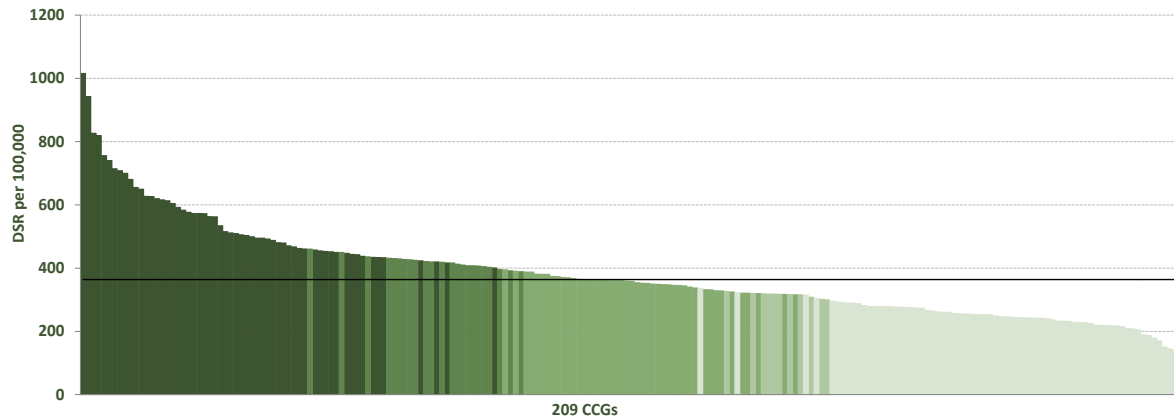
Map 4a: Alcohol-specific admissions in people

The maps and column chart display the data for 2015/16, during which CCG values ranged from 228.6 to 1,681.0 per 100,000 population, which is a 7.4-fold difference between CCGs. The England value for 2015/16 was 573.2 per 100,000 population.

The boxplot shows the distribution of CCG values for the period 2005/06 to 2015/16. There has been significant widening of all three measures of variation. The median increased significantly from 358.4 per 100,000 in 2005/06 to 545.0 per 100,000 in 2015/16.

⁴ Jones L et al. Alcohol-attributable fractions for England. Alcohol-attributable mortality and hospital admissions. Liverpool John Moores University & North West Public Health Observatory; 2008. https://www.alcohollearningcentre.org.uk/_assets/AlcoholAttributableFractions.pdf

Variation in rate of alcohol-specific admissions in women of all ages per population by CCG (2015/16)



	Example	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	
Max-Min (Range)		613.8	665.6	701.6	649.2	691.8	741.5	1024.9	975.8	922.7	935.6	882.0	WIDENING Significant
95th-5th percentile		333.5	396.6	401.7	436.0	456.4	490.6	493.5	455.0	487.2	434.9	441.7	WIDENING Significant
75th-25th percentile		140.1	130.8	149.6	161.5	165.6	178.6	167.1	157.9	173.7	168.6	166.0	WIDENING Significant
Median		219.0	228.8	250.6	255.5	286.3	313.0	335.8	325.5	351.2	335.4	357.8	INCREASING Significant

Map 4b: Alcohol-specific admissions in men

The maps and column chart display the data for 2015/16, during which CCG values ranged from 336.3 to 2,758.0 per 100,000 population, which is a 8.2-fold difference between CCGs. The England value for 2015/16 was 872.4 per 100,000 population.

The boxplot shows the distribution of CCG values for the period 2005/06 to 2015/16. There has been significant widening of all three measures of variation. The median increased significantly from 551.5 per 100,000 in 2005/06 to 845.5 per 100,000 in 2015/16.

Map 4c: Alcohol-specific admissions in women

The maps and column chart display the data for 2015/16, during which CCG values ranged from 133.5 to 1,015.5 per 100,000 population, which is a 7.6-fold difference between CCGs. The England value for 2015/16 was 364.1 per 100,000 population.

The boxplot shows the distribution of CCG values for the period 2005/06 to 2015/16. There has been significant widening of all three measures of variation. The median increased significantly from 219.0 per 100,000 population in 2005/06 to 357.8 per 100,000 population in 2015/16.

Much of the variation in alcohol-specific admission rates is likely to be due to differences in the volume and patterns of alcohol use across England, although other factors such as differences in demography, the level of deprivation and coding for association with alcohol could explain some of the variation.

Options for action

To reduce the hospital admission rate due to alcohol-specific conditions, commissioners, clinicians and primary and secondary care service providers need:

- to bring together all stakeholders in the local area working to reduce alcohol-related harm to identify what is working well and the opportunities for further improvement using the Alcohol CLear self-assessment tool (see 'Resources')
- to develop plans for an integrated system for alcohol harm prevention, treatment and recovery in adults using Public Health England's (PHE's) document 'Adults – alcohol JSNA support pack 2017-18: commissioning prompts' (see 'Resources')
- to review current patterns of acute service provision to ascertain whether alternatives to hospital admission are available when appropriate
- to learn from initiatives in other hospital services, for instance, those described in PHE's document 'Alcohol Care in England's Hospitals: An opportunity not to be wasted' (see 'Resources')
- to establish appropriately resourced alcohol care teams in district general hospitals and consider the need for services that engage assertively high-need, high-cost alcohol-dependent patients
- to explore opportunities for early detection in the health service
- to develop a local alcohol treatment pathway (see 'Resources')
- to conduct rigorous monitoring and evaluation to assess the impact of interventions (Box 4.1)

Box 4.1: High Impact Changes⁵

- Work in partnership
- Develop activities to control the impact of alcohol misuse in the community
- Influence change through advocacy
- Improve effectiveness and capacity of specialist treatment
- Appoint an Alcohol Health Worker
- Identification and brief advice (IBA) – provide more help to encourage people to drink less
- Amplify national social marketing priorities

RESOURCES

- PHE Alcohol Learning Resources. Alcohol CLear self-assessment tool.
www.alcohollearningcentre.org.uk/Topics/Browse/CLear/
- Public Health England. Adults – alcohol JSNA support pack 2017- 18: commissioning prompts. Planning for alcohol harm prevention, treatment and recovery in adults. September 2016.
www.nta.nhs.uk/uploads/jsna-support-pack-prompts-adult-alcohol-2017-final.pdf
- Public Health England. Alcohol Care in England's Hospitals: An opportunity not to be wasted. November 2014.
www.alcohollearningcentre.org.uk/_assets/Alcohol_Care_in_Englands_Hospitals_An_opportunity_not_to_be_wasted_PHE_Nov_14.pdf
- NICE. Alcohol-use disorders – prevention. Public health guideline [PH24]. Published date: June 2010.
<http://guidance.nice.org.uk/PH24>
- NICE. Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence. Clinical guideline [CG115]. Published date: February 2011.
www.nice.org.uk/guidance/CG115
- NICE. Alcohol-use disorders: diagnosis and management of physical complications. Clinical guideline [CG100]. Published date: June 2010.
<http://guidance.nice.org.uk/CG100>
- NICE interactive flowchart. Alcohol-use disorders overview.
<http://pathways.nice.org.uk/pathways/alcohol-use-disorders>

⁵ Local Alcohol Profiles for England (LAPE) www.lape.org.uk/

- PHE Alcohol Learning Resources. Improving Local Alcohol Interventions.
www.alcohollearningcentre.org.uk/
- Home Office. The Government's Alcohol Strategy. 2012.
www.homeoffice.gov.uk/publications/alcohol-drugs/alcohol/alcohol-strategy?view=Binary
- Department of Health. Local Routes: Guidance for developing alcohol treatment pathways. 2009.
http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_110423

ALCOHOL USE

Map 5: Variation in rate of alcohol-specific admissions in people aged under 18 years per population by CCG (2015/16)

Crude rate per 100,000

NHS Domain 1: Preventing people from dying prematurely

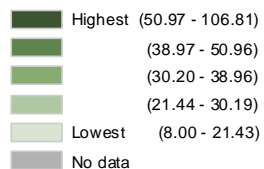
NHS Domain 3: Helping people to recover from episodes of ill health or following injury

NHS Domain 5: Treating and caring for people in a safe environment & protecting them from avoidable harm

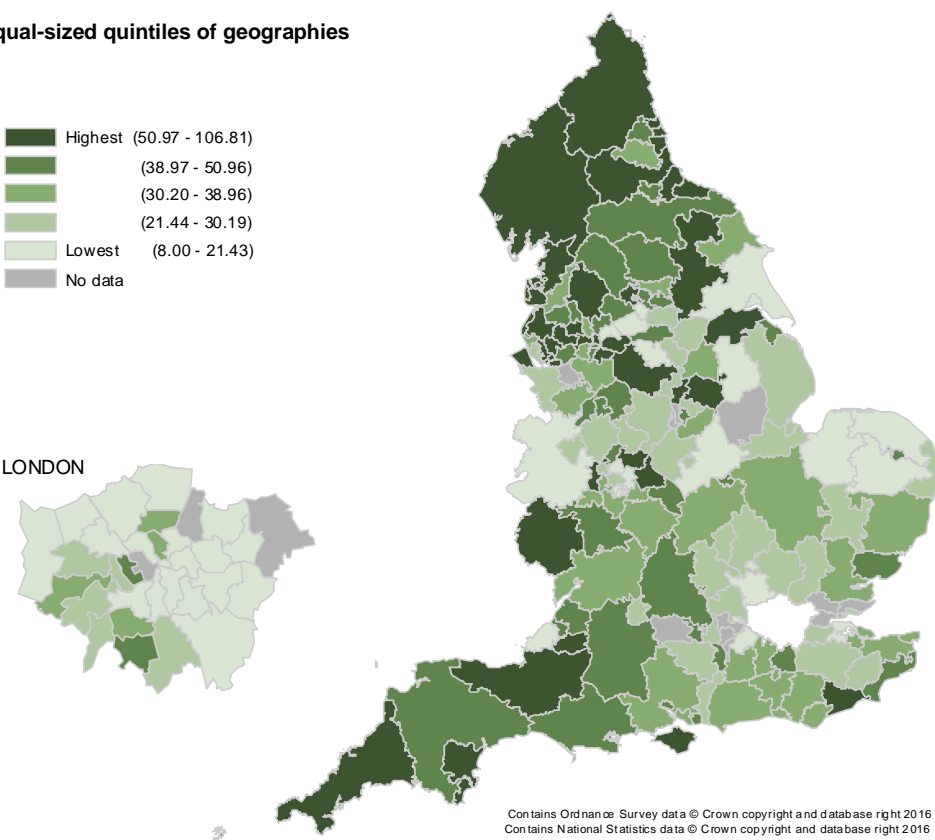
PHOF Domain 4: Healthcare public health and preventing premature mortality

OPTIMUM VALUE: LOW

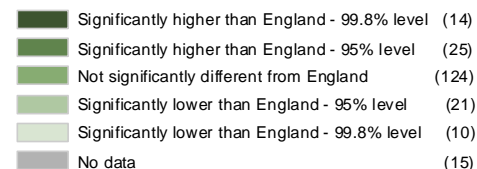
Equal-sized quintiles of geographies



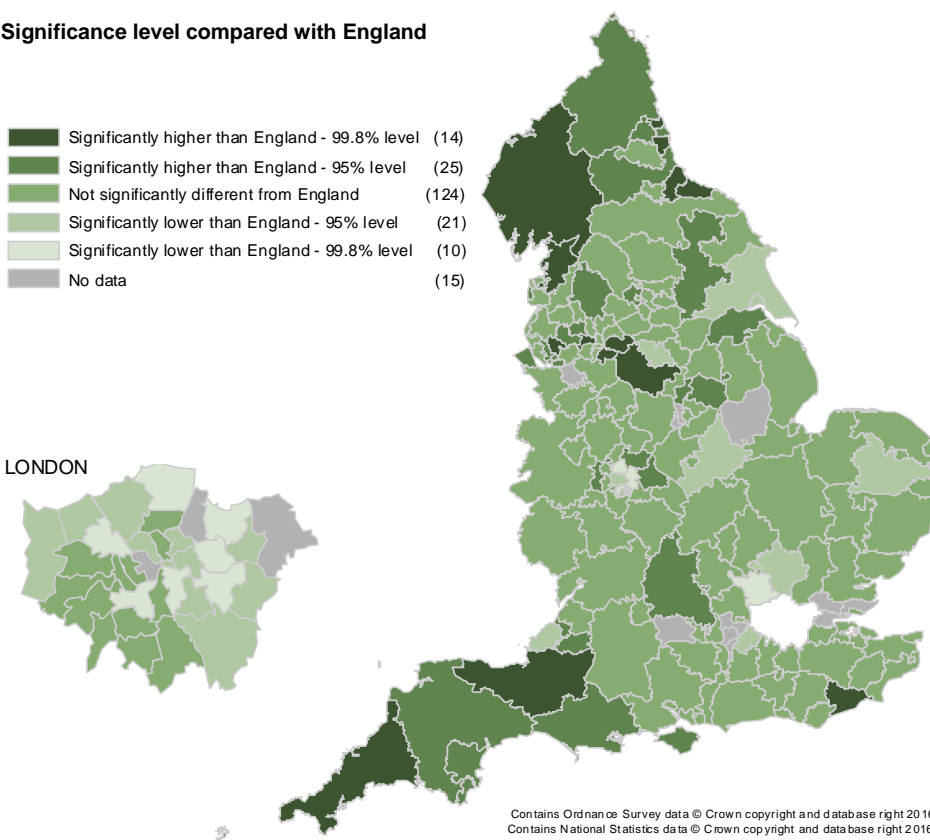
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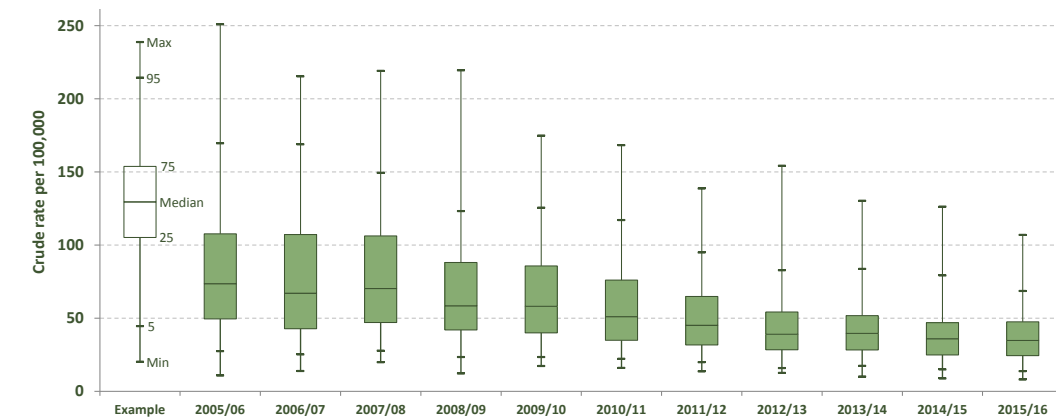
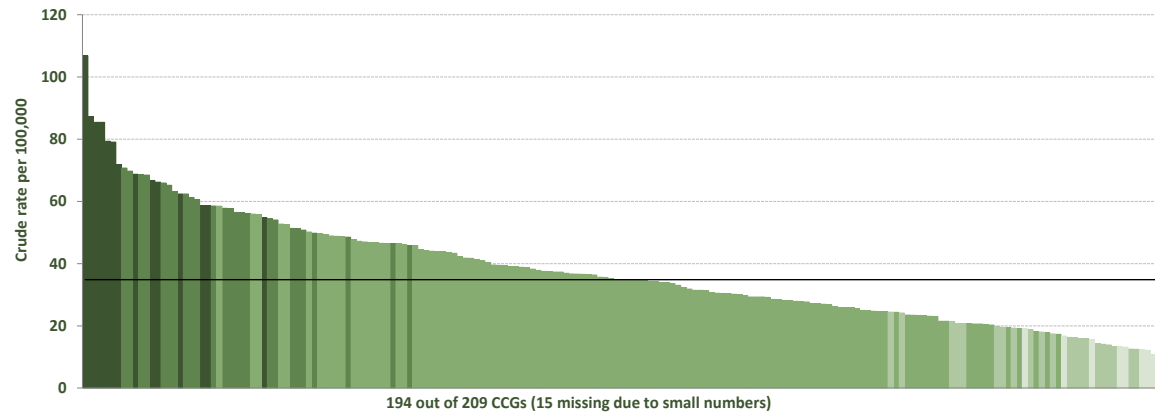
Significance level compared with England



LONDON



Variation in rate of alcohol-specific admissions in people aged under 18 years per population by CCG (2015/16)



	Example	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	
Max-Min (Range)		240.1	201.3	199.2	207.2	157.6	152.3	125.0	141.6	120.1	117.5	98.8	NARROWING Significant
95th-5th percentile		142.2	143.6	121.6	99.7	102.2	94.8	75.0	66.8	66.3	64.2	54.9	NARROWING Significant
75th-25th percentile		58.2	64.4	59.2	46.0	45.7	41.1	33.1	25.8	23.4	22.1	23.1	NARROWING Significant
Median		73.6	67.1	70.3	58.4	58.1	51.0	45.2	39.0	39.5	35.9	34.7	DECREASING Significant

Context

Young people are particularly susceptible to the harms of alcohol consumption and are more likely to drink and drive or sustain an alcohol-related injury.¹ Alcohol consumption in young people is associated with future alcohol misuse, educational problems and violent behaviour.^{2,3,4,5} Particular concern has centred on the volume and pattern of drinking among children and young people (Box 5.1), because starting to drink at an early age is associated with higher trends of alcohol dependence in adulthood and a wide range of other adverse consequences.⁶

Alcohol consumption among children aged 11 to 15 years has been steadily decreasing, and at the time of writing is at its lowest ever recorded levels.⁷ In 2014, 38% of pupils had drunk alcohol, but regular drinking in children is uncommon, with 4% of children aged 11 to 15 years reporting they drank alcohol at least once a week (regular) and a further 5% reporting they drank alcohol once a fortnight. Nearly half (49%) of pupils that drank alcohol in the previous 4 weeks, however, had been drunk; of these 63% had deliberately tried to get drunk.⁷ Self-reported drinking prevalence increases with age: from about 8% of children aged 11 years to almost 70% of young people aged 15 years who report drinking.⁷ There is also wide geographical variability in alcohol consumption among children aged 11 to 15 years

¹ Newbury-Birch D, Walker J, Avery L et al. Impact of alcohol consumption on young people: A systematic review of published reviews. Research Report DCSF-RR067. Department for children, schools and families. 2009. <http://dera.ioe.ac.uk/11355/1/DCSF-RR067.pdf>

² Healey C Rahman A, Faizal M, Kinderman P.. Underage drinking in the UK: changing trends, impact and interventions. A rapid evidence synthesis. International Journal of Drug Policy 2014; 25(1): 124-132.

³ Bellis MA et al. Teenage drinking, alcohol availability and pricing: a cross-sectional study of risk and protective factors for alcohol-related harms in school children. BMC Public Health 2009; 9(1): 380.

⁴ Best D, Manning V, Gossop M, Gross S, Strang J. Excessive drinking and other problem behaviours among 14–16 year old schoolchildren. Addictive behaviors 2006; 31(8):1424-1435.

⁵ Liang W, Chikritzhs T. Age at first use of alcohol predicts the risk of heavy alcohol use in early adulthood: A longitudinal study in the United States. International Journal of Drug Policy 2015; 26(2):131-134.

⁶ Department of Health. Guidance on the Consumption of Alcohol by Children and Young People. A report by the Chief Medical Officer. December 2009.

http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_110256.pdf

⁷ NHS Digital. Statistics on Alcohol England, 2017. Publication date: May 03, 2017. www.content.digital.nhs.uk/catalogue/PUB23940

ranging from 14.6% to 77.6% in local authorities across England.⁷

Professionals from a range of disciplines including health, education, social care and criminal justice agencies need to identify, assess and appropriately refer young people with alcohol-related problems.⁶

As an effective approach to tackling this issue, NICE recommends offering brief, one-to-one advice on the harmful effects of alcohol use, how to reduce the risks, and how to find sources of support.⁸ NICE also recommends cognitive behavioural therapy (CBT) as an effective intervention for treating young people's substance misuse.⁸ Specialist substance misuse treatment interventions are effective in young people: evidence-based techniques appear to reduce drop-out rates from treatment and confer benefit to aspects of a young person's life beyond their substance misuse.

Magnitude of variation

The maps and column chart display the data for 2015/16, during which CCG values ranged from 8.0 to 106.8 per 100,000 population, which is a 13.4-fold difference between CCGs. The England value for 2015/16 was 34.9 per 100,000 population.

The boxplot shows the distribution of CCG values for the period 2005/06 to 2015/16. There has been significant narrowing of all three measures of variation. The median decreased significantly from 73.6 per 100,000 in 2005/06 to 34.7 per 100,000 in 2015/16.

Much of the variation observed is likely to be due to differences in the rate of alcohol use. Other reasons for variation include differences in:

- the level of deprivation, which appears to have an adverse impact,
- the level of obesity, which can worsen the impact of alcohol,⁹
- demography
- coding for association with alcohol

Box 5.1: Patterns of drinking in children and young people

- 11 million units of alcohol are consumed in a week by 11–17-year-olds^{10,11}
- By 15 years of age, most children have drunk alcohol: 65% of 15- and 16-year-olds in the UK have drunk alcohol in the last month when compared with the European average of 57%¹²
- 400,000 young people aged 11–15 years were drunk in the previous four weeks¹⁰
- The majority of 15- and 16-year-olds associate alcohol consumption with positive consequences (75%) and having a lot of fun (68%)¹⁰
- Starting drinking at an early age is associated with higher trends of alcohol dependence in adulthood and a wide range of other adverse consequences⁶

Options for action

To reduce hospital admissions due to alcohol-specific conditions in young people, commissioners, clinicians and service providers need:

- to bring together all of the stakeholders in the local area working to reduce alcohol-related harm in young people and using the Alcohol CLeaR self-assessment tool (see 'Resources')

⁸ NICE. Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence. Clinical guideline [CG115]. Published date: February 2011. www.nice.org.uk/guidance/CG115

⁹ Liu B, Balkwill A, Reeves G, Beral V "010) Body mass index and risk of liver cirrhosis in middle aged UK women: prospective study. *Bmj*.2010;340:c912.(doi):10.1136/bmj.c912

¹⁰ NHS Information Centre (2012) Smoking, Drinking and Drug Use Among Young People in England 2011. www.ic.nhs.uk/pubs/sdd11fullreport

¹¹ Office for National Statistics (2010) General Lifestyle Survey

¹² HibbelB, Guttormsson U, Ahlström S, Balakireva O, Bjarnason T, Kokkevi A, Kraus L (2012). The 2011 ESPAD Report. Substance Use Among Students in 36 European Countries. www.espad.org/sites/espad.org/files/The_2011_ESPAD_Report_FULL_2012_10_29.pdf

- identify what is working well and the opportunities for further improvement
- to develop universal and targeted prevention interventions, and specialised interventions for young people already experiencing harm, using PHE's document 'Young people substance misuse JSNA support pack 2017-18: commissioning prompts' (see 'Resources')
- to ensure that targeted interventions are directed at vulnerable groups, including young people who began drinking regularly at under 15 years of age
- to adhere to the Royal College of Psychiatrists' practice standards for young people with substance misuse problems (see 'Resources')
- to follow NICE guidance (CG115; see 'Resources') and provide psychosocial interventions, such as CBT, as part of the service
- to conduct rigorous monitoring and evaluation to assess the impact of interventions

Specialist substance misuse services for young people need to be commissioned jointly with agencies such as social services to ensure both health and social care interventions are included.

RESOURCES

- NHS Digital. Statistics on Alcohol, England, 2017. Publication date: May 03, 2017. www.content.digital.nhs.uk/catalogue/PUB23940
- PHE Alcohol Learning Resources. Alcohol CLear self-assessment tool. www.alcohollearningcentre.org.uk/Topics/Browse/CLear/
- Public Health England. Young people substance misuse JSNA support pack 2017-18: commissioning prompts. Good practice prompts for planning comprehensive interventions. September 2016. www.nta.nhs.uk/uploads/jsna-support-pack-prompts-young-people-2017-final.pdf
- Royal College of Psychiatrists Centre for Quality Improvement. Practice standards for young people with substance misuse problems. 2012. www.rcpsych.ac.uk/pdf/Practice%20standards%20for%20young%20people%20with%20substance%20misuse%20problems.pdf
- NICE. Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence. Clinical guideline [CG115]. Published date: February 2011. www.nice.org.uk/guidance/CG115
- NICE. Alcohol-use disorders – prevention. Public health guideline [PH24]. Published date: June 2010. <http://guidance.nice.org.uk/PH24>
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ALCOHOL USE

Map 6: Variation in percentage of people aged 18 to 75 with alcohol use who completed structured treatment successfully and did not re-present to treatment within 6 months by upper-tier local authority (2015)

NHS Domain 1: Preventing people from dying prematurely

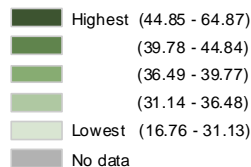
NHS Domain 2: Enhancing quality of life for people with long term conditions

NHS Domain 3: Helping people to recover from episodes of ill health or following injury

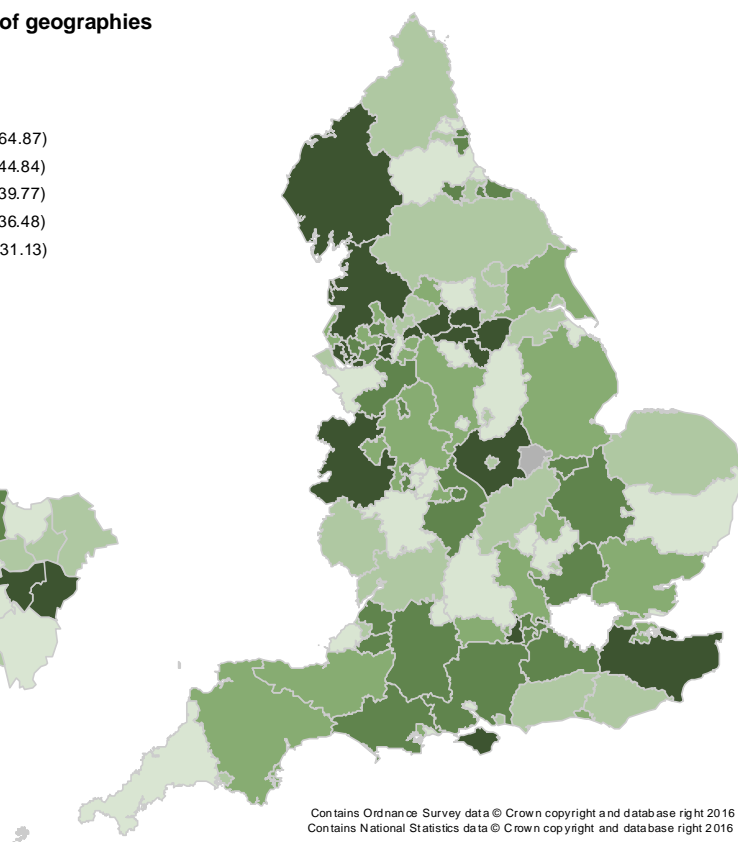
PHOF Domain 2: Health improvement

OPTIMUM VALUE: HIGH

Equal-sized quintiles of geographies

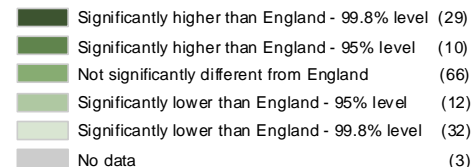


LONDON

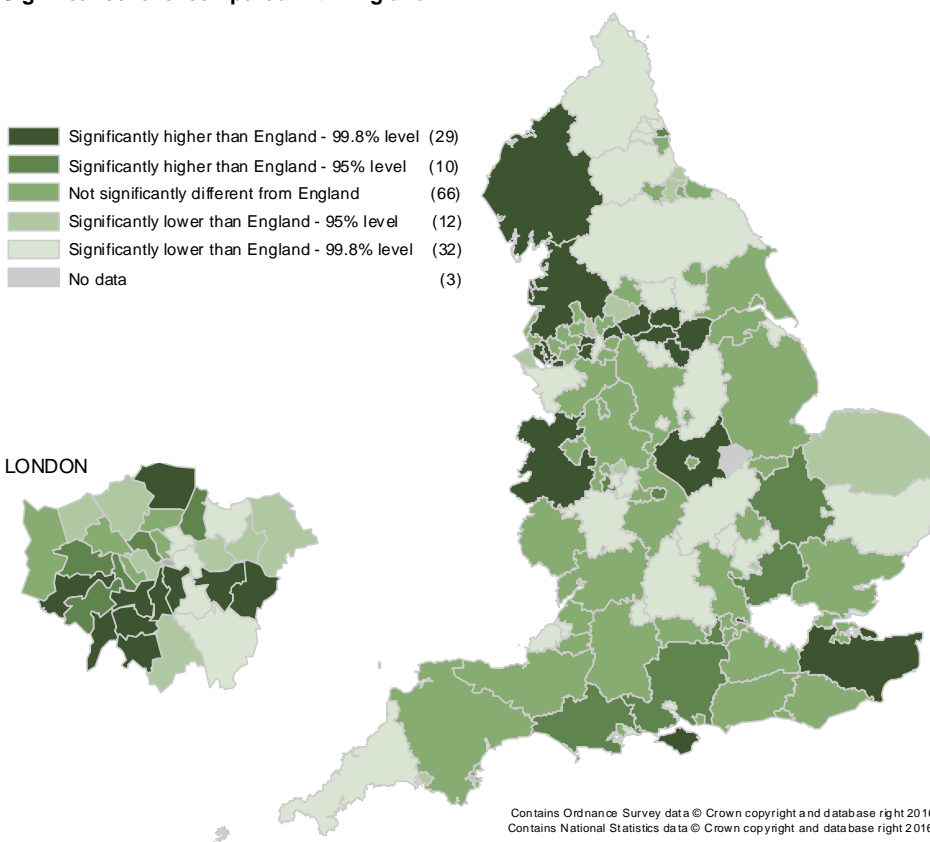


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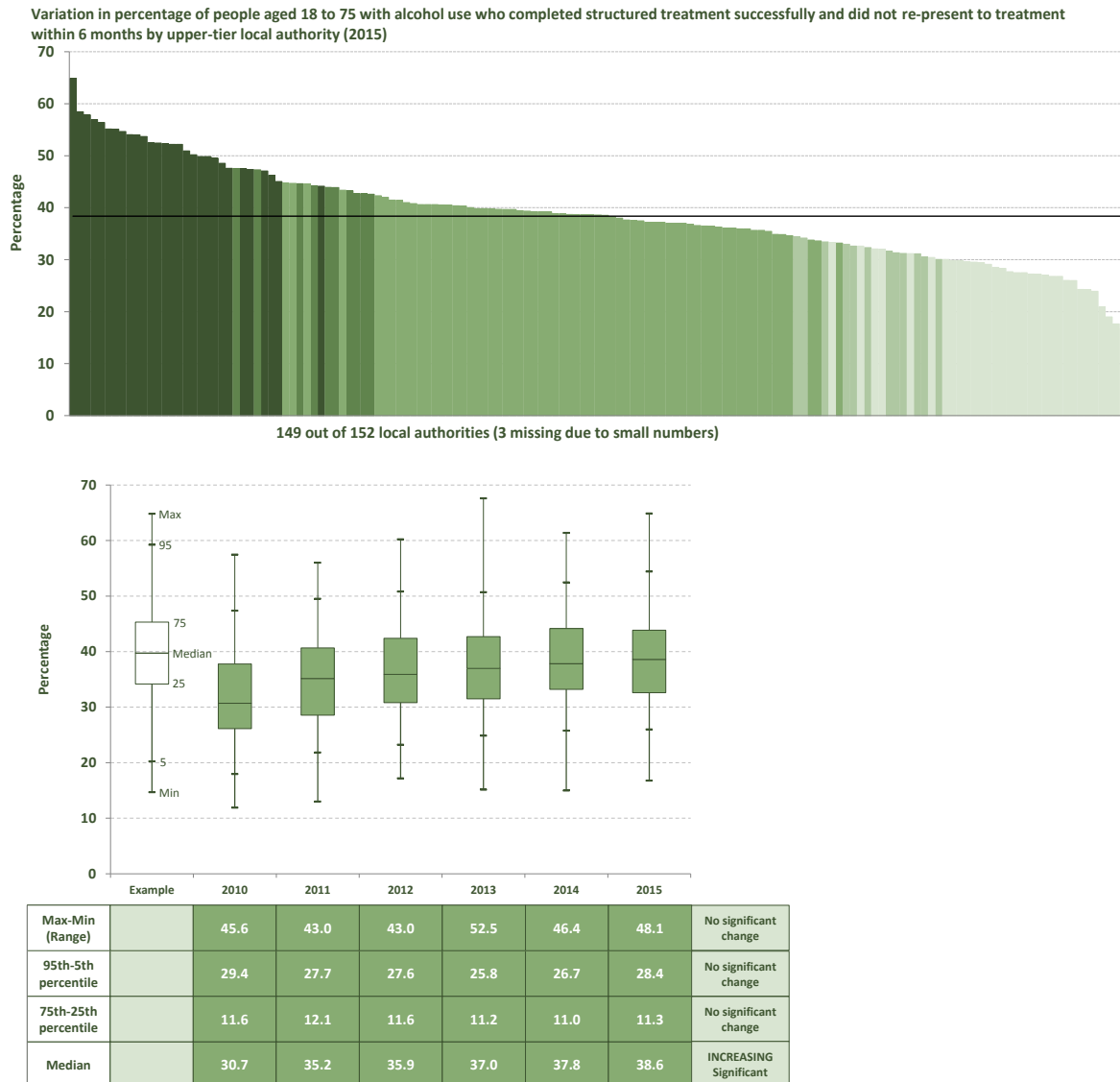
Significance level compared with England



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Context

In England alcohol use is the leading risk factor for early mortality, ill health and disability for people aged 15 to 49 years; for people of all ages it is the fifth leading risk factor.¹ Alcohol use can lead to cirrhosis of the liver and liver cancer.

In 2015 more working years of life were lost in England as a result of alcohol-related deaths than from the 10 leading causes of cancer combined.²

Alcohol use has considerable economic and human costs for government, society at large and individual drinkers and their associates. Economic estimates have placed the annual cost in high-income countries at between 1.4% and 2.7% of gross domestic product,³ equivalent to between £27 billion and £52 billion in England during 2016.²

Alcohol dependence is characterised by craving, tolerance, a preoccupation with alcohol and continued drinking despite harmful consequences. People with harmful or dependent levels of alcohol use can benefit from structured treatment, involving psychological and pharmacological interventions, which can increase people's motivation to change behaviour patterns and reduce alcohol consumption. In addition, to facilitate and sustain recovery, it is important for people with harmful or dependent levels of alcohol use to receive recovery support interventions and services, such as peer support, mutual aid and other positive social networks,

¹ GBD 2013 Risk Factors Collaborators, Forouzanfar MH, Alexander L, Anderson HR, Bachman VF, Biryukov S, Brauer M et al. Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. The Lancet 2015; 386(10010): 2287-2323. DOI: [https://doi.org/10.1016/S0140-6736\(15\)00128-2](https://doi.org/10.1016/S0140-6736(15)00128-2). Epub 2015 Sep 11.

² Burton R, Henn C, Lavoie D, O'Connor R, Perkins C, Sweeney K et al. A rapid evidence review of the effectiveness and cost-effectiveness of alcohol control policies: an English perspective. The Lancet 2016; 389(10078): 1558-1580. DOI: [http://dx.doi.org/10.1016/S0140-6736\(16\)32420-5](http://dx.doi.org/10.1016/S0140-6736(16)32420-5)

³ Rehm J, Mathers C, Popova S, Thavorncharoensap M, Teerawattananon Y, Patra J. Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. The Lancet 2009; 373(9682): 2223-2233. DOI: [http://dx.doi.org/10.1016/S0140-6736\(09\)60746-7](http://dx.doi.org/10.1016/S0140-6736(09)60746-7)

family/parenting support, education, training, employment and housing.

When young people present to specialist substance misuse services, the second most common substance about which they need help is alcohol, although young people are rarely dependent. In general the needs of young people with alcohol use problems are different from those of adults. Young people require psychosocial, harm reduction and family interventions rather than treatment for dependence, which only a minority of young people need.

Structured treatment for alcohol use is delivered according to a care plan which contains clear goals that are regularly reviewed with the client, and may involve several concurrent or sequential treatment interventions. In particular NICE judges the following interventions to be effective:

- cognitive behavioural therapy
- motivational enhancement therapy
- social behaviour and networks therapy
- behavioural therapies that apply principles of positive reinforcement
- behavioural couples therapy

Pharmacological therapies endorsed by NICE and licensed for use in the UK are benzodiazepines, usually chlordiazepoxide, for medically assisted withdrawal, nalmefene for consumption reduction in dependent drinkers and acamprosate, naltrexone and disulfiram for relapse prevention.

The point estimate of prevalence of people with alcohol dependence potentially in need of specialist assessment and treatment in England in 2014/15 was 595,131, which represents 1.39% of the population aged 18 years and over.⁴ This includes 313,753 with mild dependence (0.73%), 173,399 with moderate dependence (0.41%) and 107,979 with severe dependence (0.25%).⁴ This estimate of prevalence suggests there is considerable unmet need for treatment of alcohol dependence.

In 2015/16, 144,908 people with problematic or dependent levels of alcohol consumption were in contact with alcohol treatment services, 85,035 (58.7%) of whom were treated for alcohol use only and 59,873 (41.3%) for use of alcohol and other substances.⁵

Of people receiving treatment for alcohol use only:

- 61% were men
- 86% were White British, 2% White Irish and 4% 'Other White' (3% not stated)
- the median age was 45 years
- 51% referred themselves into treatment and 28% were referred into treatment through health and social care services
- the average waiting time to first intervention was 3.9 days⁴

Of the people who were given a prescribed intervention, 94% received them for less than 12 months. The majority of prescriptions were to enable safe withdrawal from alcohol dependence.⁴

Of the people who exited treatment:

- 62% completed treatment successfully, based on a clinical judgement that the person no longer had a need for structured treatment having achieved all care plan goals and overcome the dependent use of alcohol which brought them into treatment, after an average of 197.5 days
- 27% did not complete treatment⁴

⁴ Pryce R, Buykx P, Gray L, Stone T, Drummond C, Brennan A. Estimates of Alcohol Dependence in England based on APMS 2014, including Estimates of Children Living in a Household with an Adult with Alcohol Dependence. Prevalence, Trends and Amenability to Treatment. Prepared for Public Health England. March 2017. [www.nta.nhs.uk/uploads/estimates-of-alcohol-dependency-in-england\[0\].pdf](http://www.nta.nhs.uk/uploads/estimates-of-alcohol-dependency-in-england[0].pdf)

⁵ Public Health England, University of Manchester National Drug Evidence Centre, Department of Health. Adult substance misuse statistics from the National Drug Treatment Monitoring System (NDTMS) 1st April 2015 to 31st March 2016. Published November 2016. www.ndtms.net/Publications/downloads/Adult%20Substance%20Misuse/adult-statistics-from-the-national-drug-treatment-monitoring-system-2015-2016.pdf

- During treatment 1% of people died, 68% of whom were men⁴

Magnitude of variation

The maps and column chart display the data for 2015, during which local authority values ranged from 16.8% to 64.9%, which is a 3.9-fold difference between local authorities. The England value for 2015 was 38.4%.

The boxplot shows the distribution of local authority values for the period 2010 to 2015. There was no significant change in any of the three variation measures between 2010 and 2015. The median increased significantly from 30.7% in 2010 to 38.6% in 2015.

Possible reasons for the degree of variation observed include differences in:

- levels of social and health inequalities among people with alcohol use in local populations
- the timing of identification and referral of people with dependent alcohol use
- the availability of alcohol treatment and recovery services
- access to alcohol treatment and recovery services
- the level of service coverage
- the severity of dependence among people with alcohol use in local populations
- the co-use of other harmful substances such as opiate or non-opiate drugs
- physical and/or psychological co-occurring conditions
- social factors such as the level of support from family and social networks, involvement in the criminal justice system and homelessness
- compliance with treatment and treatment goals

Options for action

In light of unmet need commissioners, clinicians, service providers and other stakeholders need to undertake a comprehensive needs assessment locally in order to ascertain the level of alcohol-related harm and the need for structured treatment services and interventions.

To optimise structured treatment for alcohol use and meet the needs of clients, commissioners, clinicians and primary and secondary care service providers need:

- to enhance the understanding of all local partner agencies working to reduce alcohol-related harm about what is working well and the opportunities for further improvement using the Alcohol CLeaR self-assessment tool (see 'Resources')
- to develop plans for an integrated system for alcohol harm prevention, treatment and recovery in adults using Public Health England's document 'Adults – alcohol JSNA support pack 2017-18: commissioning prompts' (see 'Resources') and NICE guidance (PH24, CG115, CG100 and QS11; see 'Resources')
- to develop local alcohol treatment pathways that can be clearly understood (e.g. Department of Health guidance entitled 'Local Routes', see 'Resources')
- to conduct rigorous monitoring and evaluation to assess the impact of interventions on dependent drinking of all severities
- To improve outcomes for people receiving treatment for alcohol use, commissioners need to specify that service providers comply with NICE guidance (CG115, CG100 and QS11; see 'Resources').

Commissioners, clinicians and primary and secondary care providers also need:

- to explore opportunities for prevention and early detection in the health service, such as hospital alcohol liaison services, brief interventions in primary care and other settings and evidence-based screening in the NHS Health Check
- to review and develop local evidence-based awareness and behaviour change campaigns on alcohol with the aims of delaying the age of first use in young people and making lower risk drinking the

social norm (eg mentor-ADEPIS website, see 'Resources')

For guidance on planning and commissioning effective services for young people, see 'Resources'.

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⁶ The PHE Alcohol Learning Centre is scheduled to be moved to the GOV.UK website in November 2017.

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www.alcohollearningcentre.org.uk/eLearning
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<http://healthierlives.phe.org.uk/topic/drugs-and-alcohol>
- Public Health England. Public Health Outcomes Framework. Overarching indicators.
www.phoutcomes.info

ALCOHOL USE

Map 7: Variation in rate of premises licensed to sell or supply alcohol per population aged 18 years and over by lower-tier local authority per population (2016)

Crude rate per 1,000

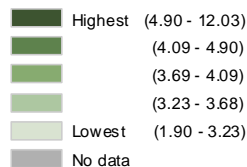
NHS Domain 1: Preventing people from dying prematurely

NHS Domain 2: Enhancing quality of life for people with long term conditions

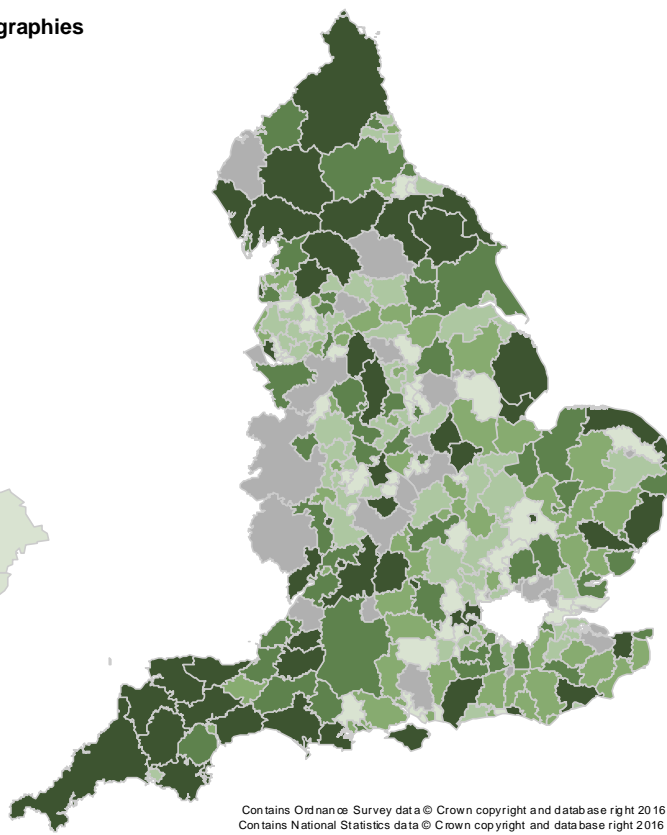
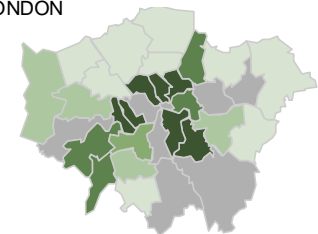
PHOF Domain 1: Improving the wider determinants of health

OPTIMUM VALUE: LOW

Equal-sized quintiles of geographies

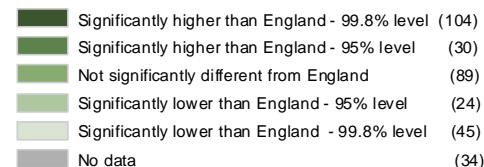


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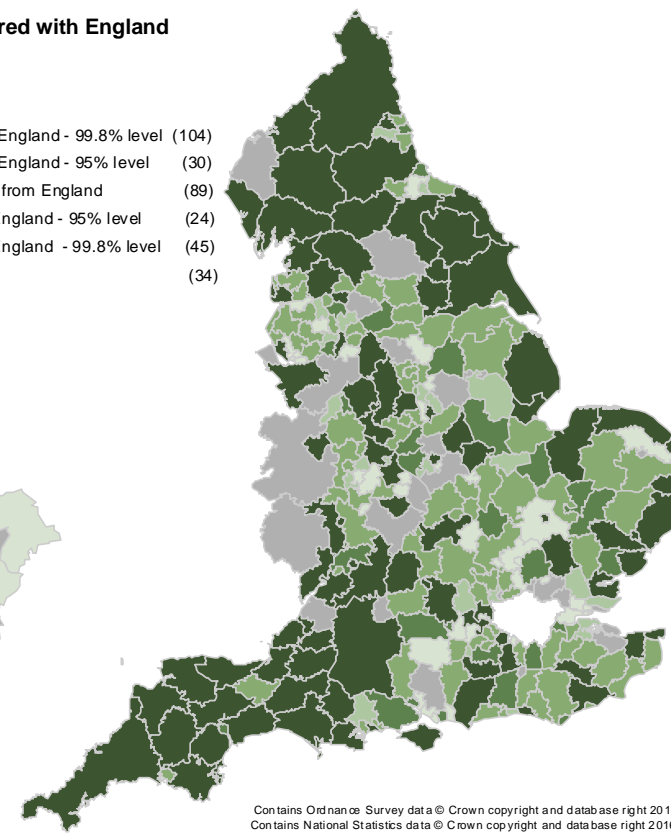
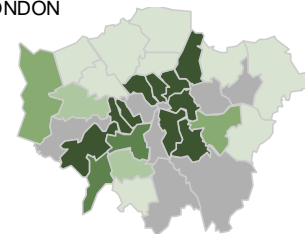


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Significance level compared with England

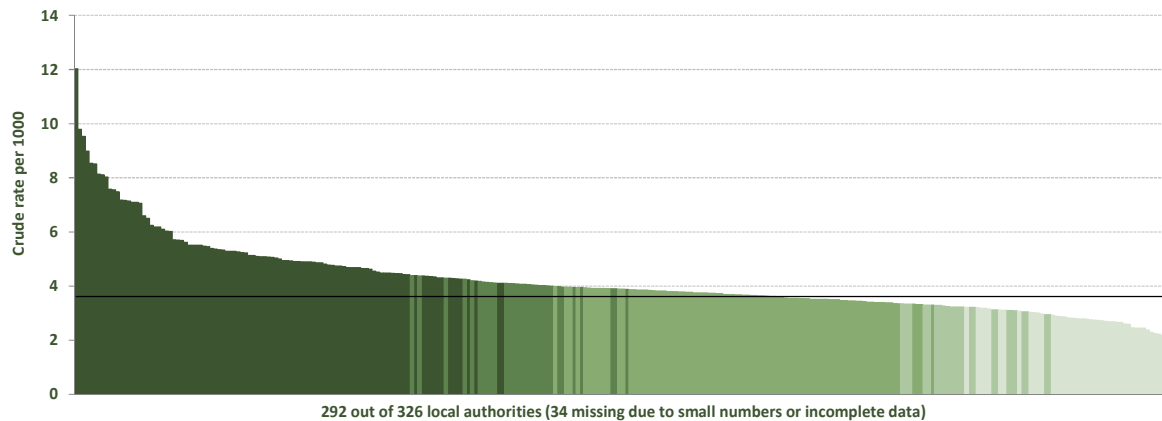


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Variation in rate of premises licensed to sell or supply alcohol per population aged 18 years and over by lower -tier local authority per population (2016)



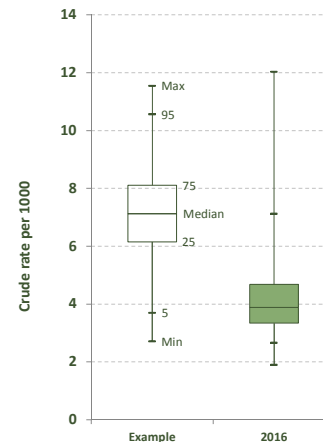
Context

Excessive alcohol consumption damages the liver and can lead to alcoholic liver disease, including fatty liver disease, alcoholic hepatitis and cirrhosis.¹ Liver disease is responsible for 86% of directly attributable mortality from alcohol in the UK.

Levels of alcohol consumption, for individuals or populations, are influenced by the accessibility of alcohol, which depends on three factors or drivers:

- availability
- affordability
- acceptability¹

The availability of alcohol is governed by the Licensing Act 2003 and the Licensing Act 2003 (Mandatory Conditions)



	Example	2016
Max-Min (Range)		10.1
95th-5th percentile		4.5
75th-25th percentile		1.3
Median		3.9

order 2014 (see 'Resources'). In addition the sale of alcohol below the cost of duty plus VAT was banned under the Licensing Act 2003 (Mandatory Conditions) order 2014.

The Licensing Act 2003, administered by local authorities, covers the sale, by retail, or supply of alcohol, the provision of regulated entertainment and the provision of late-night refreshment. The types of businesses and organisation that need a licence under the Licensing Act 2003 are pubs and bars, cinemas, theatres, nightclubs, late-opening cafes, takeaways and supermarkets and 'qualifying' clubs.

In 2016 there were 210,000 licensed premises in England and Wales, an increase of 4% on 2010.¹

Under the Licensing Act 2003 local authorities need to prepare and publish a statement of licensing policy (SLP), which includes a vision for the area and a statement of intent that guides practice when carrying out licensing functions. The SLP must be kept under review and the licensing authority may make any revisions to the SLP as it considers appropriate.

There are four statutory objectives of equal importance to be addressed when any licensing functions are undertaken:

- the prevention of crime and disorder
- public safety
- the prevention of public nuisance
- the protection of children from harm

The legislation also supports a number of other key aims and purposes. These are important and should be principal

¹ Public Health England. The Public Health Burden of Alcohol and the Effectiveness and Cost-effectiveness of Alcohol Control Practices. An evidence review. Published: December 2016.
www.gov.uk/government/uploads/system/uploads/attachment_data/file/583047/alcohol_public_health_burden_evidence_review.pdf

aims for all organisations and individuals involved in licensing work (see Box 7.1)

Under the Licensing Act 2003 health bodies and Directors of Public Health in England are responsible authorities who must be notified of applications and are entitled to make representations to the licensing authority if they determine there are appropriate grounds to do so.

The SLP could be used to highlight relevant local public health concerns in relation to alcohol harm and ways to address them. Before determining policy the licensing authority must consult with responsible authorities including public health. Public health should engage with the licensing authority early to establish when the SLP is to be reviewed and how public health can be involved.

Policies that sufficiently reduce the hours during which alcohol is available for sale, particularly late-night on-trade sales, can substantially reduce alcohol-related harm in the night-time economy.¹ There is also a clear relationship between the density of alcohol outlets and social disorder, however, research findings are more mixed for other outcomes.¹

In the Secretary of State's guidance issued under section 182 of the Licensing Act 2003 (see 'Resources') the phrase 'cumulative impact' of licensed premises is defined as:

'... the potential impact on the promotion of the licensing objectives of a significant number of licensed premises concentrated in one area. The number, type and density of licensed premises selling alcohol within an area may be such as to give rise to serious problems of crime, disorder and/or public nuisance.'

These can be referred to as cumulative impact zones or stress areas. The Home Office defines it as a cumulative impact policy (CIP).

For this indicator the denominator is per head of population aged 18 years and over; however in the Local Alcohol Profiles for England (LAPE; see 'Resources') there is an alternative formulation in which density of licensed premises is presented per square kilometre, indicating the spatial density of licensed premises in contrast to the population density, as shown here.²

Box 7.1: Key aims and purposes under section 182 of the Licensing Act 2003 (paragraph 1.5)

- Protecting the public and local residents from crime, antisocial behaviour and noise nuisance caused by irresponsible premises
- Giving the police and licensing authorities the powers they need to effectively manage and police the night-time economy and take action against premises that are causing problems
- Recognising the important role which pubs and other licensed premises play in our local communities by minimising the regulatory burden on businesses, encouraging innovation and supporting responsible premises
- Providing a regulatory framework for alcohol which reflects the needs of local communities and empowers local authorities to make and enforce decisions about the most appropriate licensing decisions in their local area
- Encouraging greater community involvement in licensing decisions and giving local residents the opportunity to have their say regarding licensing decisions that may affect them

Magnitude of variation

The maps and column chart display the data for 2016, during which local authority values ranged from 1.9 to 12.0 per 1,000 population, which is a 6.3-fold difference between local authorities. The England value for 2016 was 3.6 per 1,000 population. The boxplot shows the distribution of local authority values for 2016.

² Public Health England. Local Alcohol Profiles for England. Consumption and Availability. Indicator 18.01 Number of premises licensed to sell alcohol per square kilometre. NB: this indicator is available only at the geography of a lower-tier local authority.

Possible reasons for the degree of variation observed include differences in:

- historical and existing levels of demand in different local populations
- sociocultural norms around alcohol consumption and abstinence in different local populations
- licensing policy, including CIPs
- planning policy
- the nature and proportion of various sectors in different local economies, such as the leisure and entertainment industry, tourism, retail, business services, manufacturing or agriculture

Options for action

To reduce alcohol-related harm in relation to the availability of alcohol from licensed premises, the Director of Public Health and public health team can:

- identify the level of alcohol-related harm in the local population and the people most at risk using, for instance, the Local Alcohol Profiles for England (LAPE; see ‘Resources’)
- harvest local knowledge to identify hotspots of alcohol harm and/or high levels of consumption in the local area
- identify the types of applications that are likely to have a negative impact on the promotion of the statutory licensing objectives locally (eg a 24-hour vertical drinking establishment) and make those a priority for public health responses
- for each application about which it is deemed a priority to respond, the Director of Public Health/public health team can consider whether it would be appropriate to suggest the imposition of one or more licensing conditions (see ‘Resources’) to address relevant concerns
- engage with the regular (5-yearly or more frequently at the instigation of the licensing authority) review of the SLP and ensure that such involvement is relevant and appropriate to the promotion of the four statutory objectives for licensing
- involve the local health and wellbeing board and the wider public health community in the SLP review process
- engage the community and ascertain their views
- share data and evidence with other responsible authorities

The SLP can be reviewed for a specific reason such as to include a CIP; the Director of Public Health/Public Health Team can also submit alcohol harm-related information to such a review, including, for instance:

- the number of people in the area in structured treatment for alcohol use
- levels of deprivation in the area
- alcohol consumption levels in the area
- other statistics from LAPE

The Director of Public Health and other responsible authorities (police, fire service, child protection services, environmental health, trading standards, health and safety, planning and the licensing authority) can work together to discuss and address the impact of licensed premises on the local population, for instance, in a joint local licensing group or forum.

The Director of Public Health can also consider engaging with schemes such as Pubwatch, Best Bar None and community alcohol partnerships.

RESOURCES

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- Public Health England. Local Alcohol Profiles for England <https://fingertips.phe.org.uk/local-alcohol-profiles>
- PHE Alcohol Learning Resources³ www.alcohollearningcentre.org.uk

³ The PHE Alcohol Learning Centre is scheduled to be moved to the GOV.UK website in November 2017.

HEPATITIS C

Map 8: Variation in rate of laboratory reports for confirmed hepatitis C per population by region (2015)

Crude rate per 100,000

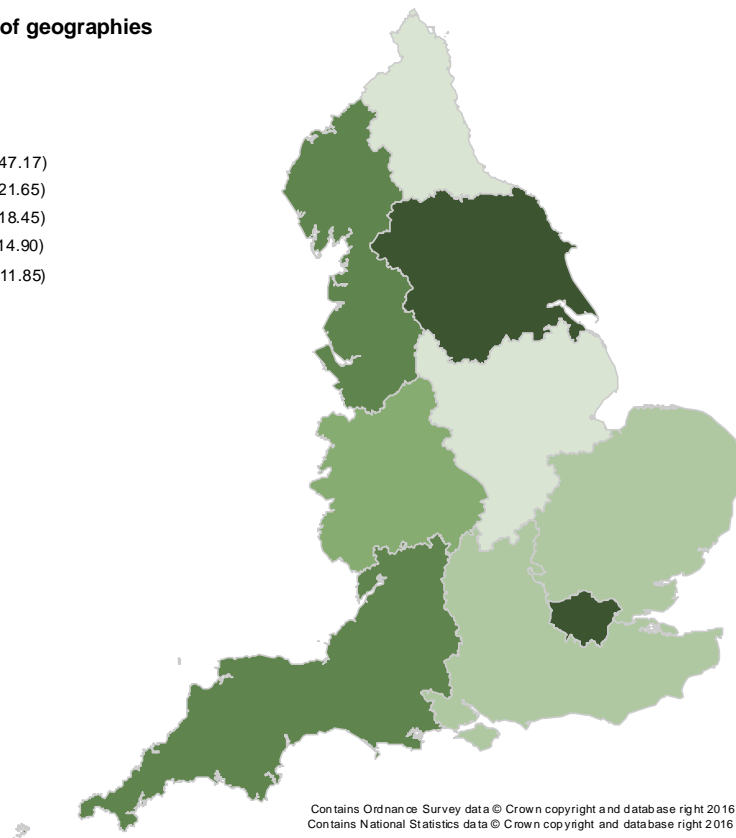
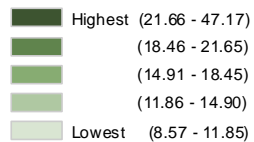
NHS Domain 1: Preventing people from dying prematurely

NHS Domain 2: Enhancing quality of life for people with long term conditions

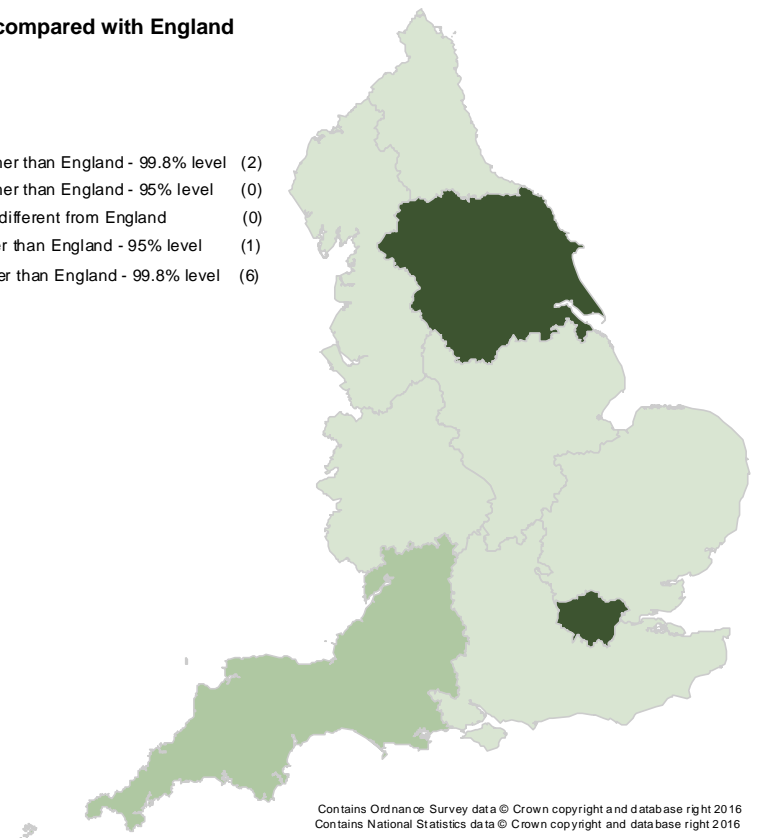
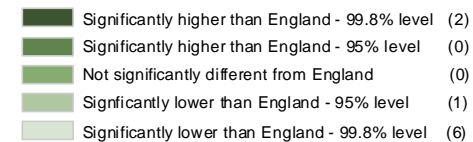
PHOF Domain 3: Health protection

OPTIMUM VALUE: REQUIRES LOCAL INTERPRETATION

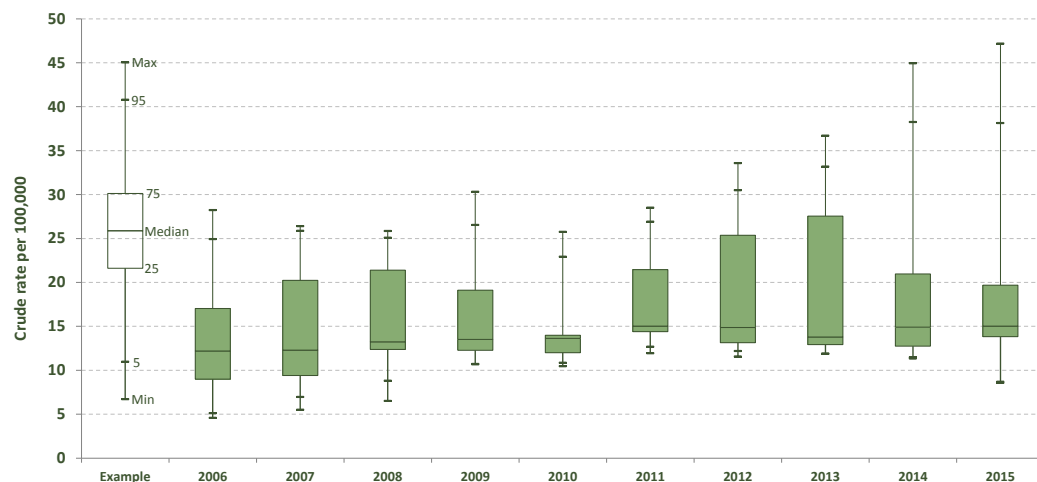
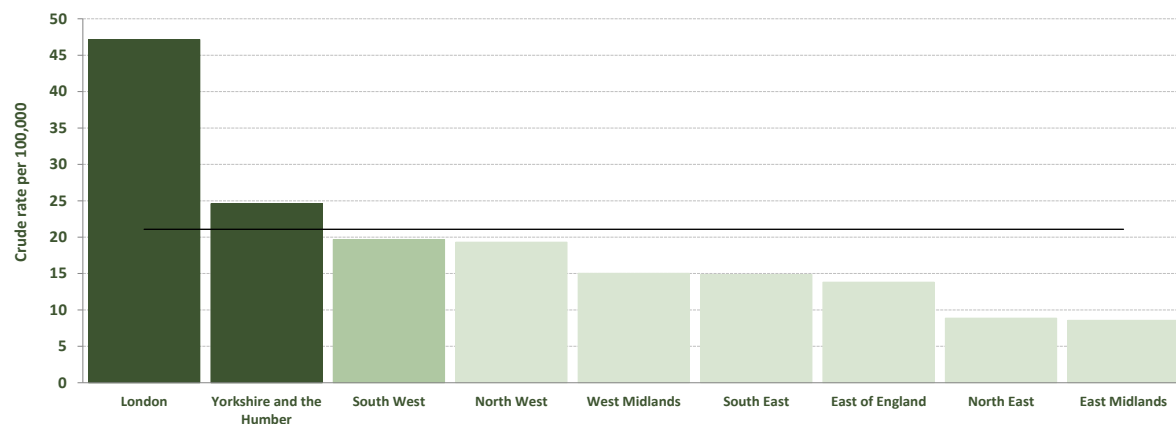
Equal-sized quintiles of geographies



Significance level compared with England



Variation in rate of laboratory reports for confirmed hepatitis C per population by region (2015)



Max-Min (Range)	Example	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
		23.6	20.9	19.4	19.6	15.3	16.6	22.0	24.8	33.6	38.6	WIDENING Significant
95th-5th percentile		19.8	18.9	16.3	15.8	12.1	14.2	18.3	21.3	26.8	29.4	No significant change
75th-25th percentile		8.0	10.8	9.0	6.8	2.0	7.1	12.2	14.6	8.2	5.9	No significant change
Median		12.2	12.3	13.2	13.5	13.6	15.0	14.9	13.8	14.9	15.0	INCREASING Significant

Context

Hepatitis C is a bloodborne viral infection that is transmitted through contact with infected blood. In the UK the most important risk factor for hepatitis C infection is injecting drug use.¹ About 70 to 75% of people infected with acute hepatitis C develop a chronic condition which can result in liver failure and liver cancer. The most recent national estimates suggest that 214,000 people in the UK are chronically infected with hepatitis C,¹ 160,000 of whom are thought to live in England.²

Acute hepatitis C is a notifiable disease. Public Health England (PHE; formerly the Health Protection Agency) introduced national surveillance standards for hepatitis C in 2007. Statutory laboratory reporting was introduced in 2010. Prior to the introduction of statutory laboratory reporting there was considerable under-reporting of hepatitis C diagnoses.³

Surveillance of hepatitis C enables the targeting of preventive and control measures.

¹ Public Health England. Hepatitis C in the UK 2015 report.

www.gov.uk/government/uploads/system/uploads/attachment_data/file/448710/NEW_FINAL_HCV_2015_IN_THE_UK_REPORT_28072015_v2.pdf

² Harris RJ, Ramsay M, Hope V et al. Hepatitis C prevalence in England remains low and varies by ethnicity: an updated evidence synthesis. *European Journal of Public Health* 2012; 22 (2): 187–92.

³ Health Protection Agency. Hepatitis C in the UK: 2012 Report.

www.hcvaction.org.uk/sites/default/files/resources/Hepatitis%20C%20in%20the%20UK%202012%20Report%20%28Health%20Protection%20Agency%29.pdf

During 2015 in England and Wales there were 11,626 confirmed laboratory reports of hepatitis C, a decrease of 3.1% in the number of reports when compared with that in 2014.⁴ Where known, more than two-thirds of laboratory reports (69%) were in men.⁴ Where known, more than half of laboratory reports (53%) were in people aged between 15 and 44 years, and almost half (45%) were in people aged 45 years and over.⁴ Since 2006 the highest number of reports of hepatitis C has consistently been seen in people aged 15 to 44 years.⁴

Magnitude of variation

The maps and column chart display the data for 2015, during which region values ranged from 8.6 to 47.2 per 100,000 population, which is a 5.5-fold difference between regions. The England value for 2015 was 21.1 per 100,000 population.

The boxplot shows the distribution of region values for the period 2006 to 2015. The maximum to minimum range widened significantly. The median increased significantly from 12.2 per 100,000 population in 2006 to 15.0 per 100,000 population in 2015.

There are several possible reasons for the degree of variation observed, including differences in:

- the demography of local populations – some ethnic groups may have a higher prevalence of hepatitis C
- the level of injecting drug use in the local population
- prevalence of newly diagnosed cases of hepatitis C, people who may require treatment
- incidence of new cases of hepatitis C
- coverage of laboratory reporting
- the level of investment in laboratory services
- the organisation of local services
- access to services for testing and counselling
- effectiveness of local preventive measures, for example, needle exchange and opioid substitution programmes

Regional variation in the number of laboratory reports for hepatitis C in England has persisted. The percentage change in the number of reports between 2010 and 2011, however, also varied

among regions. This is as a result of the introduction of statutory reporting in 2010, which led to the initiation of reporting at laboratories in regions that had not reported previously.

Options for action

To improve and increase laboratory reporting for hepatitis C, commissioners, local authorities (Directors of Public Health), health and wellbeing boards, clinicians and providers of primary care, secondary care and public health services need to work in partnership:

- to review the completeness of reporting by laboratories responsible for reporting hepatitis C in the locality
- to identify the level of increase in hepatitis C that has taken place in the local population over the last 5 to 10 years
- to review the local demographic profile of people at risk and use the data to help improve the identification and treatment of people with hepatitis C
- to introduce consistent methods of reporting, for example, polymerase chain reaction (PCR) results
- to ensure that treatment outcomes, such as sustained viral response (SVR) rates, are measured against the number of people testing positive in the community, given that the purpose of testing is to identify patients who need treatment

In accordance with NICE guidance PH43 (see 'Resources') commissioners should commission integrated services for

⁴ Public Health England. Health Protection Report weekly report. Infection Reports. Volume 10, Number 24. Published on 22 July 2016. Immunisation. Laboratory reports of hepatitis A infection, and hepatitis C: 2015. www.gov.uk/government/uploads/system/uploads/attachment_data/file/540334/hpr2416_hepAC.pdf

hepatitis C testing and treatment and laboratory services for testing, with testing perceived as part of a care pathway covering diagnosis, treatment and immunisation.

Laboratory services providing hepatitis C testing should:

- have Clinical Pathology Accreditation (UKAS; see 'Resources')
- be able to support the range of samples used for hepatitis C testing (or refer the sample to a laboratory that can perform the test)
- automatically test samples positive for hepatitis C antibody for the presence of hepatitis C virus, for example, PCR assay (or refer the sample to a laboratory that can perform the test)
- deliver results within 2 weeks of receipt of the sample together with an accurate interpretation of the laboratory results and guidance of the future management of confirmed cases
- provide accurate data according to the items listed in Box 8.1

Box 8.1: Data on hepatitis C testing required from laboratory services (NICE PH43; see 'Resources')

- Number of people tested and the type of test performed
- Referral source of samples
- Exposure category (if provided)
- Number of people testing positive, which should include PCR positive/current and PCR negative/resolved

Standards for local surveillance and follow-up of hepatitis C (see 'Resources') need to be followed, including laboratory reporting to PHE centres in line with national public health legislation.

Commissioners need to specify that primary care, secondary care and public health service providers follow NICE guidance PH43, including as relevant:

- increasing awareness of hepatitis C infection among healthcare professionals and people at risk of hepatitis infection to increase the number of people who are tested and the level of undiagnosed infection reduced
- raising awareness and understanding of hepatitis C in primary care, for instance, through e-learning (see 'Resources') or training

- exploring ways of sustaining the level of testing among people attending drug services
- expanding the use of newer technologies, such as dried blood testing, to facilitate testing in non-clinical settings
- where relevant identifying ways of enhancing testing across the prison estate

RESOURCES

- Public Health England. Hepatitis C in the UK 2015 report. www.gov.uk/government/uploads/system/uploads/attachment_data/file/448710/NEW_FINAL_HCV_2015_IN_THE_UK_REPORT_28072015_v2.pdf
- Public Health England. Health Protection Report weekly report. Infection Reports. Volume 10, Number 24. Published on 22 July 2016. Immunisation. Laboratory reports of hepatitis A infection, and hepatitis C: 2015. www.gov.uk/government/uploads/system/uploads/attachment_data/file/540334/hpr2416_hepAC.pdf
- Department of Health. Health Protection Legislation (England) Guidance 2010. http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digital_assets/@dh/@en/@ps/documents/digitalasset/dh_114589.pdf
- Health Protection Agency. Standards for local surveillance and follow-up of hepatitis B and C. 2011. www.gov.uk/government/uploads/system/uploads/attachment_data/file/324052/Standards_surveillance_follow_up_hep_B_and_C_final_.pdf
- NICE. Hepatitis B and C testing: people at risk of infection. Public health guideline [PH43]. Published date: December 2012. Last updated: March 2013. www.nice.org.uk/guidance/ph43

- NICE interactive flowchart. Hepatitis B and C testing overview.
<https://pathways.nice.org.uk/pathways/hepatitis-b-and-c-testing>
- RCGP Learning. RCGP Clinical Courses and Certifications. 'Hepatitis B & C', and 'Hepatitis C: Enhancing Prevention, Testing and Care'.
<http://elearning.rcgp.org.uk/course/index.php?categoryid=8>
- United Kingdom Accreditation Service (UKAS). Clinical Pathology Accreditation.
www.ukas.com/services/accreditation-services/clinical-pathology-accreditation/

HEPATITIS C

Map 9: Variation in estimated prevalence of injecting of opiate and/or crack cocaine in people aged 15 to 64 years per population by upper-tier local authority (2011/12)

Crude rate per 1,000

NHS Domain 1: Preventing people from dying prematurely

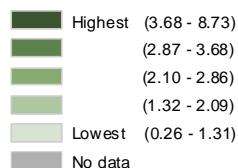
NHS Domain 2: Enhancing quality of life for people with long-term conditions

NHS Domain 5: Treating and caring for people in safe environment and protecting them from avoidable harm

PHOF Domain 2: Health improvement

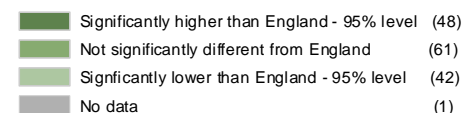
OPTIMUM VALUE: LOW

Equal-sized quintiles of geographies

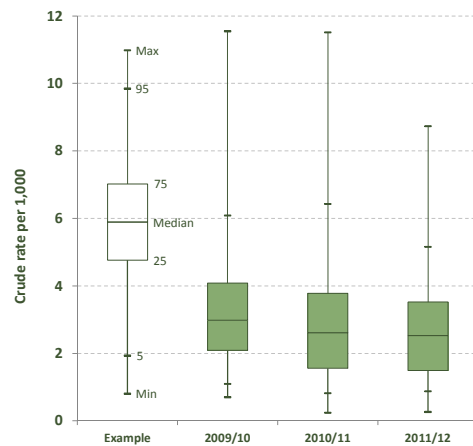
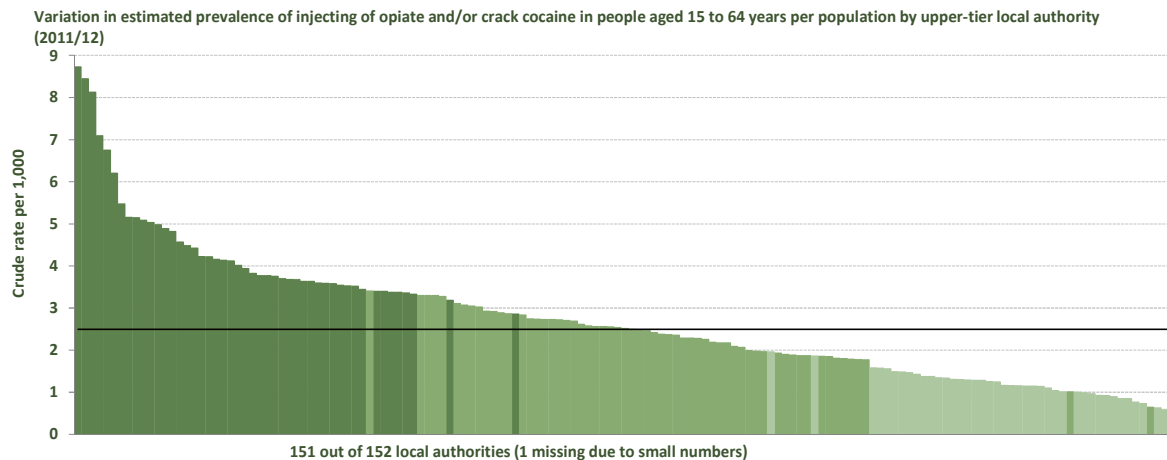


LONDON

Significance level compared with England



LONDON



Max-Min (Range)		10.8	11.3	8.5	No significant change
95th-5th percentile		5.0	5.6	4.3	No significant change
75th-25th percentile		2.0	2.2	2.0	No significant change
Median		3.0	2.6	2.5	No significant change

Context

In the UK people who inject drugs are at the greatest risk of hepatitis C infection; they are also at risk of hepatitis B infection. A capacity to identify differences in the levels of injecting drug use in different areas of the country is important when assessing the disease burden from hepatitis C and its implications for prevention and vaccination. Information about the number of people who inject drugs is also key to formulating effective policies for tackling related harms.

Undertaking direct counts of people engaged in a largely covert activity, such as the use of class A drugs and in particular injecting drug use, is difficult. Indirect techniques that use various data sources tend to offer more reliability, although such prevalence estimates need to be treated with caution because they are difficult to validate.

The prevalence estimates for this indicator include people aged 15 to 64 years, resident in each local authority area, and known to be injecting opiate drugs and/or crack cocaine. The data is from the fifth round of a series of annual estimates of the prevalence of opiate and/or crack cocaine use and injecting in England at a national, regional and local level (see 'Resources').

There has been a statistically significant decrease in the national estimate of opiate and/or crack cocaine use between 2008/09 and 2009/10, and in injecting drug use between 2006/07 and 2009/10.¹

¹ Further results and a detailed explanation of the methodology can be found in the report of the study: Hay G, Dos Santos AR, Worsley J, Millar T. Estimates of the Prevalence of Opiate Use and/or Crack Cocaine Use, 2011/12. Liverpool John Moores University. www.nta.nhs.uk/uploads/estimates-of-the-prevalence-of-opiate-use-and-or-crack-cocaine-use-2011-12-summary-report-v2.pdf

Other drugs that can be taken by injection include:

- other psychoactive drugs, such as cocaine and amphetamines
- image and performance-enhancing drugs

Magnitude of variation

The maps and column chart display the data for 2011/12, during which local authority values ranged from 0.3 to 8.7 per 1,000 population, which is a 33.7-fold difference between local authorities. The England value for 2011/12 was 2.5 per 1,000 population.

The boxplot shows the distribution of local authority values for 2009/10 to 2011/12.

There was no significant change in any of the three variation measures between 2009/10 and 2011/12.

Options for action

When planning service improvement and development for people who inject drugs, local areas, commissioners, clinicians and service providers could review:

- prevalence estimates for the locality
- the degree of contact with this underserved, high-risk group
- strategies for prevention and case-identification locally and their success in reducing the risk of hepatitis C
- barriers to treatment for people diagnosed with hepatitis C
- ways to address barriers to treatment to reduce hepatitis C and liver disease in this underserved, high-risk group
- access to vaccination against hepatitis B

RESOURCES

- Hay G, Dos Santos AR, Worsley J, Millar T. Estimates of the Prevalence of Opiate Use and/or Crack Cocaine Use, 2011/12. Liverpool John Moores University.
www.nta.nhs.uk/uploads/estimates-of-the-prevalence-of-opiate-use-and-or-crack-cocaine-use-2011-12-summary-report-v2.pdf

HEPATITIS C

Map 10: Variation in percentage of hepatitis C test uptake among people who inject drugs receiving drug treatment by upper-tier local authority (2015/16)

NHS Domain 1: Preventing people from dying prematurely

NHS Domain 2: Enhancing quality of life for people with long-term conditions

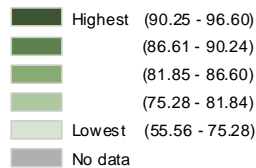
NHS Domain 3: Helping people to recover from episodes of ill health or following injury

NHS Domain 5: Treating and caring for people in safe environment and protecting them from avoidable harm

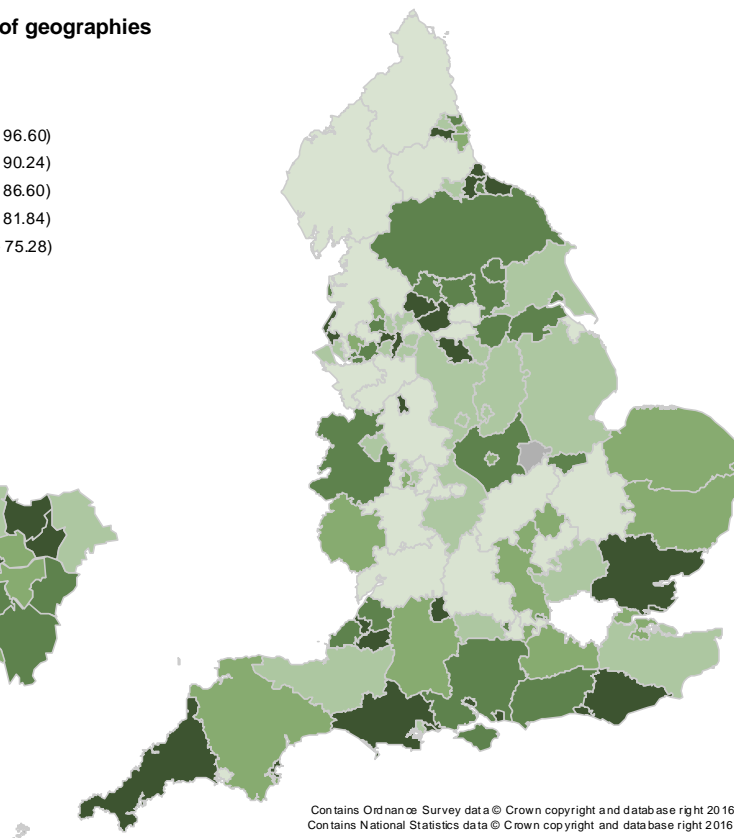
PHOF Domain 3: Health protection

OPTIMUM VALUE: HIGH

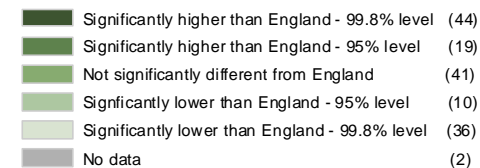
Equal-sized quintiles of geographies



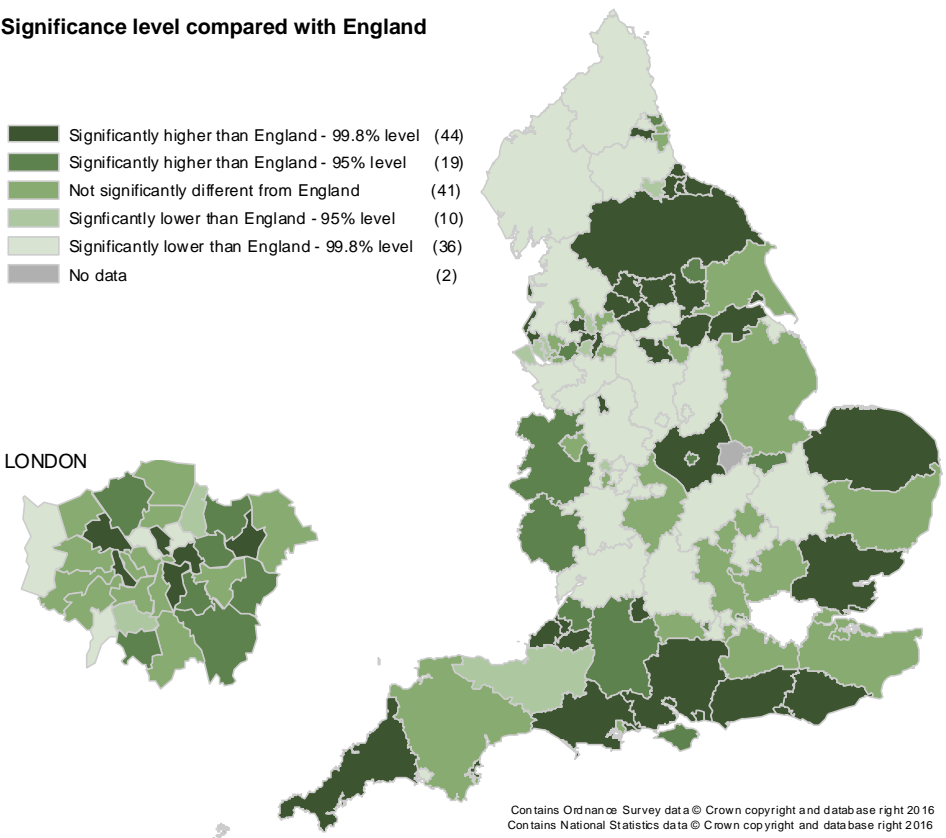
LONDON

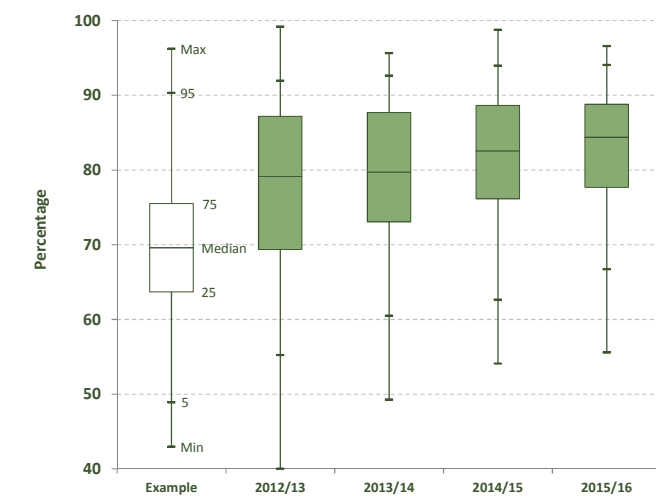
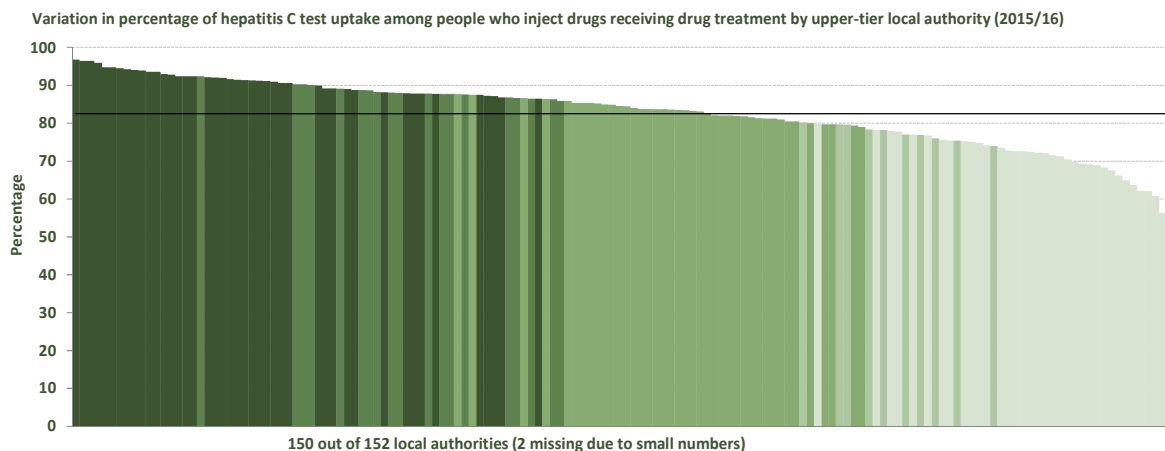


Significance level compared with England



LONDON





Max-Min (Range)		59.2	46.4	44.7	41.0	No significant change
95th-5th percentile		36.7	32.1	31.3	27.3	NARROWING Significant
75th-25th percentile		17.8	14.7	12.5	11.1	NARROWING Significant
Median		79.1	79.7	82.5	84.4	INCREASING Significant

Context

In the UK people who inject drugs are at greatest risk of hepatitis C infection. Infection is acquired when people share contaminated injecting equipment that has been used by people with hepatitis C.

Preventing the spread of hepatitis C is an important public health issue, which can have wide-reaching benefits, reducing health harms for individuals and the subsequent cost to society.

People at risk of hepatitis C infection should be offered access to screening tests and tests to confirm hepatitis C infection. Testing can be an important step:

- to help people with hepatitis C understand the implications of the infection for their health
- to address any barriers preventing access to treatment services
- to deliver treatment with an intention to cure
- to help prevent the spread of disease to other people

Magnitude of variation

The maps and column chart display the data for 2015/16, during which local authority values ranged from 55.6% to 96.6%, which is a 1.7-fold difference between local authorities. The England value for 2015/16 was 82.5%.

The boxplot shows the distribution of local authority values for the period 2012/13 to 2015/16. Both the 95th to 5th percentile gap and the 75th to 25th percentile gap narrowed significantly. The median increased significantly from 79.1% in 2012/13 to 84.4% in 2015/16.

Options for action

When planning services for people at increased risk of hepatitis C, local authorities should assess local need and work with their commissioned services:

- to review the percentage of people receiving drug treatment who are offered and accept hepatitis C testing
- to ascertain the reasons for low rates of testing
- to ensure that professionals working in drug services understand the importance of and reasons for the offer of testing for hepatitis C
- to agree and implement strategies for improving hepatitis C test uptake and access to treatment services

RESOURCES

- Public Health England. Hepatitis C in England 2017 report. www.gov.uk/government/uploads/system/uploads/attachment_data/file/599738/hepatitis_c_in_england_2017_report.pdf
- Public Health England. Hepatitis C in England 2016 report. www.gov.uk/government/uploads/system/uploads/attachment_data/file/565459/Hepatitis_C_in_the_UK_2016_report.pdf
- NICE. Hepatitis B and C testing: people at risk of infection. Public health guideline [PH43]. Published date: December 2012. Last updated: March 2013. www.nice.org.uk/guidance/ph43
- NICE interactive flowchart. Hepatitis B and C testing overview. <https://pathways.nice.org.uk/pathways/hepatitis-b-and-c-testing>
- Public Health England. Turning evidence into practice: Improving access to, and completion of, hepatitis C treatment. July 2015. www.hcvaction.org.uk/resource/turning-evidence-practice-improving-access-and-completion-hepatitis-c-treatment
- Public Health England. Turning evidence into practice: Preventing blood-borne virus transmission among people who inject drugs. September 2015. www.nta.nhs.uk/uploads/teip-bbv-2015.pdf
- Department of Health (England) and the devolved administrations. Drug Misuse and Dependence: UK guidelines on clinical management. London: 2007. www.nta.nhs.uk/uploads/clinical_guidelines_2007.pdf
- Harm Reduction Works – campaign materials. www.harmreductionworks.org.uk/

HEPATITIS C

Map 11a: Variation in rate of hospital admissions for hepatitis C-related end-stage liver disease or hepatocellular carcinoma per population by Sustainability Transformation Partnerships (STP) (2012/13 - 2014/15)

Crude rate per 1,000,000

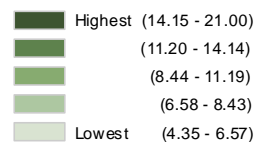
NHS Domain 4: Ensuring that people have a positive experience of care

NHS Domain 5: Treating and caring for people in a safe environment and protecting them from avoidable harm

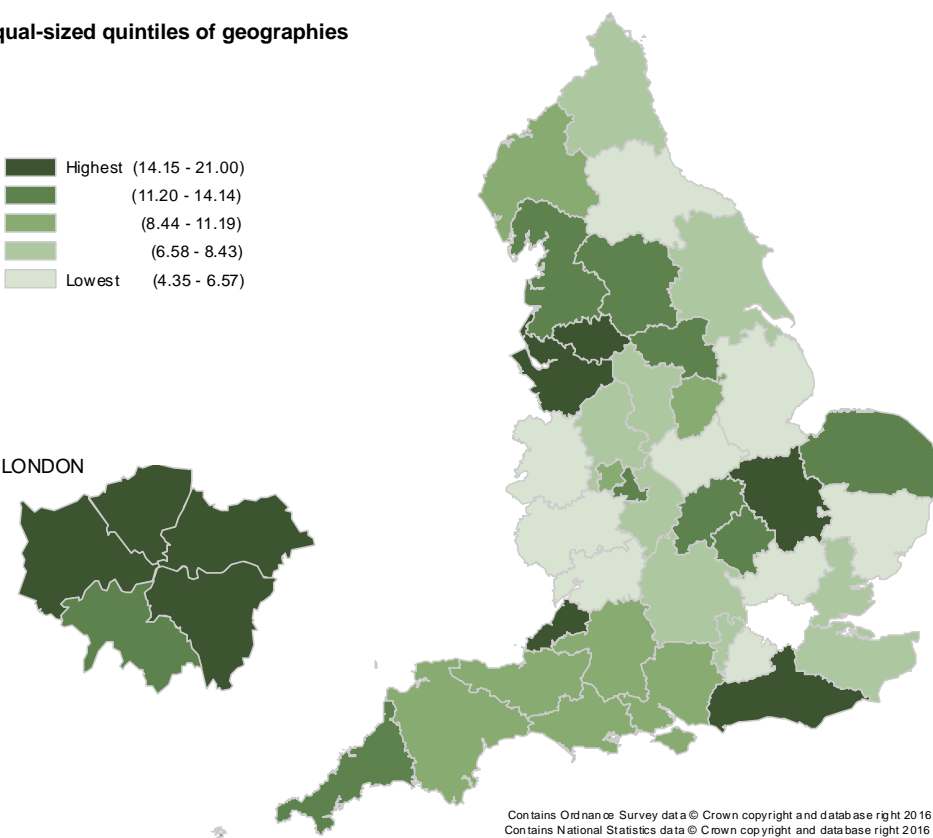
PHOF Domain 4: Healthcare public health and preventing premature mortality

OPTIMUM VALUE: LOW

Equal-sized quintiles of geographies

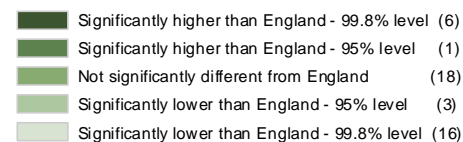


LONDON

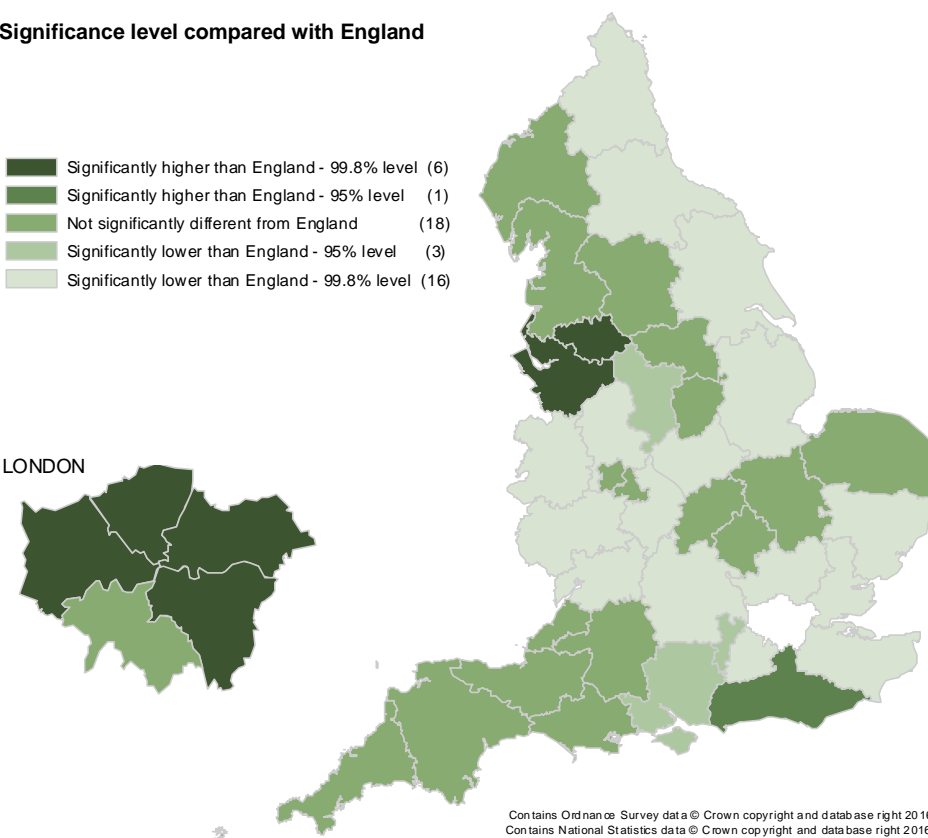


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Contains National Statistics data © Crown copyright and database right 2016

Significance level compared with England



LONDON



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HEPATITIS C

Map 11b: Variation in rate of mortality from hepatitis C-related end-stage liver disease or hepatocellular carcinoma per population by Sustainability Transformation Partnerships (STP) (2011-2015)

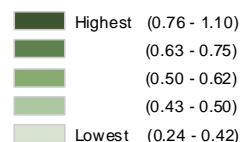
Crude rate per 100,000

NHS Domain 1: Preventing people from dying prematurely

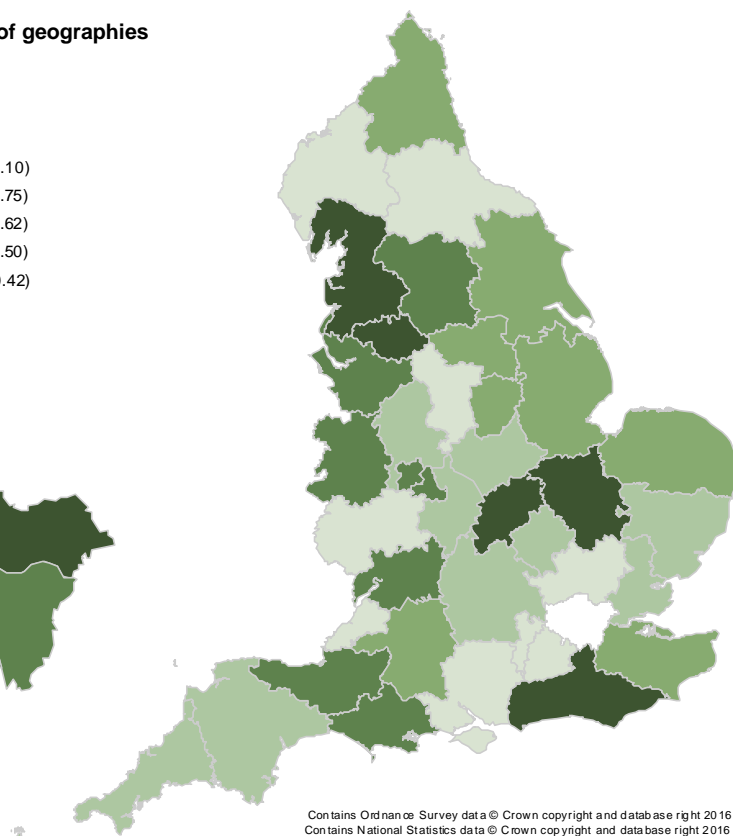
PHOF Domain 4: Healthcare public health and preventing premature mortality

OPTIMUM VALUE: LOW

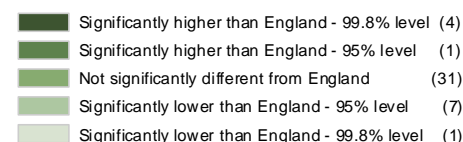
Equal-sized quintiles of geographies



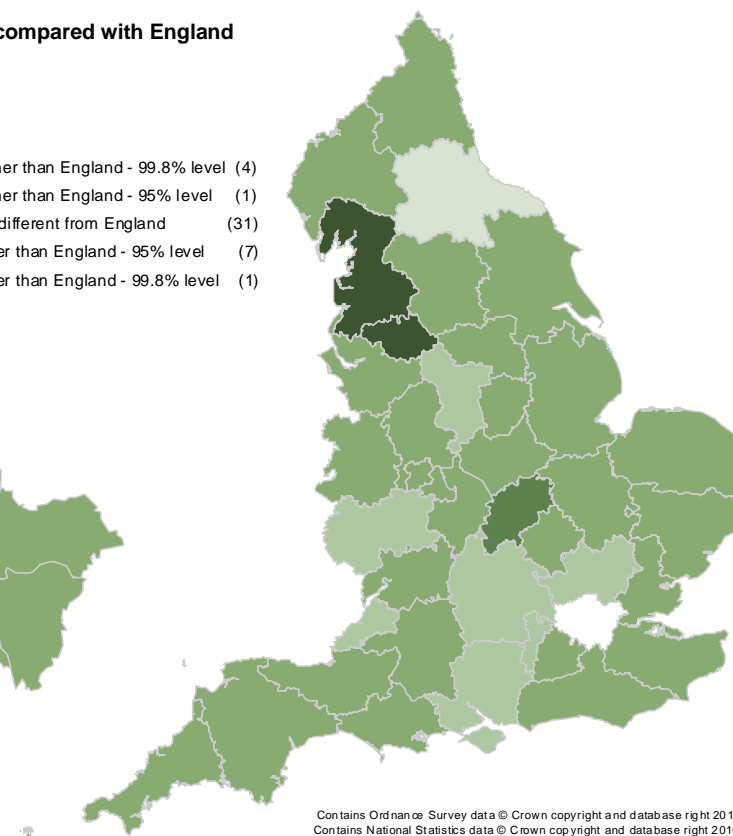
LONDON



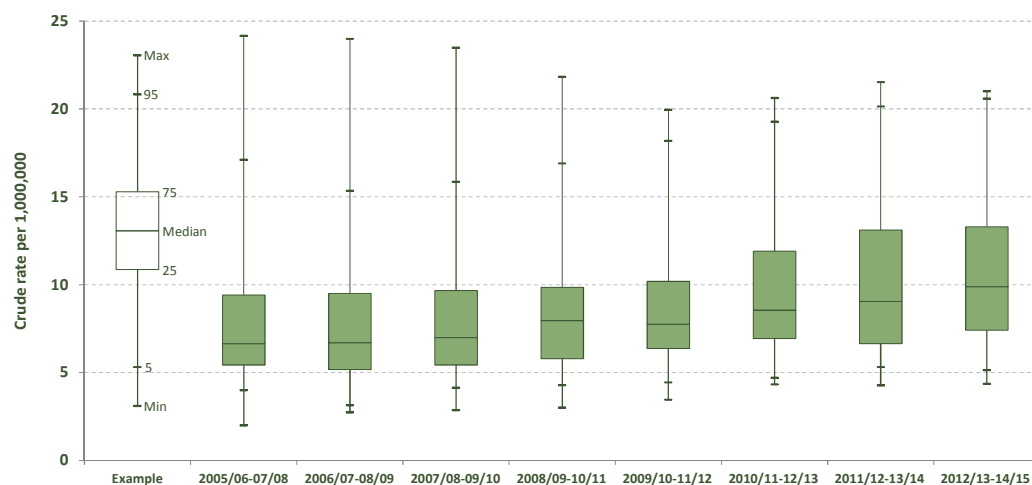
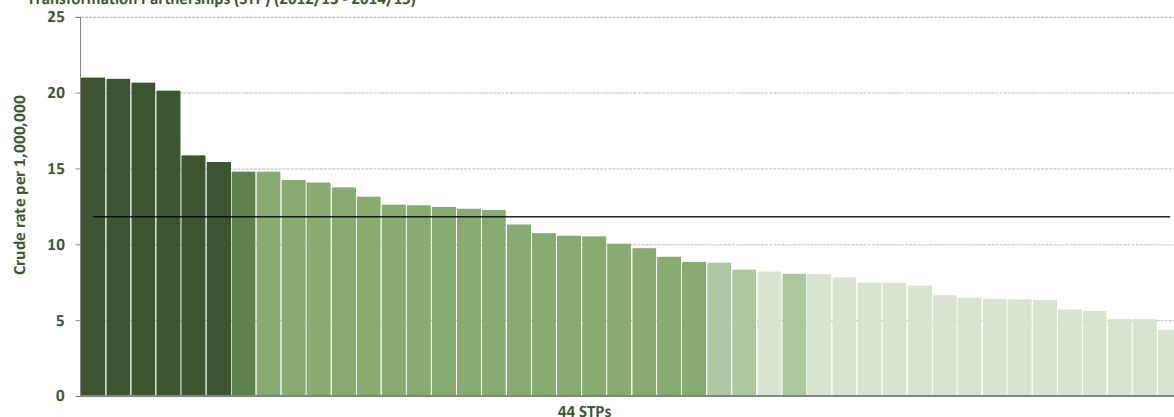
Significance level compared with England



LONDON



Variation in rate of hospital admissions for hepatitis C-related end-stage liver disease or hepatocellular carcinoma per population by Sustainability Transformation Partnerships (STP) (2012/13 - 2014/15)



Max-Min (Range)		22.2	21.3	20.6	18.8	16.5	16.3	17.3	16.7	NARROWING Significant
95th-5th percentile		13.1	12.2	11.7	12.6	13.7	14.6	14.8	15.5	WIDENING Significant
75th-25th percentile		4.0	4.3	4.2	4.1	3.8	5.0	6.5	5.9	WIDENING Significant
Median		6.6	6.7	7.0	8.0	7.8	8.5	9.0	9.9	INCREASING Significant

Context

Although exposure to hepatitis C virus often leads to a chronic infection, antiviral treatments are available that will successfully clear the virus in the vast majority of patients. Unless there is a considerable increase in people receiving effective treatment, however, the future burden of hepatitis C-related disease will be substantial.

In England between 2005 and 2014 deaths from hepatitis C-related end-stage liver disease and hepatocellular carcinoma more than doubled,¹ although an 8% fall in the number of deaths from these indications in 2015 would suggest that increased treatment with new direct-acting antiviral drugs, particularly in people with more advanced disease, may be beginning to have an effect.¹

The NHS targets are:

- to have treated about 10,000 patients in 2016
- to increase the number of people treated to 15,000 per year by 2020

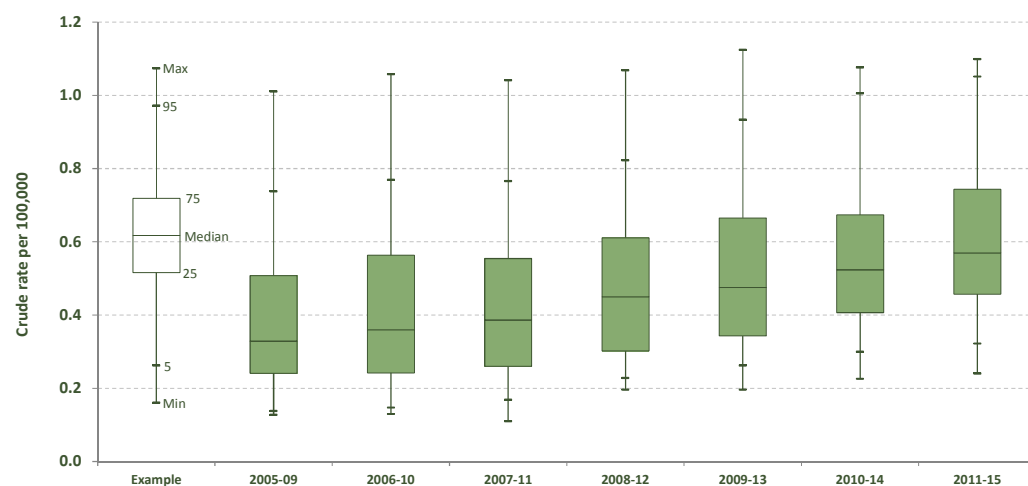
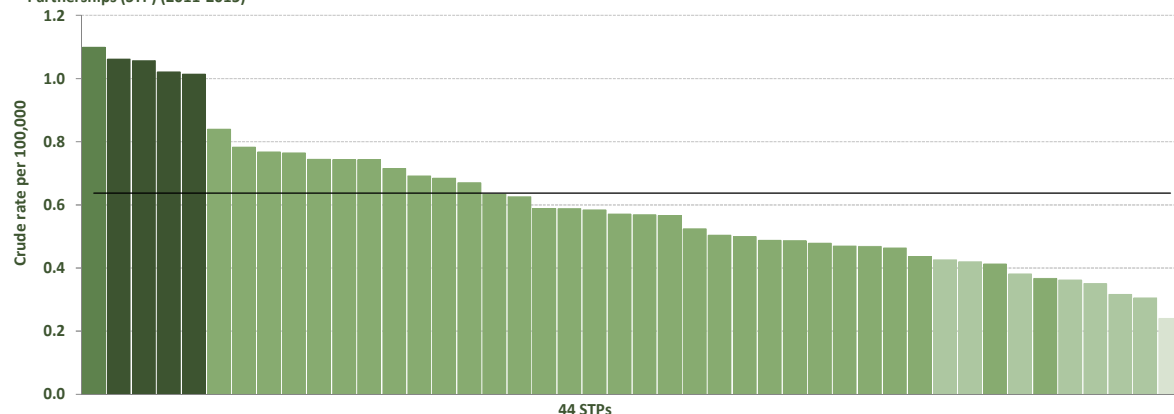
On the assumptions that these targets can be achieved and a rate of treating 15,000 people per year can be maintained, statistical modelling² has been used to predict that the number of people who would be living with hepatitis C-related cirrhosis or hepatocellular carcinoma in England:

- by 2020 would be about 5,480
- by 2030 would be about 2,620

¹ Public Health England. Hepatitis C in England: 2017 report. www.gov.uk/government/uploads/system/uploads/attachment_data/file/599738/hepatitis_c_in_england_2017_report.pdf

² Harris RJ, Martin NK, Rand E, Mandal S, Mutimer D, Vickerman P et al. New treatments for hepatitis C virus (HCV): scope for preventing liver disease and HCV transmission in England. J Viral Hepat. 2016;(8):631-643.

Variation in rate of mortality from hepatitis C-related end-stage liver disease or hepatocellular carcinoma per population by Sustainability Transformation Partnerships (STP) (2011-2015)



	Example	2005-09	2006-10	2007-11	2008-12	2009-13	2010-14	2011-15	
Max-Min (Range)		0.88	0.93	0.93	0.87	0.93	0.85	0.86	No significant change
95th-5th percentile		0.60	0.62	0.60	0.60	0.67	0.71	0.73	WIDENING Significant
75th-25th percentile		0.27	0.32	0.29	0.31	0.32	0.27	0.29	No significant change
Median		0.33	0.36	0.39	0.45	0.47	0.52	0.57	INCREASING Significant

These predictions represent a fall in hepatitis C-related of cirrhosis or hepatocellular carcinoma of 56% by 2020 and of 81% by 2030.¹

Admission to hospital for hepatitis C-related end-stage liver disease and hepatocellular carcinoma is an outcome indicator of how successful the identification and care of people with hepatitis C have been.

Death certificate data from the Office for National Statistics shows the number of hepatitis C-related deaths from end-stage liver disease and hepatocellular carcinoma has increased from 187 in 2005 to 387 in 2014, and decreased to 357 in 2015.¹

Mortality from hepatitis C and end-stage liver disease or hepatocellular carcinoma is an outcome indicator of how successful the identification and care of people with hepatitis C have been.

Magnitude of variation

Map 11a: Hospital admissions for hepatitis C-related end-stage liver disease or hepatocellular carcinoma

The maps and column chart display the data for 2012/13 to 2014/15, during which STP values ranged from 4.4 to 21.0 per million population, which is a 4.8-fold difference between STPs. The England value for 2012/13 to 2014/15 was 11.8 per million population. The boxplot shows the distribution of STP values for the period 2005/06-2007/08 to 2012/13-2014/15. The maximum to minimum range narrowed significantly, whereas both the 95th to 5th and the 75th to 25th percentile gaps widened significantly. The median increased significantly from 6.6 per million population in 2005/06-2007/08 to 9.9 per million population in 2012/13-2014/15.

Reasons for the degree of variation observed include differences in:

- the prevalence of hepatitis C
- the historical and changing patterns of risks and risk behaviours, such as injecting drug use, in local populations
- the prevalence of comorbidities, such as the level of alcohol use

In addition many patients who present with hepatitis C-related end-stage liver disease or hepatocellular carcinoma present with advanced disease and are not previously known to hepatology or gastroenterology treatment services, although they may have accessed unplanned care in the past.

Unwarranted variation could be due to differences in:

- opportunities for testing and engagement with hepatitis C treatment services
- access to drug treatment services and to social services

Map 11b: Mortality from hepatitis C-related end-stage liver disease or hepatocellular carcinoma

The maps and column chart display the data for 2011-15, during which STP values ranged from 0.2 to 1.1 per 100,000 population, which is a 4.6-fold difference between STPs. The England value for 2011-15 was 0.6 per 100,000 population. The boxplot shows the distribution of STP values for the period 2005-09 to 2011-15. The 95th to 5th percentile gap widened significantly. The median increased significantly from 0.3 per 100,000 population in 2005-09 to 0.6 per 100,000 population in 2011-15.

Reasons for warranted variation are differences in:

- the prevalence of hepatitis C
- the historical and changing patterns of risks and risk behaviours, such as injecting drug use, in local populations
- the prevalence of comorbidities, such as the level of alcohol use

Other reasons for the degree of variation observed could include differences in:

- the degree of compliance with treatment
- the configuration of treatment services

- the level of access to treatment services
- the timing of diagnosis

Options for action

For people with hepatitis C to receive the best possible care, it is essential that the aim of testing and treatment services is to prevent progression to end-stage liver disease and cancer. It is important for commissioners, clinicians and service providers to make available specialised services for:

- local hepatitis C populations, to identify people at risk and offer testing with a view to treatment
- people with end-stage liver disease and cancer, to ensure there is access to expert care to optimise outcomes

Commissioners need to work with all clinicians and service providers to ensure that:

- the local operational delivery network for hepatitis C treatment is effective, including improving people's access to accredited laboratory and other services (map A.5)
- people with hepatitis C receive appropriate and early intervention with effective therapy, which should reduce progression to end-stage liver disease and cancer (secondary prevention); treating end-stage liver disease and cancer will help to reduce mortality (supportive care and transplant)

Commissioners should also review:

- trends in mortality in the local area
- local interventions to prevent infection, detect infection and prevent the development of advanced liver disease
- treatment outcomes against the number of people testing positive for hepatitis C in the local area (intention-to-treat outcomes of people testing positive) to identify not only the barriers to a successful treatment outcome but also the ways in which those barriers can be addressed
- collaboration between specialist services and other agencies to ascertain whether the best possible outcomes for this group of people are being obtained

A prerequisite to the provision of appropriate and early intervention with effective therapy is the development of local protocols between primary and secondary care. The use of such protocols will mean that:

- care and treatment pathways for medical and social needs are in place
- NHS staff receive appropriate skills development to enable them to deliver service improvements for patients with hepatitis C infection

To increase the number and proportion of people with hepatitis C being diagnosed,¹ commissioners need to specify that service providers:

- raise awareness of hepatitis C among professionals in primary care and other settings, such as drug services, through encouraging participation in e-learning (see 'Resources')
- follow NICE guidance on testing people at risk of hepatitis C infection (PH43; see 'Resources')
- sustain and enhance testing³ among people attending drug services
- expand the use of newer technologies, such as dried blood spot testing, in non-clinical settings
- promote and offer testing to groups of people not in regular contact with health services who may have acquired hepatitis C many years previously, such as people who acquired hepatitis C infection through past injecting drug use, medical or dental treatment in countries where poor blood screening and/or infection control practices exist

or transfusion in the UK prior to September 1991 – some people in these groups may have advanced asymptomatic disease

- where relevant locally, monitor bloodborne virus opt-out testing for new receptions to prisons to inform strategies to improve the offer and uptake of testing
- produce appropriate communications to mark World Hepatitis Day

Commissioners could consider commissioning bloodborne virus opt-out testing in drug services.¹

Commissioners need to specify that laboratory service providers¹:

- perform ribonucleic acid amplification on the same sample as the original antibody assay to reduce the turnaround time for referral, benefitting patient care and increasing cost-effectiveness
- include patient referral instructions on the laboratory report

To increase the number of people with hepatitis C accessing treatment,¹ commissioners need to work with public health agencies, clinicians and other stakeholders:

- to simplify referral pathways
- to improve the availability, access and uptake of approved hepatitis C treatments in primary and secondary care, drug treatment services, prisons and other settings not only for people newly diagnosed or already engaged with treatment services but also for people who have been diagnosed but subsequently lost to follow-up

³ Department of Health (England), The Scottish Government, Welsh Assembly, Northern Ireland Executive. Drug Misuse and Dependence: UK Guidelines on Clinical Management. 2007. www.nta.nhs.uk/publications/documents/clinical_guidelines_2007.pdf

- where relevant, to monitor Health and Justice Indicators of Performance to ensure equity of access to hepatitis C care and treatment pathways for all prisoners and immigration detainees
- to explore innovative approaches to outreach and patient support

Service providers need to be aware that after treatment people with a sustained viral response should be given appropriate information and support to help guard against re-infection.¹

At a national level Public Health England needs to analyse the agreed national treatment monitoring dataset to assess equity, access, uptake and effect of treatment on the future burden of hepatitis C-related disease in England.¹ This analysis will not only inform future healthcare planning but also enable progress to be monitored against World Health Organization goals to eliminate hepatitis C as a serious public health threat by the year 2030.

RESOURCES

- PHE. Hepatitis C in England 2017 report.
http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/599738/hepatitis_c_in_england_2017_report.pdf
- PHE. Hepatitis C in the UK: 2016 report.
www.gov.uk/government/uploads/system/uploads/attachment_data/file/565459/Hepatitis_C_in_the_UK_2016_report.pdf
- NICE. Hepatitis B and C testing: people at risk of infection. Public health guideline [PH43]. Published date: December 2012. Last updated: March 2013. www.nice.org.uk/guidance/ph43
- NICE. Interactive flowchart. Hepatitis B and C testing overview.
<https://pathways.nice.org.uk/pathways/hepatitis-b-and-c-testing>
- RCGP Learning. RCGP Clinical Courses and Certifications. 'Hepatitis B & C', and 'Hepatitis C: Enhancing Prevention, Testing and Care'.
<http://elearning.rcgp.org.uk/course/index.php?categoryid=8>

HEPATITIS B

Map 12: Variation in percentage of women who tested positive for hepatitis B in the NHS Infectious Diseases in Pregnancy Screening Programme by region (2015)

NHS Domain 2: Enhancing quality of life for people with long term conditions

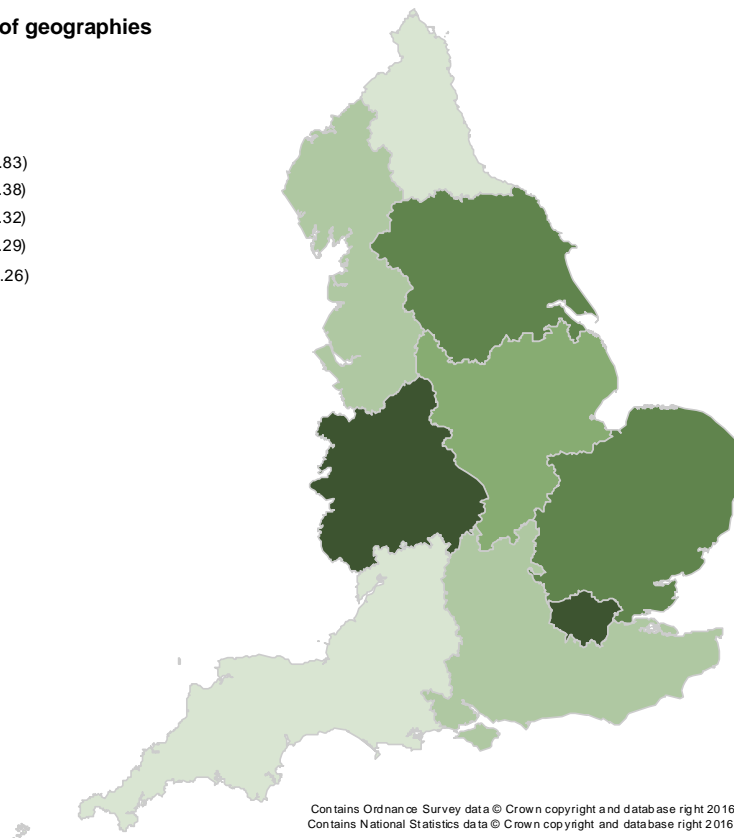
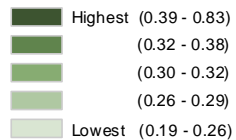
NHS Domain 3: Helping people to recover from episodes of ill health or following injury

NHS Domain 5: Treating and caring for people in a safe environment and protecting them from avoidable harm

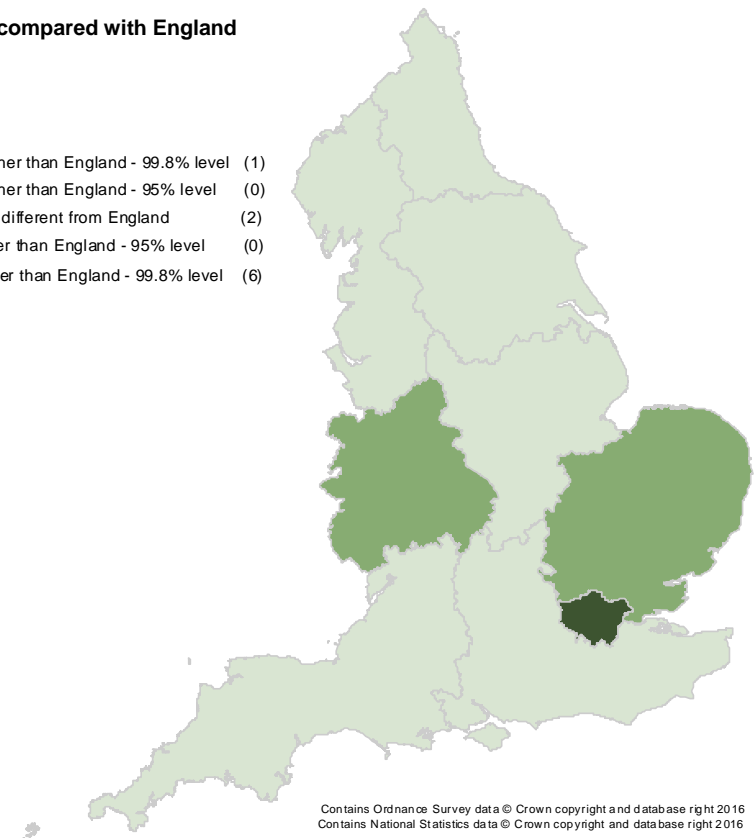
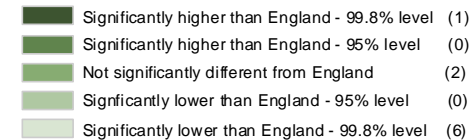
PHOF Domain 3: Health protection

OPTIMUM VALUE: REQUIRES LOCAL INTERPRETATION

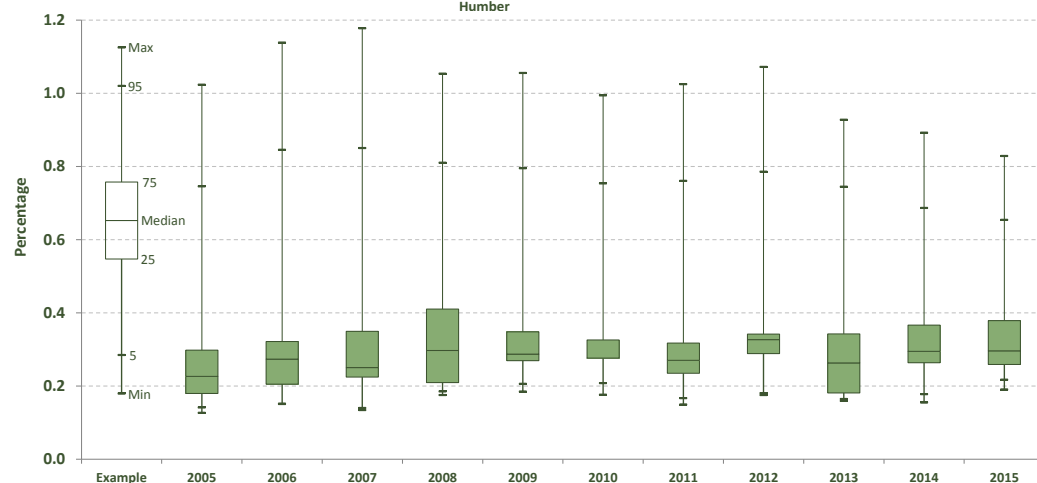
Equal-sized quintiles of geographies



Significance level compared with England



Variation in percentage of women who tested positive for hepatitis B in the NHS Infectious Diseases in Pregnancy Screening Programme by region (2015)



Max-Min (Range)		0.90	0.99	1.04	0.88	0.87	0.82	0.88	0.90	0.77	0.74	0.64	NARROWING Significant
95th-5th percentile		0.60	0.69	0.71	0.63	0.59	0.55	0.59	0.61	0.58	0.51	0.44	NARROWING Significant
75th-25th percentile		0.12	0.12	0.13	0.20	0.08	0.05	0.08	0.05	0.16	0.10	0.12	No significant change
Median		0.23	0.27	0.25	0.30	0.29	0.28	0.27	0.33	0.26	0.29	0.30	No significant change

Context

The UK National Screening Committee (UK NSC) recommends that systematic population screening in pregnancy for HIV, hepatitis B and syphilis is offered and recommended to all eligible women.¹ Screening for susceptibility to rubella ceased on 1 April 2016.

The NHS Infectious Diseases in Pregnancy Screening (IDPS) Programme, part of Public Health England (PHE), has responsibility for implementing this policy and managing the programme in England.² The programme works collaboratively with the Screening Quality Assurance Services to support service improvements.³ The objectives for the programme are as follows:

- to reduce the risk of mother-to-child transmission
- to ensure that women are identified early in pregnancy
- to facilitate appropriate assessment and management for the women's own health
- to facilitate appropriate neonatal referral and management⁴

¹ UK National Screening Committee. www.gov.uk/government/groups/uk-national-screening-committee-uk-nsc

² Public Health England. Population Screening Programmes. NHS Infectious Diseases in Pregnancy Screening (IDPS) programme. www.gov.uk/topic/population-screening-programmes/infectious-diseases-in-pregnancy

³ Public Health England. NHS Population Screening: quality assurance. www.gov.uk/guidance/nhs-population-screening-quality-assurance

⁴ Public Health England and NHS England. NHS public health functions agreement 2017-18. Service Specification No. 15. Infectious Diseases in Pregnancy Screening Programme. First published: April 2017. www.england.nhs.uk/wp-content/uploads/2017/06/service-specification-15.pdf

National coverage of antenatal hepatitis B screening increased from 93% in 2005 to 98% in 2015.⁵ In 2015, 0.4% of pregnant women screened for hepatitis B were positive for hepatitis B surface antigen, which is a marker of current infection.⁵ There has been no significant change in hepatitis B-positive rates since 2005.⁵ In 2015, for diagnoses where all information was available, 25% of pregnant women who were diagnosed as hepatitis B-positive were identified through antenatal screening in the current pregnancy.⁵ As this group of women may not have been diagnosed in the absence of routine screening, the babies would have been at increased risk of infection through mother-to-child transmission.

The data for this indicator in 2015 was collected from maternity units by regions, with the help of Field Epidemiology Services, and collated into national data by PHE, National Infections Service (NIS), Colindale. The IDPS Programme introduced new screening standards in April 2016.⁶ The standards include clear metrics that assess the screening pathway and help service providers and commissioners to identify where improvements are needed. To measure performance against these standards the IDPS programme introduced a new annual fiscal year data collection process, which replaced the NIS process from April 2016.⁷ The programme also commissions the Centre of Epidemiology for Child Health at University College London Hospitals (UCLH) Institute of Child Health to collect data on screening programme outcomes.

Magnitude of variation

The maps and column chart display the data for 2015, during which region values ranged from 0.2% to 0.8%, which is a 4.4-fold difference between regions. The England value for 2015 was 0.4 %.

The boxplot shows the distribution of region values for the period 2005 to 2015. Both the maximum to minimum range and the 95th to 5th percentile gap narrowed significantly, with the higher levels reducing. The median for England did not change significantly.

The denominator used to calculate uptake and the proportion of women screened positive for hepatitis B is based on booking data derived from different sources as follows:

- laboratory data on the number of tests done
- the number of women seen for initial booking
- a combination of these two factors

Furthermore some women book in one hospital and receive all their antenatal care in a different maternity unit. The calculation and interpretation of regional uptake and the proportion of women who are screened positive for hepatitis B take into account differences in the sources of booking data. Variability in the data is likely to be resolved with the introduction of screening programme key performance indicators for coverage for all three infections, and implementation of the new national Maternity Services Data Set which will provide more accurate data on the number of women:

- booked
- tested for infectious diseases
- found to be infected

Options for action

To ensure Hepatitis B-positive mothers are known about to prevent vertical transmission to their child, commissioners, clinicians and service providers should refer to the NHS IDPS Programme Service Specification No.15 (see 'Resources') and supporting documents to ensure a programme is set up correctly and meets the standards set

⁵ Public Health England. National Antenatal Infections Screening Monitoring: annual data tables. Last updated: 13 January 2017. www.gov.uk/government/publications/national-antenatal-infections-screening-monitoring-annual-data-tables

⁶ Public Health England. Infectious diseases in pregnancy screening: programme standards. Last updated: 30 March 2016. www.gov.uk/government/publications/infectious-diseases-in-pregnancy-screening-programme-standards

⁷ Public Health England. Antenatal screening programmes: annual standards data collection. Last updated: 27 April 2017. www.gov.uk/government/publications/infectious-diseases-in-pregnancy-screening-annual-data-collection

by the national screening team (see 'Resources' for programme standards and laboratory handbook).

RESOURCES

- Public Health England. Infectious diseases in pregnancy screening (IDPS): programme overview. www.gov.uk/guidance/infectious-diseases-in-pregnancy-screening-programme-overview
- Public Health England. National Antenatal Infections Screening Monitoring (NAISM). www.gov.uk/guidance/infectious-diseases-during-pregnancy-screening-vaccination-and-treatment
- Public Health England. National Antenatal Infections Screening Monitoring: annual data tables. Last updated 13 February 2017. www.gov.uk/government/publications/national-antenatal-infections-screening-monitoring-annual-data-tables
- Public Health England and NHS England. NHS public health functions agreement 2017-18. Service Specification No. 15. Infectious Diseases in Pregnancy Screening Programme. First published: April 2017. www.england.nhs.uk/wp-content/uploads/2017/06/service-specification-15.pdf
- Public Health England. NHS Infectious Diseases in Pregnancy Screening Programme: Standards 2016 to 2017. Published March 2016. www.gov.uk/government/uploads/system/uploads/attachment_data/file/529070/IDPS_Programme_Standards_2016_to_2017.pdf
- Public Health England. NHS Infectious Diseases in Pregnancy Screening Programme: Laboratory Handbook 2016 to 2017. Published July 2016. www.gov.uk/government/uploads/system/uploads/attachment_data/file/539828/NHS_Infectious_Diseases_in_Pregnancy_Screening_Programme_Laboratory_Handbook_2016_2017_with_gateway_number.pdf

HEPATITIS B

Map 13: Variation in percentage of infants immunised for hepatitis B by their first birthday who were born to mothers with persistent hepatitis B infection by upper-tier local authority (2015/16)

NHS Domain 1: Preventing people from dying prematurely

NHS Domain 5: Treating and caring for people in a safe environment and protecting them from avoidable harm

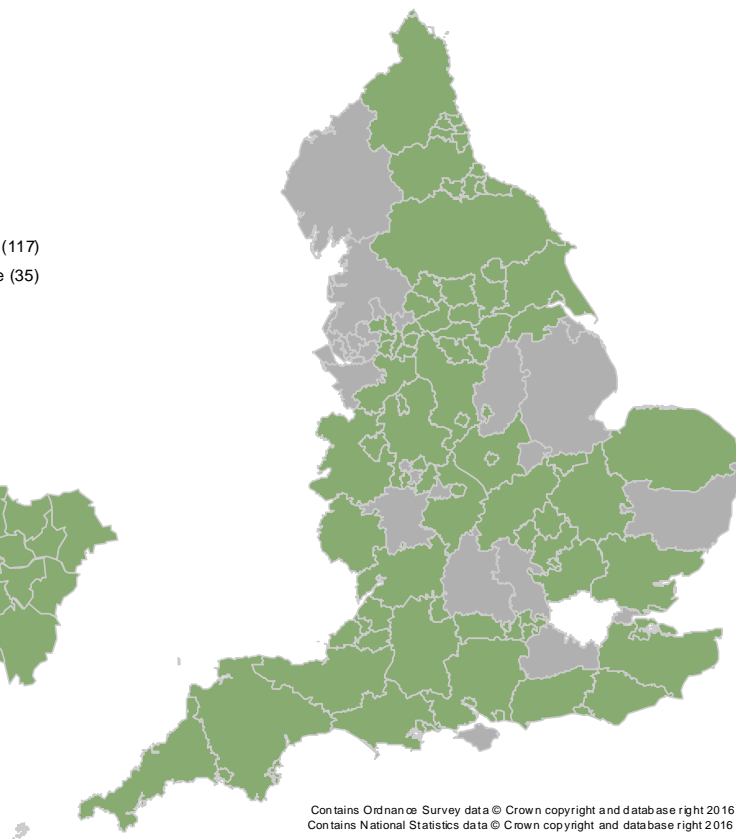
PHOF Domain 3: Health protection

OPTIMUM VALUE: HIGH

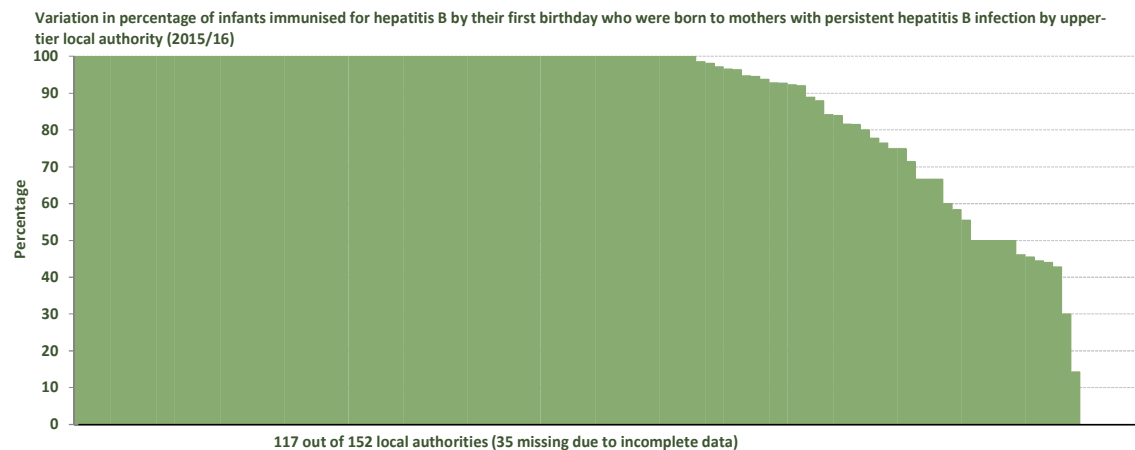
Data availability

■ Data submitted (117)
 ■ Data not available (35)

LONDON



Contains Ordnance Survey data © Crown copyright and database right 2016
 Contains National Statistics data © Crown copyright and database right 2016



Context

The contribution of hepatitis B infection to the burden of liver disease is increasing. When not treated persistent hepatitis B infection can lead to premature death due to cirrhosis of the liver or liver cancer (hepatocellular carcinoma). Around one-quarter of all liver disease cases in the UK are due to hepatitis infections. Hepatitis B infection transmitted from mother to child during birth accounts for 21% of all new persistently infected cases. Mother-to-child transmission is an important cause of persistent hepatitis B infection, but in most cases it can be prevented.

Since 2000 Department of Health policy has supported the provision of a targeted infant immunisation programme, as outlined in Health Service Circular 1998/127.¹

Vaccination coverage is the best indicator of the protection a population has against vaccine-preventable communicable diseases. Vaccination of neonates born to women with persistent hepatitis B infection is:

- highly effective at preventing infection in the infant and therefore of averting the risk of chronic liver disease and cancer
- cost-saving to the NHS

Vaccination of newborn babies to pregnant women with hepatitis B should achieve 100% coverage. The UK National Screening Committee and NICE provide guidance on appropriate local arrangements (see 'Resources').

Local authority data is sent to Public Health England through the COVER programme. Valid data on the denominator of children at risk and/or the numerator of children vaccinated with three doses by 12 months of age are not available for some local authorities. Local authorities providing zero returns for 2015/16 were asked to confirm that there were no infants born to persistently infected pregnant women in the population. Local authorities unable to provide confirmation were coded as missing data.

Magnitude of variation

The map and column chart display the data for 2015/16, during which local authority values ranged from 0.0% to 100.0%. The England value is not calculated for this indicator due to incompleteness of the data.

Reasons for the degree of variation observed could be differences in local systems for vaccination, particularly:

- the amount of resource invested
- the method of measurement
- access to services

Options for action

When planning service improvement or development for vaccination of the newborn against hepatitis B, commissioners, clinicians and service providers need to ensure that local arrangements follow national guidance (see 'Resources') and meet quality statements 3 and 4 in the NICE quality standard (QS65; see 'Resources').

Commissioners also need to monitor valid coverage data quarterly to improve the vaccination rates achieved in 2015/16.

- In localities where reporting is incomplete, as a matter of urgency commissioners need to review information flows and take action to improve reporting
- In localities where there are low levels of uptake, commissioners need to review the systems used to coordinate and provide vaccination to newborn

¹ NHS Executive. Screening of pregnant women for hepatitis B and immunisation of babies at risk. Health Service Circular 1998/127. Issue date: 22 July 1998.
http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4011840.pdf

infants at risk in order to improve reporting and/or achieve higher rates of coverage

RESOURCES

- NHS Digital. NHS Immunisation Statistics, England 2015 to 2016. Published: 22 September 2016. www.gov.uk/government/statistics/nhs-immunisation-statistics-england-2015-to-2016
- NICE. Immunisations: Reducing differences in uptake in under 19s. Public health guideline [PH21]. Published date: September 2009. www.nice.org.uk/guidance/PH21
- Public Health England. Infectious diseases in pregnancy screening: programme standards. Published: 1 September 2010. Last updated: 30 March 2016. www.gov.uk/government/publications/infectious-diseases-in-pregnancy-screening-programme-standards
- Public Health England. Infectious diseases in pregnancy screening programme: clinical guidance. Published 2 March 2016. Last updated: 25 July 2016. www.gov.uk/government/collections/infectious-diseases-in-pregnancy-screening-clinical-guidance
- Public Health England. Infectious diseases in pregnancy screening programme: laboratory handbook 2016 to 2017. Published 24 October 2012. Last updated: 25 July 2016. www.gov.uk/government/publications/infectious-diseases-in-pregnancy-screening-programme-laboratory-handbook
- Department of Health. Hepatitis B antenatal screening and newborn immunisation programme – Best practice guidance (updated June 2011). www.gov.uk/government/publications/hepatitis-b-antenatal-screening-and-newborn-immunisation-programme-best-practice-guidance
- NICE. Hepatitis B and C testing: people at risk of infection (Recommendation 9). Public health guideline [PH43]. Published date: December 2012. Last updated: March 2013. www.nice.org.uk/guidance/ph43
- NICE. Hepatitis B. NICE quality standard [QS65; quality statements 3 and 4]. Published date: July 2014. www.nice.org.uk/guidance/qs65
- Public Health England. Hepatitis B and C: local surveillance standards. Published: 7 July 2011. www.gov.uk/government/publications/hepatitis-b-and-c-local-surveillance-standards
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HEPATITIS B

Map 14: Variation in rate of laboratory reports for acute or probable acute hepatitis B per population by region (2015)

Crude rate per 100,000

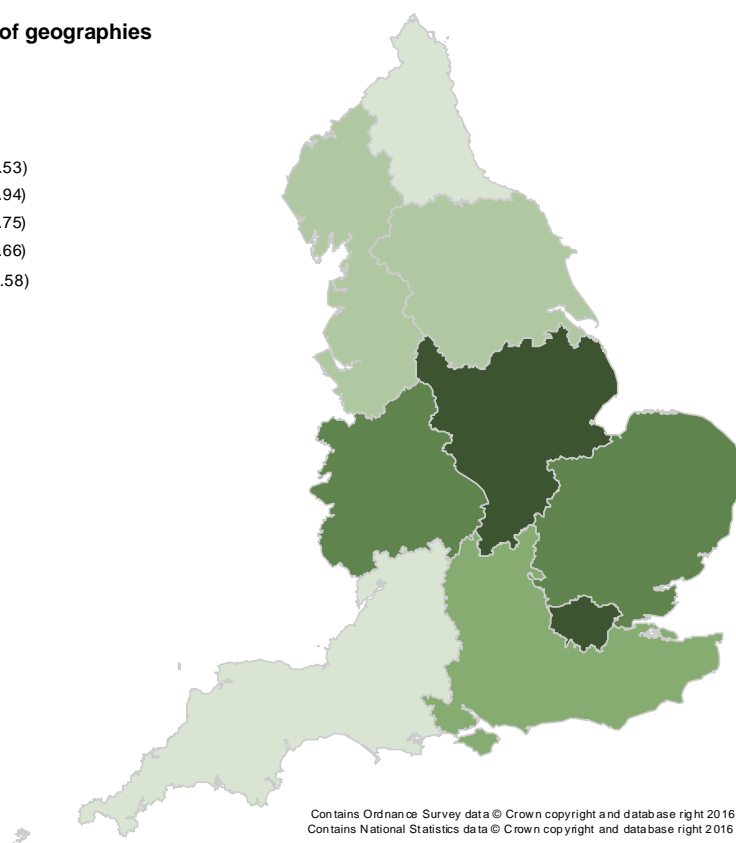
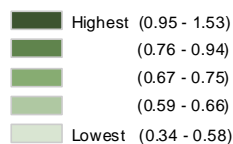
NHS Domain 1: Preventing people from dying prematurely

NHS Domain 2: Enhancing quality of life for people with long term conditions

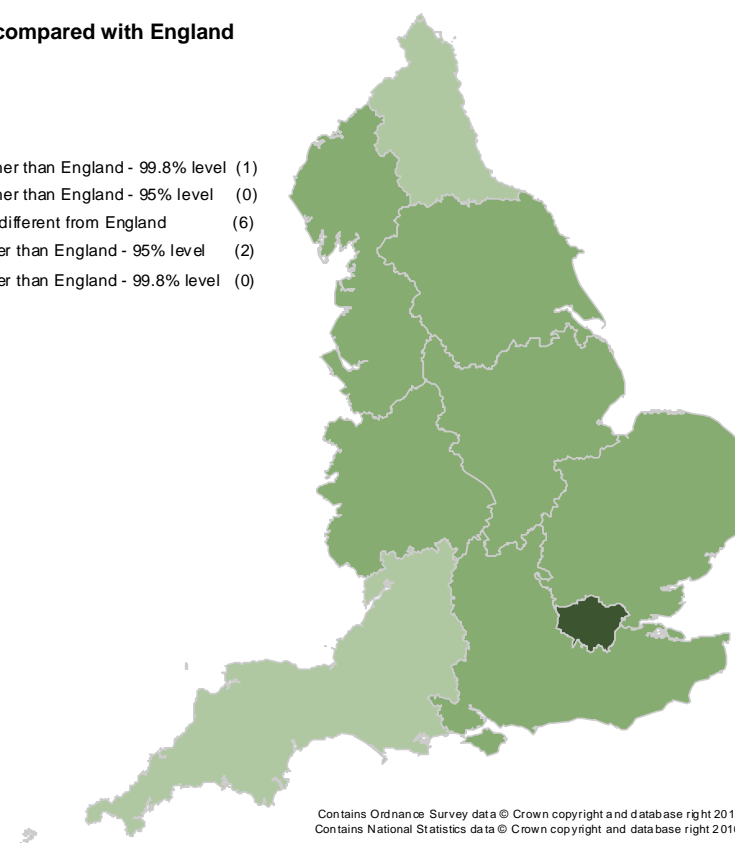
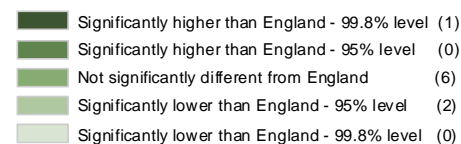
PHOF Domain 3: Health protection

OPTIMUM VALUE: REQUIRES LOCAL INTERPRETATION

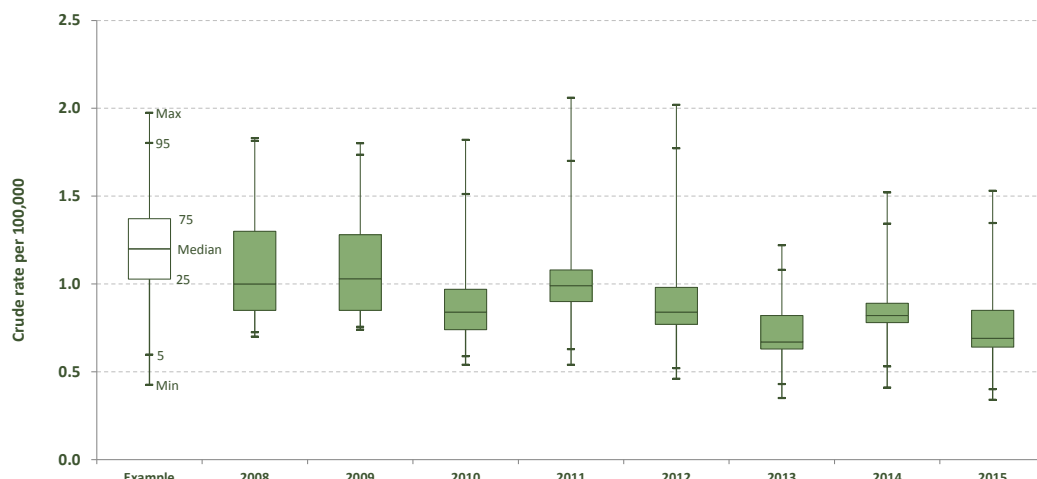
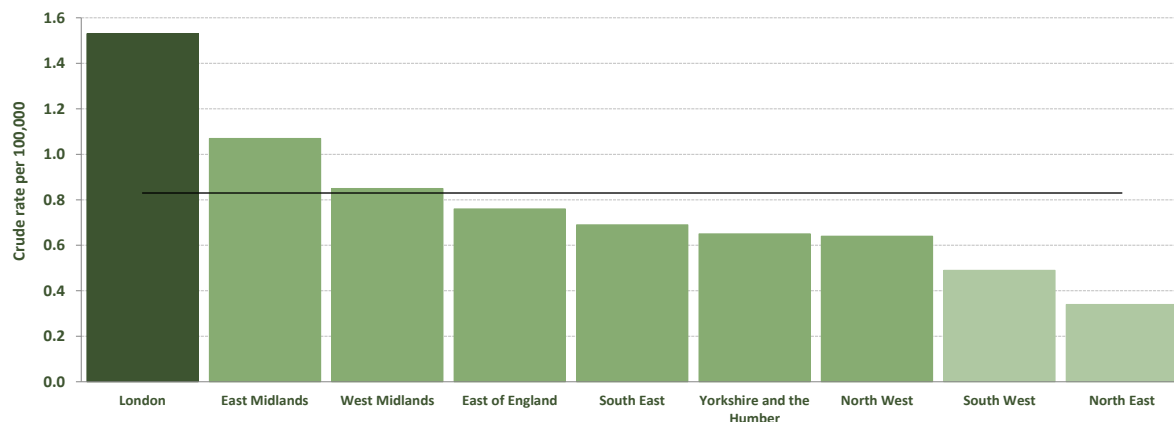
Equal-sized quintiles of geographies



Significance level compared with England



Variation in rate of laboratory reports for acute or probable acute hepatitis B per population by region (2015)



	Example	2008	2009	2010	2011	2012	2013	2014	2015	
Max-Min (Range)		1.13	1.06	1.28	1.52	1.56	0.87	1.11	1.19	No significant change
95th-5th percentile		1.09	0.98	0.92	1.07	1.25	0.65	0.81	0.95	No significant change
75th-25th percentile		0.45	0.43	0.23	0.18	0.21	0.19	0.11	0.21	NARROWING Significant
Median		1.00	1.03	0.84	0.99	0.84	0.67	0.82	0.69	DECREASING Significant

Context

Hepatitis B is a bloodborne infection of the liver caused by the hepatitis B virus, which can provoke an acute illness characterised by nausea, malaise, abdominal pain and jaundice.¹ It can also lead to a chronic persistent infection associated with an increased risk of chronic liver disease and hepatocellular carcinoma.¹

Acute hepatitis B is a notifiable disease. Public Health England (PHE; formerly the Health Protection Agency) introduced national surveillance standards for hepatitis B in 2007 and published the first annual report in 2008. Statutory laboratory reporting was introduced in 2010. Surveillance of hepatitis B enables the targeting of preventive and control measures such as the implementation of a selective immunisation programme.

The incidence of acute hepatitis B is low in England (0.83 per 100,000 population in 2015),¹ and there has been a gradual decline in incidence since 2008. Incidence is higher in men than in women: 1.17 versus 0.49 per 100,000 population.¹ In 2015 men aged 45-54 years had the highest incidence at 2.0 per 100,000 population.¹

In 2015 only 22.3% of the total cases of acute hepatitis B had ethnicity recorded: 66.0% of cases were White, 20.6% Black or Black British and 11.8% Asian or Asian British.¹

For 56% of acute cases associated exposure information was recorded: for more than half the cases (56.6%), the probable route of exposure was heterosexual exposure.¹ Other routes of exposure included sex between men

¹ Public Health England. Acute Hepatitis B (England): annual report for 2015. Health Protection Report weekly report. Infection reports/Immunisation. Volume 10, Number 28, Published on: 26 August 2016. www.gov.uk/government/uploads/system/uploads/attachment_data/file/549028/hpr2816_hepB.pdf

(15.6%), healthcare-related exposure (8.2%), unspecified risk relating to travel abroad (8.2%), skin-piercing, tattooing and acupuncture (4.7%), and injecting drug use (3.5%).¹

Magnitude of Variation

The maps and column chart display the data for 2015, during which region values ranged from 0.3 to 1.5 per 100,000 population, which is a 4.5-fold difference between regions. The England value for 2015 was 0.8 per 100,000 population.

The boxplot shows the distribution of region values for the period 2008 to 2015.

The 75th to 25th percentile gap narrowed significantly. The median decreased significantly from 1.0 per 100,000 population in 2008 to 0.7 per 100,000 population in 2015.

There are several possible reasons for the degree of variation observed including differences in:

- the demography of local populations including patterns of ethnicity and migration
- the historical and changing patterns of risk and risk behaviours in local populations
- prevalence of newly diagnosed cases of hepatitis B
- incidence of new cases of hepatitis B
- coverage of laboratory reporting
- the level of investment in laboratory services
- the organisation of local services
- access to services for testing and counselling
- the effectiveness of local preventive and control measures

Options for action

Commissioners, local authorities, particularly Directors of Public Health, health and wellbeing boards, clinicians and providers of primary care, secondary care and public health services need to work in partnership:

- to review the completeness of laboratory reporting of hepatitis B in the locality
- to identify trends in incidence of acute hepatitis B in the local population and population subgroups over the last 5 to 10 years and review the profile of people at risk of infection locally
- to use these local data to improve the identification and treatment of people with hepatitis B and the implementation of targeted preventive and control measures

In accordance with NICE guidance (PH43; see 'Resources') commissioners should commission locally appropriate integrated services for hepatitis B testing and treatment, with testing seen as part of a care pathway covering diagnosis, treatment and immunisation.

In accordance with NICE guidance (PH43; see 'Resources') laboratory services providing hepatitis B testing should:

- have Clinical Pathology Accreditation (UKAS; see 'Resources')
- be able to support the range of samples used for hepatitis B testing (or refer the sample to a laboratory that can perform the test)
- deliver results within 2 weeks of receipt of the sample together with an accurate interpretation of the laboratory results and guidance on the future management of confirmed cases
- provide accurate data according to the items listed in Box 14.1

Box 14.1 Hepatitis B testing data required from laboratory services

- Number of people tested and the type of test performed
- Referral source of samples
- Exposure category (if provided)
- Number of people testing positive, which should include acute, chronic and past exposure

Standards for local surveillance and follow-up of hepatitis B (see 'Resources') need to be followed, including laboratory reporting to PHE centres in line with national public health legislation.

Commissioners need to specify that primary care, secondary care and public health service providers follow NICE guidance (PH43; see 'Resources') including, as relevant:

- raising awareness about hepatitis B in the local population and among people at increased risk of infection
- organising education and training for healthcare professionals who provide services for people at increased risk of infection (for example, see 'Resources' for RCGP Learning)
- tracing close contacts of people with hepatitis B infection
- providing neonatal hepatitis B infection vaccination services (see Map 13) to prevent vertical transmission

To facilitate early diagnosis, prompt treatment and the prevention of infection with hepatitis B, commissioners need to specify that service providers adhere to the NICE quality standard (QS65, particularly quality statement 1; see 'Resources') which states that children, young people and adults at increased risk of hepatitis B should be offered testing in a range of settings, such as GP practices, prisons or immigration removal centres, drugs services, and sexual health and genitourinary medicine clinics, alongside appropriate vaccination.

Testing and vaccination strategies need to be in line with PHE's guidance on immunisation against infectious disease (the green book, chapter 18; see 'Resources').

RESOURCES

- Public Health England. Acute Hepatitis B (England): annual report for 2015. Health Protection Report weekly report. Infection reports/Immunisation. Volume 10, Number 28, Published on: 26 August 2016.
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- United Kingdom Accreditation Service (UKAS). Clinical Pathology Accreditation.
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<http://elearning.rcgp.org.uk/course/index.php?categoryid=8>

HEPATITIS B

Map 15a: Variation in rate of hospital admissions for hepatitis B-related end-stage liver disease or hepatocellular carcinoma per population by Sustainability Transformation Partnerships (STP) (2012/13 - 2014/15)

Crude rate per 1,000,000

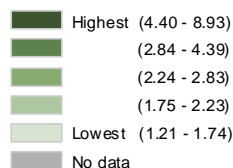
NHS Domain 4: Ensuring that people have a positive experience of care

NHS Domain 5: Treating and caring for people in a safe environment and protecting them from avoidable harm

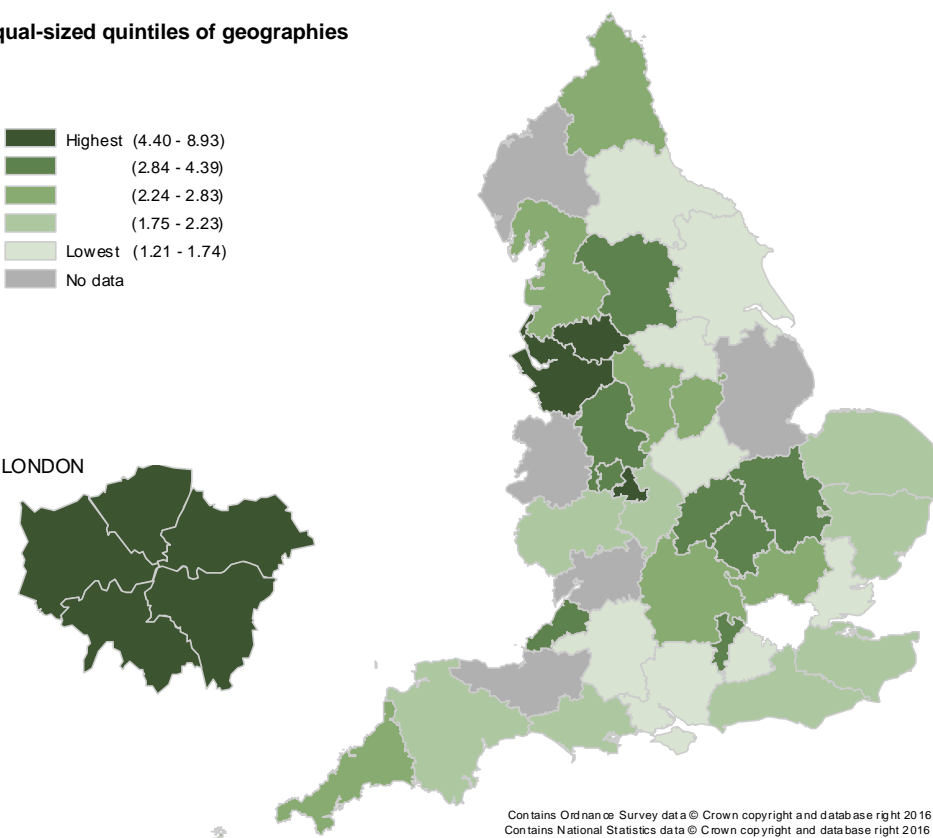
PHOF Domain 4: Healthcare public health and preventing premature mortality

OPTIMUM VALUE: LOW

Equal-sized quintiles of geographies

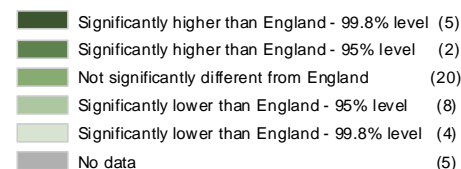


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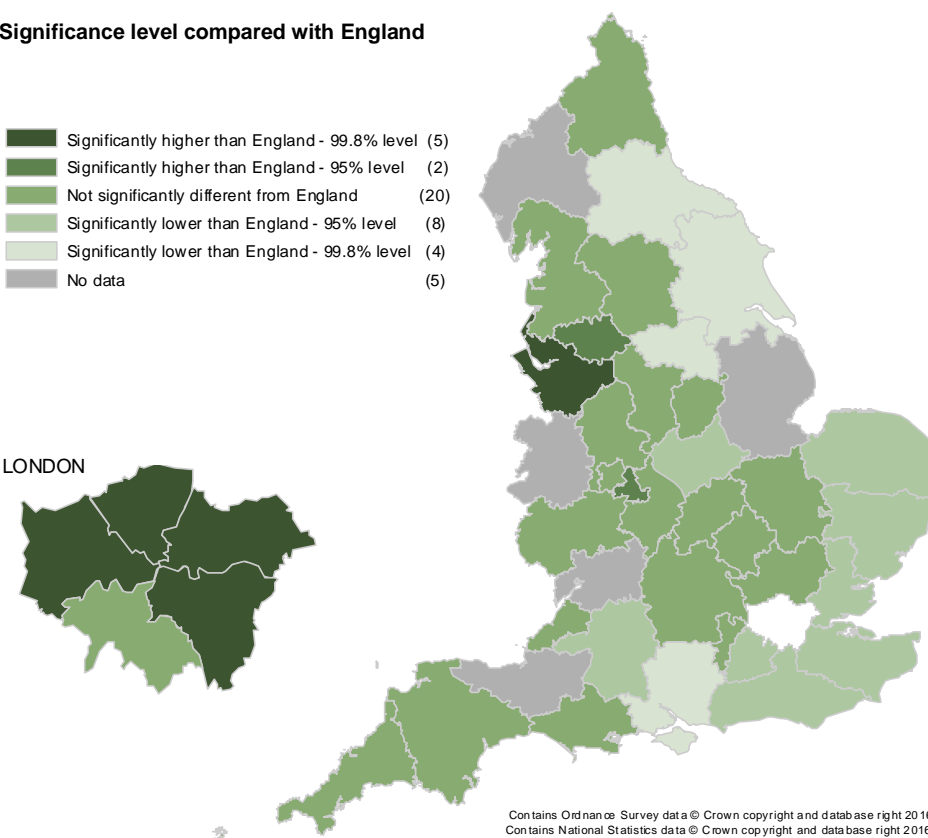


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Significance level compared with England



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HEPATITIS B

Map 15b: Variation in mortality rate from hepatitis B-related end-stage liver disease or hepatocellular carcinoma per population by Sustainability Transformation Partnerships (STP) (2011-2015)

Crude rate per 100,000

NHS Domain 1: Preventing people from dying prematurely

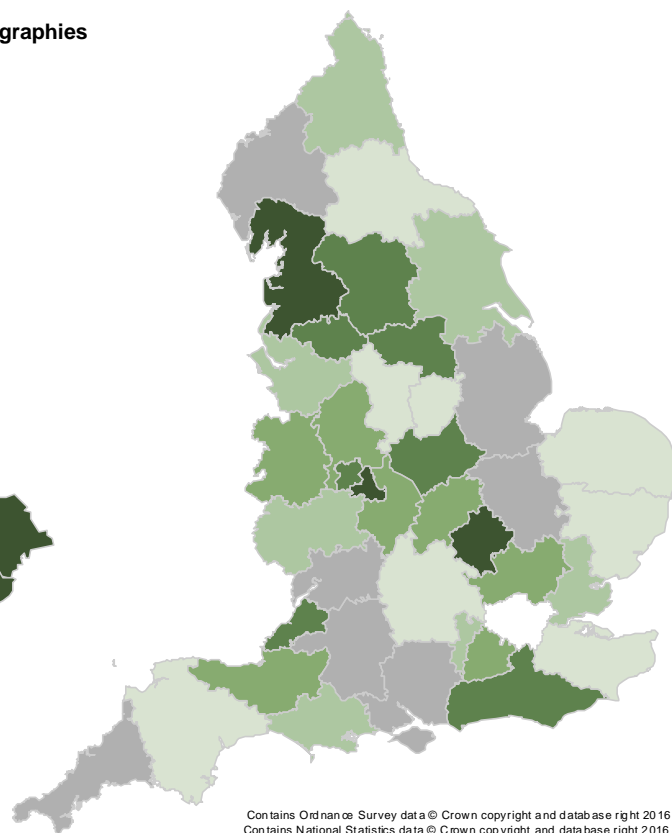
PHOF Domain 4: Healthcare public health and preventing premature mortality

OPTIMUM VALUE: LOW

Equal-sized quintiles of geographies

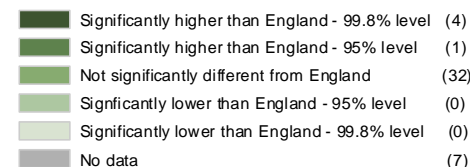


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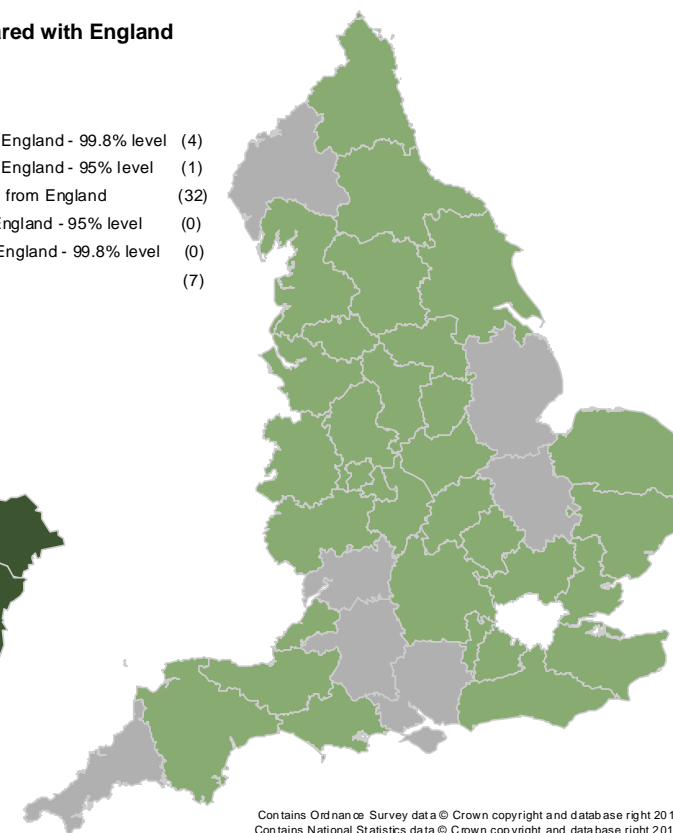


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Significance level compared with England

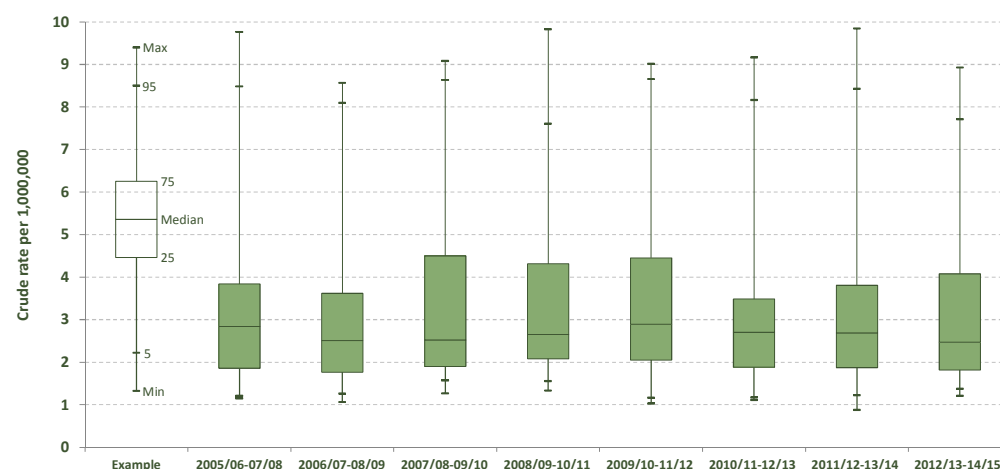
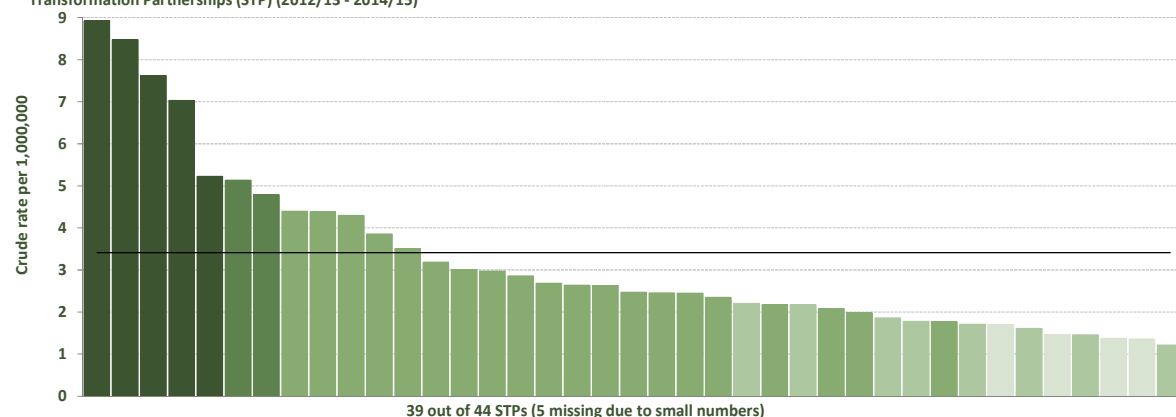


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Variation in rate of hospital admissions for hepatitis B-related end-stage liver disease or hepatocellular carcinoma per population by Sustainability Transformation Partnerships (STP) (2012/13 - 2014/15)



Max-Min (Range)		8.61	7.50	7.81	8.50	7.98	8.05	8.97	7.71	No significant change
95th-5th percentile		7.28	6.83	7.06	6.05	7.49	6.99	7.20	6.34	No significant change
75th-25th percentile		1.98	1.85	2.60	2.23	2.40	1.60	1.93	2.26	No significant change
Median		2.84	2.51	2.52	2.65	2.89	2.71	2.69	2.47	No significant change

Context

Chronic infection with hepatitis B is a risk factor for increased hospital admissions and mortality from chronic liver disease and hepatocellular carcinoma. Exposure to the hepatitis B virus can cause an acute infection, which is symptomatic in up to one-third of adults whereas symptoms are rare in children.¹ Although the illness is self-limiting, if the virus persists in the blood for longer than 6 months, the person will have developed a chronic (or persistent) hepatitis B infection.¹

Rates of progression from acute to chronic hepatitis B vary according to age at time of exposure. Chronic hepatitis B infection is more likely to develop if the infection is acquired in childhood: 85% of hepatitis B infections in newborns become chronic,² whereas up to 10% of adults will develop chronic hepatitis B infection if the infection is acquired in adulthood.¹

In some people chronic hepatitis B is inactive¹ but some people will develop a chronic active hepatitis which involves progressive damage to the liver leading to:

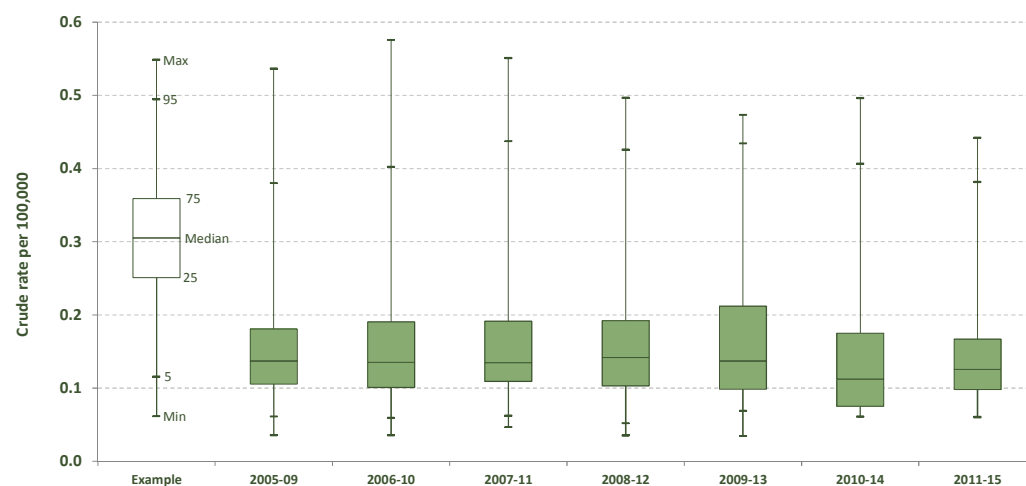
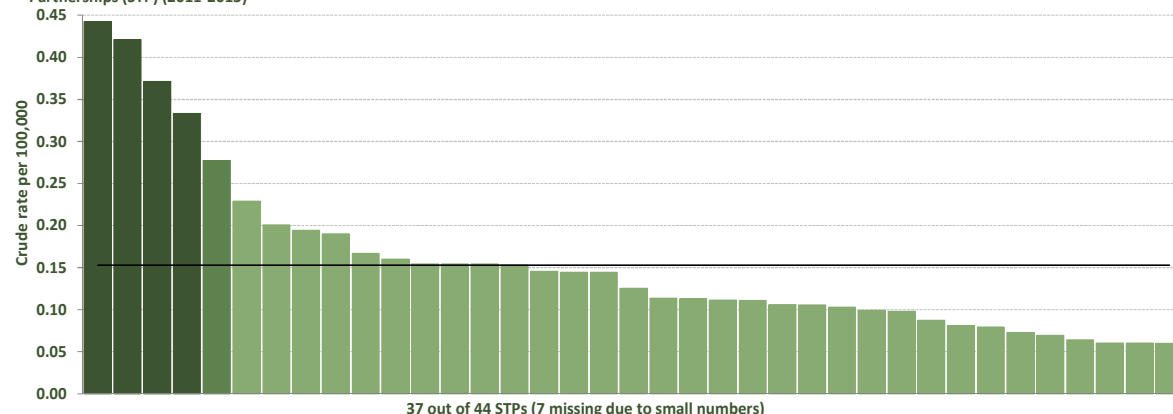
- fibrosis
- cirrhosis, which develops in about 15-20% of people who became infected as healthy adults – it may take up to 20 years after initial infection for the condition to become manifest³
- hepatocellular carcinoma, which develops in about 10% of people whose condition has progressed to cirrhosis and is detected on average 30 years after the initial infection³

¹ Public Health England. Hepatitis B: clinical and public health management. www.gov.uk/guidance/hepatitis-b-clinical-and-public-health-management

² NICE. Hepatitis B and C testing: people at risk of infection. Public health guideline [PH43]. Published date: December 2012. Last updated: March 2013. www.nice.org.uk/guidance/ph43

³ NICE Clinical Knowledge Summaries. Hepatitis B. Last revised in March 2014. <https://cks.nice.org.uk/hepatitis-b>

Variation in mortality rate from hepatitis B-related end-stage liver disease or hepatocellular carcinoma per population by Sustainability Transformation Partnerships (STP) (2011-2015)



	Example	2005-09	2006-10	2007-11	2008-12	2009-13	2010-14	2011-15	
Max-Min (Range)		0.50	0.54	0.50	0.46	0.44	0.44	0.38	NARROWING Significant
95th-5th percentile		0.32	0.34	0.38	0.37	0.37	0.35	0.32	No significant change
75th-25th percentile		0.08	0.09	0.08	0.09	0.11	0.10	0.07	No significant change
Median		0.14	0.13	0.13	0.14	0.14	0.11	0.13	No significant change

The goal of treatment for chronic hepatitis B is to prevent cirrhosis, hepatocellular carcinoma and liver failure. Without antiviral treatment the 5-year cumulative incidence of cirrhosis is 8-20% and people with cirrhosis are at significant risk of decompensated liver disease if they remain untreated.⁴ Five-year survival rates for people with untreated decompensated cirrhosis can be as low as 15%.⁴

Antiviral treatment suppresses replication of the hepatitis B virus, decreases hepatic inflammation and fibrosis, and reduces the likelihood of disease progression and serious clinical outcomes.⁴ There are many efficacious and safe treatment options for hepatitis B. Clinicians need to decide which individuals need immediate treatment, with which sequence and combination of drugs, and which individuals have low levels of hepatitis B virus in the blood with little sign of liver damage such that they can be monitored and given treatment only if there are signs of disease progression.⁴

As the mutation rate of hepatitis B virus DNA is high, there is a risk of drug resistance or decreased susceptibility to the drugs developing which should be taken into account when considering treatment with nucleoside or nucleotide analogues.⁴

Admission to hospital for a person with hepatitis B infection usually occurs if the person is severely unwell,³ and admission for hepatitis B-related end-stage liver disease and hepatocellular carcinoma is an outcome indicator of how successful the identification and care of people with hepatitis B have been.

⁴ NICE. Hepatitis B (chronic) diagnosis and management. Clinical guideline [CG165]. Published date: June 2013. www.nice.org.uk/guidance/cg165

The rate of mortality for hepatitis B-related end-stage liver disease and hepatocellular carcinoma is a stronger outcome indicator of how successful the identification and care of people with hepatitis B have been.

Magnitude of variation

Map 15a: Hospital admissions for hepatitis B-related end-stage liver disease or hepatocellular carcinoma

The maps and column chart display the data for 2012/13-2014/15, during which STP values ranged from 1.2 to 8.9 per million population, which is a 7.4-fold difference between STPs. The England value for 2012/13-2014/15 was 3.4 per million population.

The boxplot shows the distribution of STP values for the period 2005/06-2007/08 to 2012/13-2014/15. There was no significant change in any of the three variation measures between 2005/06-2007/08 and 2012/13-2014/15.

Map 15b: Mortality from hepatitis B-related end-stage liver disease or hepatocellular carcinoma

The maps and column chart display the data for 2011-15, during which STP values ranged from 0.1 to 0.4 per 100,000 population, which is a 7.4-fold difference between STPs. The England value for 2011-15 was 0.2 per 100,000 population.

The boxplot shows the distribution of STP values for the period 2005-09 to 2011-15. The maximum to minimum range narrowed significantly.

Possible reasons for the degree of variation observed in admissions or mortality include differences in:

- the prevalence of hepatitis B in local populations influenced by patterns of ethnicity and migration
- the historical and changing patterns of risks and risk behaviours in local populations
- opportunities for testing and engagement with hepatitis B treatment services
- access to drug treatment services where relevant
- the prevalence of comorbidities, such as the level of alcohol use
- the timeliness and timing of referral
- access to treatment services

- the timing of diagnosis
- the degree of compliance with treatment
- the configuration of treatment services
- management of treatment failure and drug resistance

Options for action

To reduce admissions and mortality from hepatitis B-related end-stage liver disease and hepatocellular carcinoma, commissioners, clinicians and service providers need to review:

- local interventions to prevent infection, detect infection and prevent the development of advanced liver disease

To increase the number and proportion of people with hepatitis B being diagnosed and treated, commissioners need to specify that service providers:

- raise awareness of hepatitis B among professionals in primary and secondary care and other settings, for example, through encouraging participation in e-learning (see 'Resources')

For people with hepatitis B to receive the best possible care, it is essential that the aim of testing and treatment services is to prevent progression to end-stage liver disease and hepatocellular carcinoma. It is important for commissioners, clinicians and service providers to make available specialised services for:

- local hepatitis B populations, to identify people at risk and offer testing with a view to treatment
- people with end-stage liver disease and hepatocellular carcinoma, to ensure there is access to expert care to optimise outcomes

Commissioners need to work with clinicians and service providers to ensure that:

- the local operational delivery network for hepatitis B treatment is effective, including improving people's access to accredited laboratory and other services
- people with hepatitis B receive appropriate and timely intervention with effective therapy, which should reduce progression to end-stage liver disease and hepatocellular carcinoma (secondary prevention) – treating end-stage liver disease and hepatocellular carcinoma will help to reduce mortality (supportive care and transplant)

To provide appropriate and timely intervention with effective therapy, local protocols need to be developed between primary and secondary care to ensure that:

- care and treatment pathways for medical and social care are in place
- NHS staff receive appropriate skills development to enable them to deliver service improvements for people with hepatitis B infection
- follow NICE guidance on testing people at risk of hepatitis B infection and ensure that all high-risk groups are immunised against hepatitis B (PH43; see 'Resources')
- promote and offer testing to groups of people not in regular contact with health services who may have acquired hepatitis B many years previously, for example, through medical or dental treatment in countries where poor blood screening and/or infection control practices exist, transfusion in the UK prior to September 1991 or past injecting drug use – some people who have acquired hepatitis B previously may have advanced asymptomatic disease
- follow NICE guidance on the diagnosis and management of chronic hepatitis B (CG165; see 'Resources') and ensure that testing, diagnostic and treatment services adhere to the NICE quality standard for hepatitis B (QS65; see 'Resources') especially to help reduce mortality

Commissioners should review:

- trends in mortality in the local area
- treatment outcomes against the number of people testing positive for hepatitis B in the local area (intention-to-treat outcomes of people testing positive) to identify not only the barriers to a successful treatment outcome but also the ways in which those barriers can be addressed

- the depth of collaboration between specialist services and other agencies to ascertain whether the best possible outcomes for people with hepatitis B are being obtained

Commissioners could consider specifying that laboratory service providers include patient referral instructions on the laboratory report.

To increase the number of people with hepatitis B accessing treatment, commissioners need to work with public health agencies, clinicians and other stakeholders:

- to simplify referral pathways
- to improve the availability, access and uptake of approved hepatitis B treatments in primary and secondary care and other settings not only for people newly diagnosed or already engaged with treatment services but also for people who have been diagnosed but subsequently lost to follow-up

To prevent vertical transmission of hepatitis B, commissioners need to specify that service providers follow NICE guidance (CG165, see 'Resources') and Public health functions agreement (Section 7A) service specification No. 1 (see 'Resources') regarding the care of pregnant and breastfeeding women with hepatitis B and the immunisation of new-born babies at risk from the mother's hepatitis B infection.

RESOURCES

- Public Health England. Acute Hepatitis B (England): annual report for 2015. Health Protection Report weekly report. Infection reports/Immunisation. Volume 10, Number 28, Published on: 26 August 2016.
www.gov.uk/government/uploads/system/uploads/attachment_data/file/549028/hpr2816_hepB.pdf
- Public Health England. Hepatitis B: clinical and public health management. Published: 31 July 2014. www.gov.uk/guidance/hepatitis-b-clinical-and-public-health-management
- NICE Clinical Knowledge Summaries. Hepatitis B. Last revised in March 2014.
<https://cks.nice.org.uk/hepatitis-b>
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- Health Protection Agency. Standards for local surveillance and follow-up of hepatitis B and C. 2011.
www.gov.uk/government/uploads/system/uploads/attachment_data/file/324052/Standards_surveillance_follow_up_hep_B_and_C_final_.pdf
- Public Health England. Immunisation against infectious disease: the green book. Chapter 18: Hepatitis B. February 2016. www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18
- United Kingdom Accreditation Service (UKAS). Clinical Pathology Accreditation.
www.ukas.com/services/accreditation-services/clinical-pathology-accreditation/
- RCGP Learning. RCGP Clinical Courses and Certifications. 'Hepatitis B & C'.
<http://elearning.rcgp.org.uk/course/index.php?categoryid=8>

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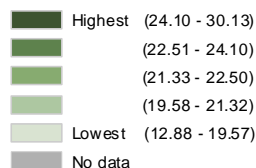
Map 16a: Variation in percentage of children in school reception year classified as overweight or obese by lower-tier local authority (school year 2015/16)

NHS Domain 1: Preventing people from dying prematurely

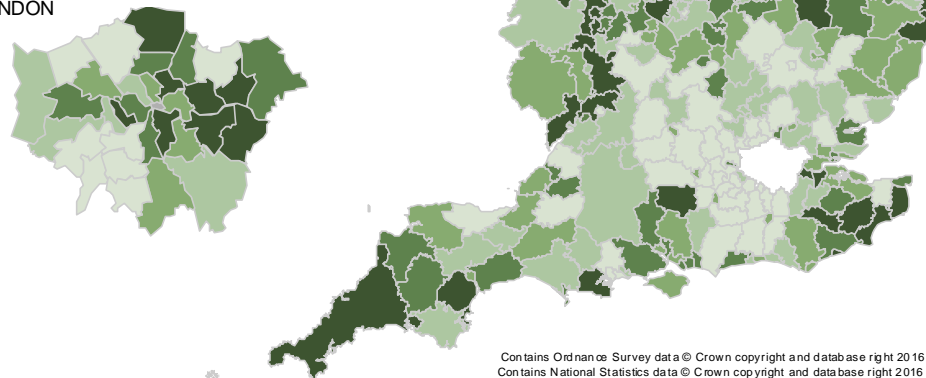
PHOF Domain 2: Health Improvement

OPTIMUM VALUE: LOW

Equal-sized quintiles of geographies

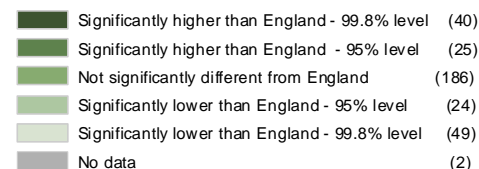


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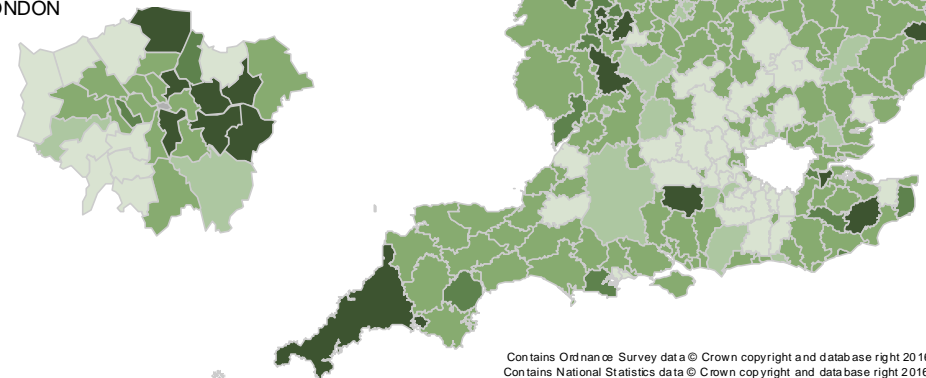


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Significance level compared with England



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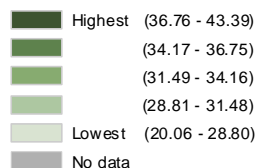
Map 16b: Variation in percentage of children in school year 6 classified as overweight or obese by lower-tier local authority (school year 2015/16)

NHS Domain 1: Preventing people from dying prematurely

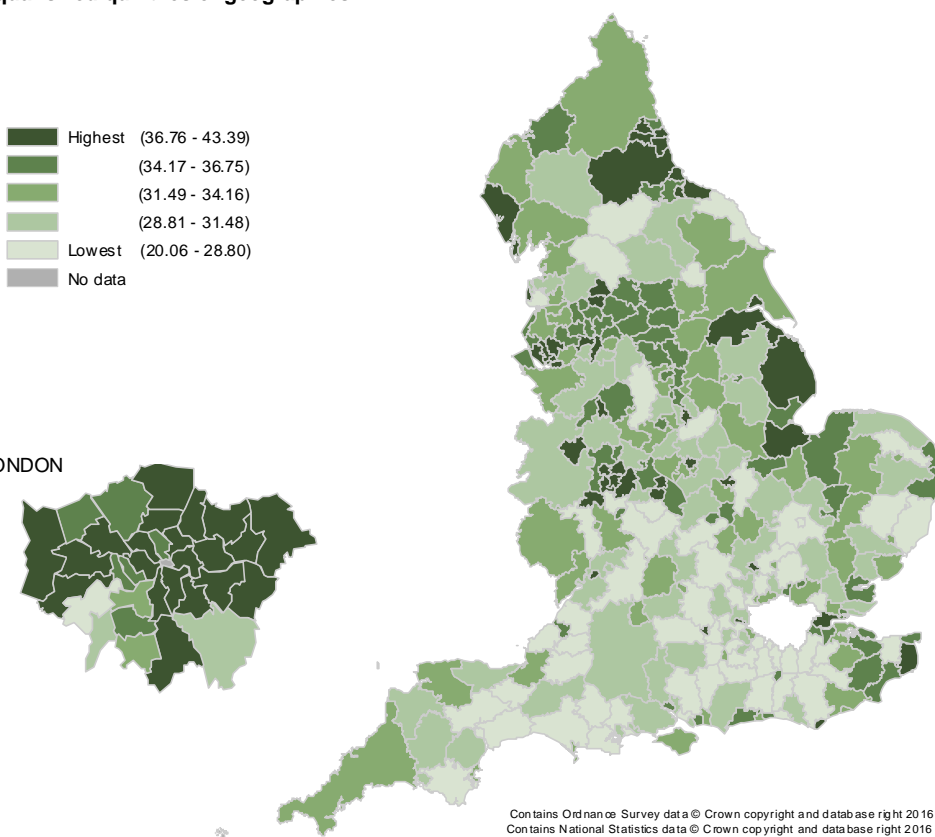
PHOF Domain 2: Health Improvement

OPTIMUM VALUE: LOW

Equal-sized quintiles of geographies

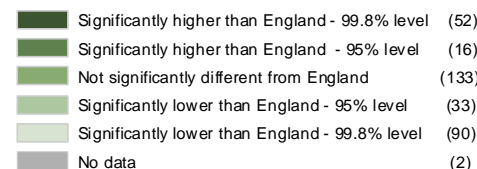


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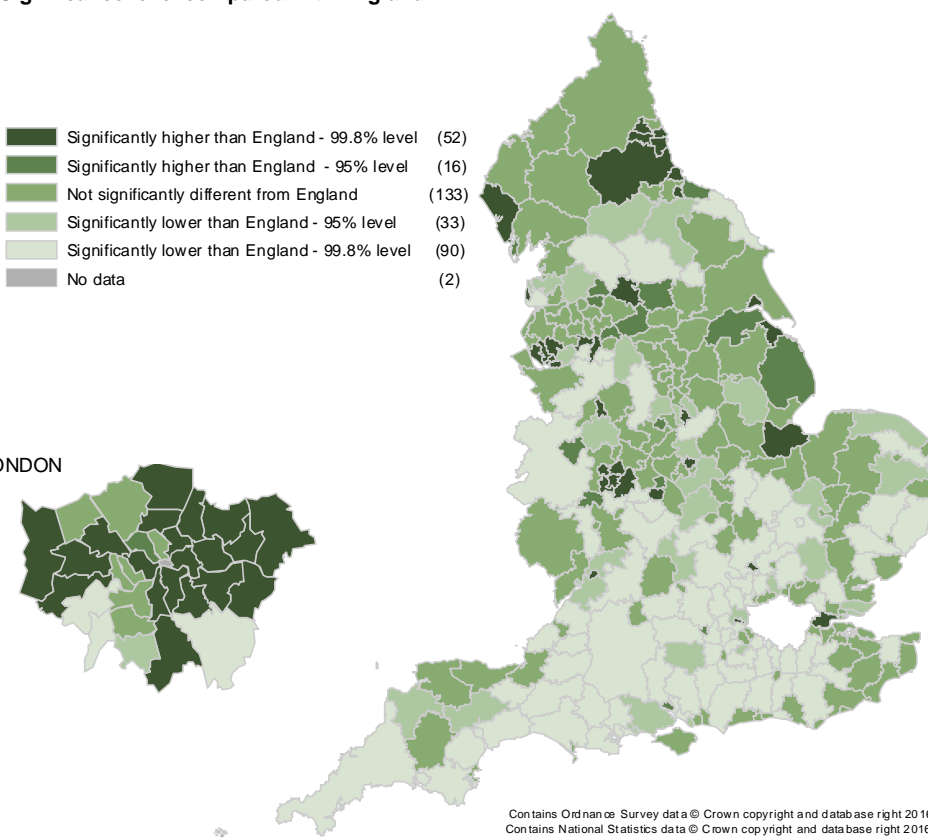


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Significance level compared with England

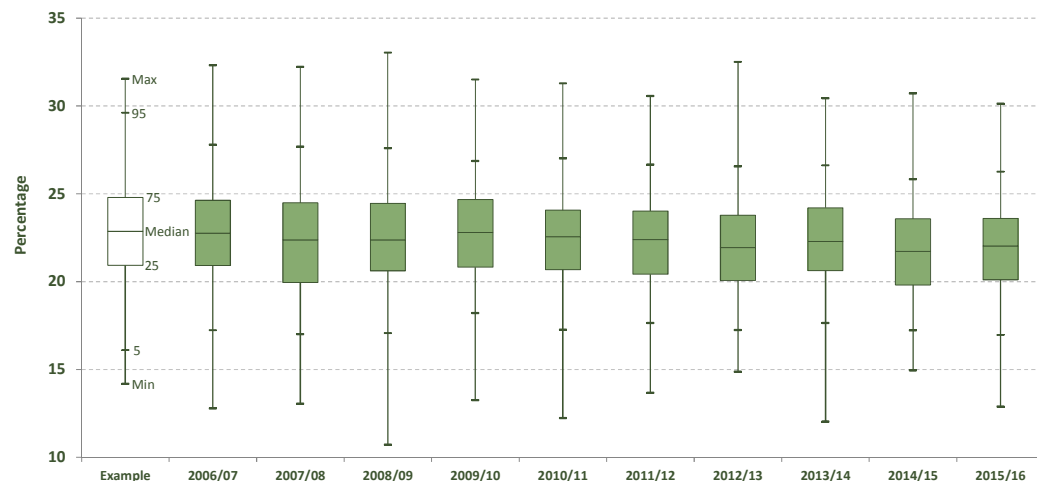
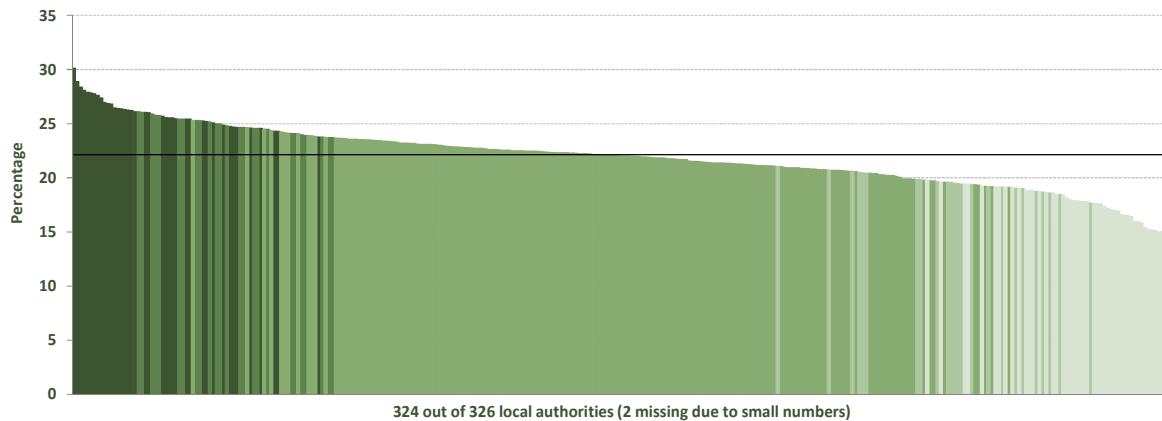


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Variation in percentage of children in school reception year classified as overweight or obese by lower -tier local authority (school year 2015/16)



	Example	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	
Max-Min (Range)		19.5	19.2	22.3	18.2	19.1	16.9	17.6	18.4	15.8	17.3	NARROWING Significant
95th-5th percentile		10.6	10.7	10.5	8.7	9.8	9.0	9.3	9.0	8.6	9.3	NARROWING Significant
75th-25th percentile		3.7	4.5	3.8	3.9	3.4	3.6	3.7	3.6	3.8	3.5	No significant change
Median		22.8	22.4	22.4	22.8	22.6	22.4	21.9	22.3	21.7	22.0	DECREASING Significant

Context

Non-alcoholic fatty liver disease (NAFLD) is the term for a range of conditions caused by a build-up of fat in the liver and can lead onto much more severe liver disorders in later life.

Childhood obesity is a major public health concern around the world and recent statistics from the World Health Organization¹ suggest that 41 million children aged under 5 are overweight or obese. Obesity in childhood is a known risk factor for being overweight or obese in adulthood.

Recent guidelines from NICE state that the emergence of childhood obesity means that there are increasing numbers of younger people who have NAFLD, with some prevalence studies suggesting that up to 38% of obese children have evidence of NAFLD.² The Lancet Commission has also reported that NAFLD is the most prevalent liver condition in children and young people in high income countries³. Although, this condition does not appear to have functional effects, studies in adults suggest that 2-3% may progress to steatohepatitis, a serious condition which is potentially life limiting.

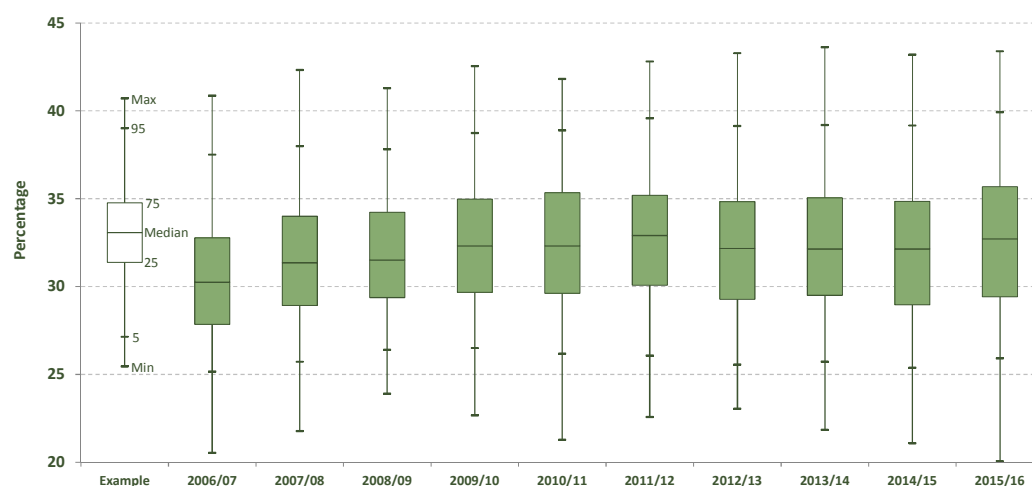
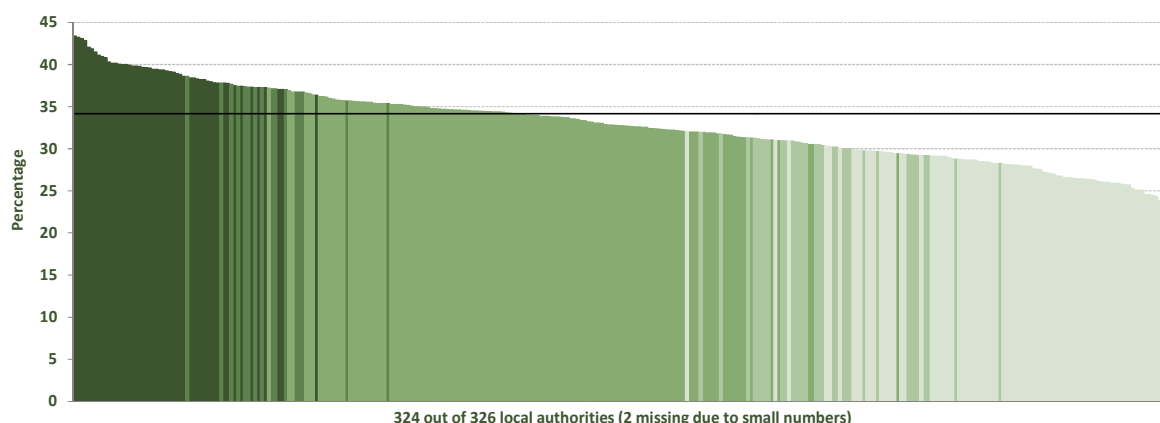
The National Child Measurement Programme (NCMP; see “Resources”) is undertaken annually in state-maintained schools in England. Over 1 million children in reception year (aged 4–5 years) and year 6 (aged 10–11 years) have their height and weight measured. The programme began in 2006, and is the largest source of recorded data on childhood obesity data in England (see Table 16.1).

¹ World Health Organization. Report of the commission on ending childhood obesity. World Health Organization, 2016.

² NICE Guideline (NG49), July 2016. Non-alcoholic fatty liver disease (NAFLD): assessment and management

³ Williams et al. (2014) Addressing liver disease in the UK: a blueprint for attaining excellence in health care and reducing premature mortality from lifestyle issues of excess consumption of alcohol, obesity, and viral hepatitis. Lancet; 384: 1953–97

Variation in percentage of children in school year 6 classified as overweight or obese by lower -tier local authority (school year 2015/16)



	Example	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	
Max-Min (Range)		20.3	20.6	17.4	19.9	20.5	20.2	20.2	21.8	22.1	23.3	WIDENING Significant
95th-5th percentile		12.4	12.3	11.4	12.2	12.7	13.5	13.6	13.5	13.8	14.0	WIDENING Significant
75th-25th percentile		4.9	5.1	4.9	5.3	5.7	5.1	5.6	5.6	5.9	6.3	WIDENING Significant
Median		30.2	31.4	31.5	32.3	32.3	32.9	32.2	32.1	32.1	32.7	INCREASING Significant

In the school year 2015/16:

- in reception, more than one in five children were overweight or obese; in year 6 this figure increased to one in three children
- the proportion of obese children in year 6 was more than double that in reception
- the prevalence of children with a healthy weight was higher in reception year than in year 6; in both years, a higher percentage of girls were at a healthy weight than boys
- the prevalence of underweight children is higher in year 6 than in reception. In reception, a higher percentage of boys were underweight than girls, whereas in year 6 a higher percentage of girls were underweight than boys

Table 16.1: Proportion of children according to weight categories⁴ (school year 2015/16)⁵

Weight category	Reception year	Year 6
Overweight and obese – all children	22.1%	34.2%
Obese	9.3%	19.8%
-Boys	9.6%	21.7%
-Girls	9.0%	17.9%
Healthy weight – all children	76.9%	64.5%
-Boys	76.1%	62.9%
-Girls	77.8%	66.2%
Underweight – all children	1.0%	1.3%
-Boys	1.2%	1.2%
-Girls	0.7%	1.5%

⁴ Children's body mass index (BMI) is categorised using the following thresholds in the British 1990 (UK90) growth reference: <2nd centile = underweight; 2nd to 85th centile = healthy weight; 85th to <95th centile = overweight; >95th centile = obese

⁵ NHS Digital. National Child Measurement Programme England, 2015/16 school year. 3 November 2016. <http://content.digital.nhs.uk/article/2021/Website-Search?productid=23381&q=NCMP+England+2015-2016&sort=Relevance&size=10&page=1&area=both#top>

Magnitude of variation

Map 16a: Children in school reception year classified as overweight or obese

The maps and column chart display the data for school year 2015/16, during which local authority values ranged from 12.9% to 30.1 %, which is a 2.3-fold difference between local authorities. The England value for 2015/16 was 22.1%.

The boxplot shows the distribution of local authority values for the period school years 2006/07 to 2015/16. Both the maximum to minimum range and the 95th to 5th percentile gap narrowed significantly. The median decreased significantly from 22.8% in 2006/07 to 22.0% in 2015/16.

Map 16b: Children in school year 6 classified as overweight or obese

The maps and column chart display the data for school year 2015/16, during which local authority values ranged from 20.1% to 43.4 %, which is a 2.2-fold difference between local authorities. The England value for school year 2015/16 was 34.2 %.

The boxplot shows the distribution of local authority values for the school years 2006/07 to 2015/16. There has been significant widening of all three measures of variation. The median increased significantly from 30.2% in 2006/07 to 32.7% in 2015/16.

The degree of variation observed is closely related to differences in the level of deprivation, which is associated with certain aspects of a child's diet and level of physical activity. It is important to note that the prevalence of childhood obesity is high in all local authorities, with excessive levels across the country; obesity is a major problem even in the local authorities which have the lowest prevalence.

For both school years measured in the NCMP, there is a trend of widening inequalities. Potential reasons for differences seen in the degree of variation between areas are complex but are likely to be influenced by factors that affect diet such as lack of food choices relating to the density of fast food outlets in the local area. Other potential reasons may include:

- lower levels of physical activity due to demographic, social, individual and environmental factors
- lack of access to lifestyle management services such as exercise referral or weight management schemes

Options for action

When planning service improvement or development to reduce obesity in children, especially in view of the rising trend in most parts of England, commissioners, clinicians, providers and public health departments should consider working with their local health and wellbeing boards and sustainability and transformation plan footprints:

- to review local prevalence and trends for obesity
- to refine and develop local strategies for reducing obesity in children, supported by guidance from NICE (see 'Resources') and other organisations. This needs to be conducted as part of a whole-system response in conjunction with national, regional and health service responses

RESOURCES

- NICE. Obesity in children and young people: prevention and lifestyle weight management programmes. Quality standard [QS94]. July 2015. www.nice.org.uk/guidance/qs94
- NICE interactive flowcharts. Lifestyle weight management services for overweight or obese children and young people overview. <https://pathways.nice.org.uk/pathways/lifestyle-weight-management-services-for-overweight-or-obese-children-and-young-people>
- NICE interactive flowcharts. Obesity prevention: pre-school and school-based interventions. <https://pathways.nice.org.uk/pathways/obesity#path=view%3A/pathways/obesity/obesity-prevention-pre-school-and-school-based-interventions.xml&content=view-index>
- NICE interactive flowcharts. Managing children and young people who are overweight or obese. <https://pathways.nice.org.uk/pathways/obesity#path=view%3A/pathways/obesity/managing-children-and-young-people-who-are-overweight-or-obese.xml&content=view-index>

- NICE interactive flowcharts. Obesity overview. <https://pathways.nice.org.uk/pathways/obesity>
- Health Survey for England 2015. Physical activity in children. Published 14th December 2016. www.content.digital.nhs.uk/catalogue/PUB22610/HSE2015-Child-phy-act.pdf
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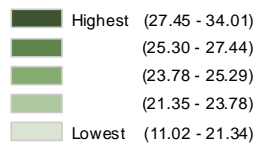
OBESITY

Map 17: Variation in percentage of adults aged 16 and over classified as obese (body mass index ≥ 30 kg/m²) by lower-tier local authority (2013-15)

NHS Domain 1: Preventing people from dying prematurely
PHOF Domain 2: Health Improvement

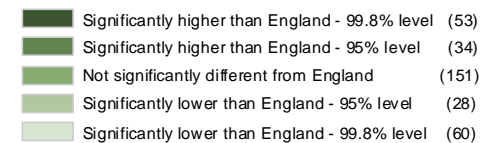
OPTIMUM VALUE: LOW

Equal-sized quintiles of geographies



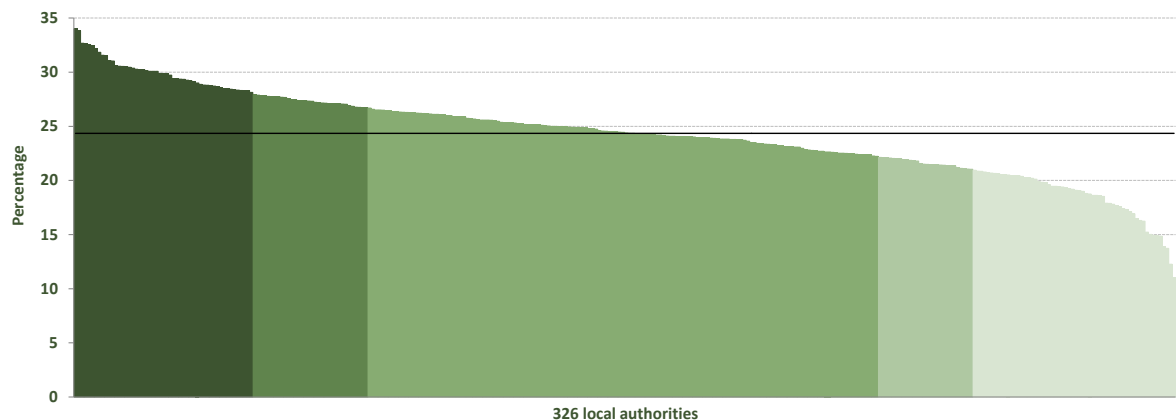
LONDON

Significance level compared with England



LONDON

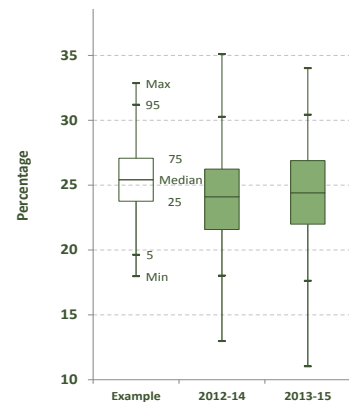
Variation in percentage of adults aged 16 and over classified as obese (body mass index ≥30 kg/m2) by lower-tier local authority (2013-2015)



Context

In recent years, it has been recognised that obesity contributes to the increasing burden of liver disease. In England, 27% of the adult population, around 12 million adults, is thought to be obese.¹

Non-alcoholic fatty liver disease (NAFLD) is the term for a range of conditions caused by a build-up of fat in the liver. An early stage of NAFLD is called fatty liver or steatosis. This is where fat accumulates in the liver cells without any inflammation or scarring. For many people, the condition will not advance and a serious liver



Max-Min (Range)		22.1	23.0
95th-5th percentile		12.2	12.8
75th-25th percentile		4.7	4.9
Median		24.1	24.4

condition will not develop, but for some, NAFLD can progress to non-alcohol related steatohepatitis (NASH)² which is a much more serious liver condition.

NAFLD is becoming increasingly common in parallel with the increasing prevalence of obesity and other components of the metabolic syndrome.^{3,4}

Recent NICE guidelines suggest that the prevalence of NAFLD in the general population is estimated at 20-30%, and that 2-3% have NASH. Disease progression is variable, being more common in those that are overweight or with diabetes.⁵

The prevalence of obesity among adults has increased sharply during the 1990s and early 2000s (see Table 17.1).

Table 17.1: Proportion of adults categorised as obese (BMI 30 kg/m²) over time^{6,7}

Population subgroup	Proportion categorised as obese		Proportion predicted to be obese in 2034 (steady progress scenario) ⁸
	1993	2015	
Men	13%	27%	36%
Women	16%	27%	36%

Obesity is an accumulation of excess body fat when energy intake from food and beverage consumption exceeds the

¹ NHS Digital. Health Survey for England, 2015 [NS]. Publication date: December 14, 2016. [www.content.digital.nhs.uk/catalogue/PUB22610](http://content.digital.nhs.uk/catalogue/PUB22610)

² British Liver Trust. Non-alcoholic fatty liver disease. www.britishlivertrust.org.uk/wp-content/uploads/44951-NAFLD-A5-Booklet-Web-compressed.pdf

³ Rinella ME. Nonalcoholic Fatty Liver Disease. A Systematic Review. JAMA. 2015;313(22):2263–2273

⁴ Neuschwander-Tetri, B. A. (2017). Non-alcoholic fatty liver disease. BMC Medicine, 15:45.

⁵ NICE Guideline (NG49), July 2016. Non-alcoholic fatty liver disease (NAFLD): assessment and management. www.nice.org.uk/guidance/ng49

⁶ Public Health England. UK and Ireland prevalence and trends. http://webarchive.nationalarchives.gov.uk/20170110171021/https://www.noo.org.uk/NOO_about_obesity/adult_obesity/UK_prevalence_and_trends

⁷ NHS Digital. Health Survey for England 2015 Adult overweight and obesity. Published 14th December 2016. <http://content.digital.nhs.uk/catalogue/PUB22610/HSE2015-Adult-obe.pdf>

⁸ UK Health Forum. Risk factor based health modelling for Public Health England. July 2014. www.ukhealthforum.org.uk/prevention/pie/?entryid43=38207

energy expended through metabolism and physical activity. The causes of obesity are complex, and relate to a variety of societal and behavioural factors.⁹

Obesity is associated with multiple health risks including:

- type 2 diabetes
- cardiovascular disease
- some cancers
- increased risk of skeletal and joint problems

Obesity is also associated with psychological conditions and reduced wellbeing.

The current costs to the NHS attributable to overweight and obesity are £6.1 billion.^{10,11} The wider costs to society and the economy have been estimated to rise to £49.9 billion per year by 2050.⁵ The treatment and prevention of obesity are major public health challenges.

Magnitude of variation

The maps and column chart display the period 2013-15, during which local authority values ranged from 11.0% to 34.0%, which is a 3.1-fold difference between local authorities. The England value for 2013-15 was 24.4%.

The boxplot shows the distribution of local authority values for the period 2012-14 to 2013-15.

When interpreting this data, it is important to note that the statistics presented are modelled estimates rather than actual prevalence. These estimates, however, give the best indication of relative rates of obesity prevalence currently available. It should also be borne in mind that the

prevalence of obesity is high in all local authorities, with excessive levels across the country; obesity is a major problem even in the local authorities with the lowest prevalence.

Prevalence of obesity in adults varies by age, sex, ethnic group and disability.¹² When compared with men, a higher proportion of women have a BMI >40 kg/m².⁶ Obesity prevalence increases with age up to approximately 70 years in both sexes. Health Survey for England data show women from Black African and Black Caribbean ethnic groups have a higher prevalence of obesity when compared with that in the general population, and men and women from Asian ethnic groups have a lower prevalence. Although data are limited, people with disabilities are more likely to be obese and have lower levels of physical activity.

Obesity prevalence can vary with socioeconomic status, where the effect is seen in women but not in men: 39% of women in the second lowest household income quintile were obese compared with 17% of women in the highest income quintile.¹³

Potential reasons for differences seen in the degree of variation between areas are complex but are likely to be influenced by factors that affect diet and those that effect food including the density of fast food outlets in the local area. Other potential reasons may include:

⁹ Government Office for Science. Foresight - Tackling Obesities: Future Choices Project Report. 2nd edition. First published: October 2007. www.gov.uk/government/collections/tackling-obesities-future-choices

¹⁰ Scarborough P, Bhatnagar P, Wickramasinghe KK et al. The economic burden of ill health due to diet, physical inactivity, smoking, alcohol and obesity in the UK: an update to 2006-07 NHS costs. J Public Health (Oxf). 2011 Dec;33(4):527-35. doi: 10.1093/pubmed/fdr033. Epub 2011 May 11. www.ncbi.nlm.nih.gov/m/pubmed/21562029

¹¹ Public Health England. Making the case for tackling obesity – why invest? Including Slide 10: The annual costs of obesity. http://webarchive.nationalarchives.gov.uk/20170210161227/http://www.noo.org.uk/slide_sets

¹² Public Health England. Health Inequalities. http://webarchive.nationalarchives.gov.uk/20170110170207/http://www.noo.org.uk/NOO_about_obesity/inequalities

¹³ NHS Digital. Health Survey for England 2015 Adult overweight and obesity. Published 14th December 2016. www.content.digital.nhs.uk/catalogue/PUB22610/HSE2015-Adult-obe.pdf

- lower levels of physical activity due to demographic, social, individual and environmental factors
- lack of access to lifestyle management services such as exercise referral or weight management schemes

Options for action

When planning service improvement or development to reduce obesity in adults, especially in view of the rising trend in most parts of England, commissioners, clinicians, service providers and public health departments should consider working with their local health and wellbeing boards and sustainability and transformation footprints:

- to review local prevalence and trends for obesity
- to refine and develop local strategies for reducing obesity, supported by guidance from NICE (see 'Resources') and other organisations. This needs to be conducted as part of a whole-system response in conjunction with national, regional and health service responses

RESOURCES

- Public Health England Obesity website. Wide-ranging authoritative information on data, evaluation and evidence related to weight status and its determinants.
<http://webarchive.nationalarchives.gov.uk/20160805121933/http://www.noo.org.uk>
- Public Health England. Adult obesity international comparisons data factsheet.
https://khub.net/c/document_library/get_file?uuid=5ac29533-d3f0-4805-b78b-58456d062e0d&groupId=31798783
- Public Health England. Adult diet data factsheet.
https://khub.net/c/document_library/get_file?uuid=74906681-d783-4f61-bad2-3094e1c4302a&groupId=31798783
- Public Health England. Adult obesity and socioeconomic status data factsheet.
https://khub.net/c/document_library/get_file?uuid=66f4f8fd-468e-4280-af13-dae5d1436fe1&groupId=31798783
- Public Health England. Adult physical activity data factsheet.
https://khub.net/c/document_library/get_file?uuid=b5155254-f0c6-4f6b-a06d-3c5847d84c1e&groupId=31798783
- NICE. Preventing excess weight gain. NICE guideline [NG7]. March 2015.
www.nice.org.uk/guidance/ng7
- NICE. Obesity in adults: prevention and lifestyle weight management programmes. Quality standard [QS111]. January 2016. www.nice.org.uk/guidance/qs111
- NICE. Interactive flowcharts. Lifestyle weight management services for overweight or obese adults overview.
<https://pathways.nice.org.uk/pathways/lifestyle-weight-management-services-for-overweight-or-obese-adults>
- NICE interactive flowcharts. Obesity overview.
<https://pathways.nice.org.uk/pathways/obesity>
- NICE interactive flowcharts. Obesity: working with local communities overview.
<https://pathways.nice.org.uk/pathways/obesity-working-with-local-communities>
- NICE interactive flowcharts. Physical activity overview.
<https://pathways.nice.org.uk/pathways/physical-activity>
- NICE interactive flowcharts. Diet overview.
<https://pathways.nice.org.uk/pathways/diet>
- NHS Digital. Health Survey for England – 2012 [NS]. Chapter 2: Physical activity in adults.
<http://content.digital.nhs.uk/catalogue/PUB13218/HSE2012-Ch2-Phys-act-adults.pdf>
- Public Health England. Local Health and Care Planning: Menu of preventative interventions. November 2016.
www.gov.uk/government/uploads/system/uploads/attachment_data/file/565944/Local_health_and_care_planning_menu_of_preventative_interventions.pdf
- Public Health England. Strategies for Encouraging Healthier 'Out of Home' Food Provision. A toolkit for local councils working with small food businesses. March 2017.
www.gov.uk/government/uploads/system/uploads/attachment_data/file/604912/Encouraging_healthier_out_of_home_food_provision_toolkit_for_local_councils.pdf