Public Health England

Protecting and improving the nation's health

Hypertension profile 2016
Indicator guide

This document presents metadata including the definitions and sources of the data for the National Cardiovascular Intelligence Network (NCVIN) Hypertension profile 2016.

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through advocacy, partnerships, world-class science, knowledge and intelligence, and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

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General information

Comparators

Profiles are produced for each clinical commissioning group (CCG) and local authority in England. The profiles for CCGs compares data for each CCG with that of similar CCGs (referred to as the 'comparator CCGs'); CCGs in their strategic clinical network (SCN); and the value for England. Where a CCG is in more than one SCN, it has been allocated to the SCN with the greatest geographical or population coverage.

The value for the comparator CCGs is the combined data for the ten most similar CCGs to that of the profile (this includes the ten most similar CCGs and the CCG which the profile describes). It uses the method used by the Commissioning for Value programme. Further details about this method are available on the Commissioning for Value webpages.

The profiles for local authorities compares data for each local authority with that of other local authorities in the same region, the Office for National Statistics (ONS) similar local authority cluster and the value for England. Further detail for the method used for ONS clustering are found in the ONS cluster data website.

Estimated number of people with hypertension

Data source	Model-based estimates (based on Health Survey for England (HSE), Eastern Region Public Health Observatory (ERPHO) and Imperial College
Time period	2011 expected prevalence applied to 2014/15 Quality and Outcomes (QOF) list size.
Unit	Persons
Definition	Model-based estimate of the prevalence of hypertension.
Definition of numerator	The 2011 expected prevalence rates of hypertension were applied to the general practice populations recorded in the 2014/15 QOF to calculate the expected number of people with hypertension. Numerator counts for local authorities were estimated by aggregating general practice estimates of expected hypertension (see methodology for further information).
Definition of denominator	N/A
Methodology	Estimates of the prevalence of hypertension were calculated using a model developed by ERPHO and Imperial College London. The model was developed using data from the 2003/04 HSE and takes into account age, sex, ethnicity and deprivation score. In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	All ages
Further information	The model-based estimate generated for a particular area is the expected measure for that area based on its population characteristics and not an estimate of the actual prevalence. The model-based estimates are unable to take account of any additional local factors that may impact on the true prevalence rate. www.apho.org.uk/resource/item.aspx?RID=111139

Number of people with diagnosed with hypertension

Data source	Quality and Outcomes Framework (QOF)
Time period	2014/15
Unit	Persons
Definition	The number of patients with diagnosed hypertension, as recorded on practice disease registers.
Definition of numerator	The number of patients with diagnosed hypertension, as recorded on 2014/15 QOF practice disease registers. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information).
Definition of denominator	N/A
Methodology	In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	All ages
Further information	Further information can be found at www.hscic.gov.uk/qof
Copyright	

Number and percentage of people with controlled hypertension

Data source	Quality and Outcomes Framework (QOF)
Time period	2014/15
Unit	%
Definition	The percentage of patients with controlled hypertension.
Definition of numerator	The number of patients with hypertension in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less. Numerator counts for local authorities were calculated by aggregating general practice level data (see methodology for further information).
Definition of denominator	Total estimated number of patients with hypertension (see estimated population with hypertension above). Denominator counts for local authorities were calculated by aggregating general practice level data (see methodology for further information).
Methodology	The number of patients with controlled hypertension divided by the estimated number of patients with hypertension In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	All ages
Further information	Further information on the QOF can be found at www.hscic.gov.uk/qof http://www.hscic.gov.uk/catalogue/PUB18887/qof-1415-prac-cardiovasculargroup.zip
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Lifestyle risk factors for hypertension

Data Source	Three component risk measures: 1. Inactive adults– Active People Survey, Sport England. 2. Excess weight – Active People Survey, Sport England 3. Binge drinking – Association of Public Health Observatories Estimates of Adults Health and Lifestyles.
Time period	2014/15
Unit	Ranking out of 209 CCG's
Indicator	Lifestyle risk factors for hypertension.
Definition	A rank index of a modifiable risk factors for hypertension. This includes three component risks: excess weight, alcohol intake (binge drinking) and inactive adults.
Methodology	Each of the component risk measures (links below) of excess weight, inactive adults and binge drinking were ranked by CCG ranked 1st being the best performing and 209th being the worst performing in that indicator. Each of the component risk measures use to produce the combined ranking figure (alcohol, obesity, and physical activity) was given a weighting factor. Each of the component rankings were weighted (multiplied) by these factors and resultant scores re-ranked and summed together for each CCG or Local authority. The final score is ranked the number 1 being the area which has the lowest combine risk measures for hypertension (best performing) area and in the case of CCGs 209 is the area with highest combined risk factors for hypertension. The CCG ranking is out 209 CCGS and the local authority version is out of 326 lower tier authorities. The reduction weighting data came table 5 page 24 in The Seventh Report of the Joint National Committee on Prevention,Detection, Evaluation, and Treatment of High Blood Pressure. US Department of Health and Human Services 2003. www.nhlbi.nih.gov/files/docs/guidelines/jnc7full.pdf
Further information	www.nhlbi.nih.gov/files/docs/guidelines/jnc7full.pdf Specfic details for each measure are also included below: Excess weight in adults Physical inactivity Percentage of the adult population that binge drink
Copyright	Active People Survey, Sport England Public health England National institute of Health.

Proportion of people aged 65 and over

Data sources	CCG profiles - Office for National Statistics (ONS) mid-year population estimates. Mid-2014 for Clinical Commissioning Groups in England, (experimental statistics) Local authority profiles - ONS mid-year population estimates for local authorities in the UK, mid-2014
Time period	2014
Unit	%
Definition	Percentage of the resident population aged 65 years and older
Definition of numerator	Number of residents aged 65 years and older
Definition of denominator	Total number of residents (resident population figure).
Methodology	Numerator divided by denominator expressed as a percentage
Age group	Population over 65
Further information	For further information see www.ons.gov.uk/ons/taxonomy/index.html?nscl=Population+Estimates+by+Age+and+Sex
Copyright	Office for National Statistics. Crown Copyright 2015

Percentage of people in the most deprived quintile

Data source	Department of Communities and Local Governmentof multiple deprivation 2015
Time period	2015
Unit	%
Definition	Percentage of people living in the most deprived quintile
Definition of numerator	Number of people living in the most deprived (30%) of lower super output areas in England
Definition of denominator	Total number of people living in CCG
Methodology	Numerator divided by denominator expressed as a percentage
Age group	All ages
Further information	For further information see https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015
Copyright	Department for Communities and Local Government (DCLG) by Oxford Consultants for Social Inclusion (OCSI). © Crown copyright, 2015

Percentage of people from minority ethnic groups

Data source	2011 Census Local authority NOMIS table - DC2101EW CCG NOMIS table - LA2101EW
Time period	2011
Unit	%
Definition	Percentage of people from monitory ethnic groups
Definition of numerator	Number of people from mixed, black, Asian and 'other' ethnic groups
Definition of denominator	Total population (resident population)
Methodology	Numerator divided by denominator expressed as a percentage
Age group	All ages
Further information	For further information see CCG ethnicity table https://www.nomisweb.co.uk/census/2011/lc2101ew Local authority ethnicity table https://www.nomisweb.co.uk/census/2011/dc2101ew
Copyright	Office for National Statistics. Crown Copyright Reserved [from Nomis 2016]

Excess weight in adults

Data source	Active People Survey, Sport England
Time period	2012 -2014
Unit	%
Definition	Percentage of adults classified as overweight or obese
Definition of numerator	Number of adults with a body mass index (BMI) classified as overweight (including obese). Adults are defined as overweight (including obese) if their BMI is greater than or equal to 25kg/m^2.
Definition of denominator	Number of respondents aged 16 and over, with valid responses to questions on height and weight.
Methodology	Numerator divided by the denominator expressed as a percentage. The counts were weighted to be representative of the whole population at each level of geography. Lower-tier local authority prevalence estimates have been used as a basis for estimating CCG level prevalence. When more than one local authority is contained within a CCG, the proportion of the local authority within the CCG has been allocated to the CCG and aggregated up to give CCG estimates.
Age group	16 years and over
Further information	Supporting indicators are available from the PHE Obesity Knowledge and Intelligence website www.noo.org.ukUnadjusted and adjusted prevalence data for excess weight, obesity, healthy weight, and underweight can be downloaded along with guidance notes and detailed analysis methods.
Copyright	Active People Survey, Sport England

Physical inactivity

Data source	Active People Survey, Sport England
Time period	2014
Unit	%
Definition	The number of respondents aged 16 and over, with valid responses to questions on physical activity, doing less than 30 'equivalent' minutes of at least moderate intensity physical activity per week in bouts of 10 minutes or more in the previous 28 days expressed as a percentage of the total number of respondents aged 16.
Definition of numerator	Number of respondents aged 16 and over, with valid responses to questions on physical activity, doing less than 30 'equivalent' minutes of at least moderate intensity physical activity per week in bouts of 10 minutes or more in the previous 28 days.
Definition of denominator	Number of respondents aged 16 and over, with valid responses to questions on physical activity.
Methodology	Numerator divided by the denominator expressed as a percentage. The counts were weighted to be representative of the whole population at each level of geography. Lower-tier local authority prevalence estimates have been used as a basis for estimating CCG level prevalence. When more than one local authority is contained within a CCG, the proportion of the local authority within the CCG has been allocated to the CCG and aggregated up to give CCG estimates.
Age group	16 years and over
Further information	Supporting indicators are available from the PHE Obesity Knowledge and Intelligence website. www.noo.org.uk/data_sources/physical_activity/activepeople
Copyright	Active People Survey, Sport England

Percentage of the adult population that binge drink

Data source	Association of Public Health Observatories Estimates of Adults Health and Lifestyles
Time period	2007/08
Unit	%
Definition	The percentage of the adult population that binge drink. Binge drinking in adults is defined separately for men and women. Men are defined as having indulged in binge drinking if they consumed eight or more units of alcohol on the heaviest drinking day in the previous seven days; for women the cut-off was six or more units of alcohol.
Definition of numerator	Number of people aged 16 years and older who are estimated to binge drink based on the patterns of behaviour reported in the Health Survey for England.
Definition of denominator	Population aged 16 years and older
Methodology	Numerator divided by the denominator expressed as a percentage. Modelled estimates based on individual-level data from the Health Survey for England. Lower-tier local authority prevalence estimates have been used as a basis for estimating CCG level prevalence. When more than one local authority is contained within a CCG, complete local authority prevalence data have been allocated to CCGs and aggregated up to give an estimated CCG prevalence.
Age group	16 years and over
Further information	Further information can be found at http://www.lape.org.uk/
Copyright	APHO

Coronary heart disease (CHD): QOF prevalence (all ages)

Data source	Quality and Outcomes Framework (QOF)
Time period	2014/15
Unit	%
Definition	The percentage of patients with coronary heart disease, as recorded on practice disease register.
Definition of numerator	Patients with coronary heart disease (CHD). Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Definition of denominator	Total practice list size. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Methodology	The number of people patients on the CHD register divided by the total practice list size. In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	All ages
Further information	Further information on the QOF can be found at www.hscic.gov.uk/qof http://www.hscic.gov.uk/catalogue/PUB18887/qof-1415-prac-cardiovasculargroup.zip
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Heart failure: QOF prevalence (all ages)

Data source	Quality and Outcomes Framework (QOF)
Time period	2014/15
Unit	%
Definition	The percentage of patients with heart failure, as recorded on practice disease registers.
Definition of numerator	Patients with heart failure Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Definition of denominator	Total practice list size. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Methodology	The number of people patients on the heart failure register divided by the total practice list size. In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	All ages
Further information	Further information on the QOF can be found at www.hscic.gov.uk/qof http://www.hscic.gov.uk/catalogue/PUB18887/qof-1415-prac-cardiovasculargroup.zip
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Stroke: QOF prevalence (all ages)

Data source	Quality and Outcomes Framework (QOF) http://www.hscic.gov.uk/catalogue/PUB18887/qof-1415-prac-cardiovasculargroup.zip
Time period	2014/15
Unit	%
Definition	The percentage of patients with stroke or transient ischaemic attack (TIA), as recorded on practice disease registers (proportion of total list size).
Definition of numerator	Patients with stroke or TIA, as recorded on practice disease registers. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Definition of denominator	Total practice list size. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Methodology	The number of people patients on the stroke register divided by the total practice list size. In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	All ages
Further information	Further information on the QOF can be found at www.hscic.gov.uk/qof
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Diabetes: QOF prevalence (over 17 years)

Data source	Quality and Outcomes Framework (QOF)
Time period	2014/15
Unit	%
Definition	The percentage of patients aged 17 years and over with diabetes mellitus, as recorded on practice disease registers.
Definition of numerator	Patients aged 17 years and over with diabetes mellitus in whom the type of diabetes has been identified. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Definition of denominator	Total number of registered patients aged 17+ years. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Methodology	Numerator divided by denominator expressed as a percentage In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	17+ years
Further information	Further information on the QOF can be found at www.hscic.gov.uk/qof http://www.hscic.gov.uk/catalogue/PUB18887/qof-1415-prac-cardiovasculargroup.zip
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Chronic kidney disease: QOF prevalence (18+)

Data source	Quality and Outcomes Framework (QOF)
Time period	2014/15
Unit	%
Definition	The percentage of patients aged 18 years and over with chronic kidney disease (CKD), as recorded on practice disease registers.
Definition of numerator	Patients aged 18 years and over with CKD, as recorded on practice disease registers. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Definition of denominator	Total number of registered patients aged 18+ years. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Methodology	Numerator divided by denominator expressed as a percentage In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	18+ years
Further information	Further information can be found at www.hscic.gov.uk/qof http://www.hscic.gov.uk/catalogue/PUB18887/qof-1415-prac-cardiovasculargroup.zip
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The percentage of patients aged 45 or over who have a record of blood pressure in the preceding five years

Data source	Quality and Outcomes Framework (QOF) – BP002 http://www.hscic.gov.uk/catalogue/PUB18887/qof-1415-prac-cardiovasculargroup.zip
Time period	2014/15
Unit	%
Definition	The percentage of patients aged 45 or over who have a record of blood pressure in the preceding five years.
Definition of numerator	Patients aged 45 or over who have a record of blood pressure in the preceding five years. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Definition of denominator	Total number of registered patients aged 45+. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Methodology	Numerator divided by denominator expressed as a percentage. In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	45+ years
Further information	Further information can be found at www.hscic.gov.uk/qof
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Cumulative percentage of the eligible population aged 40-74 offered an NHS Health Check

Data source	Public Health England http://fingertips.phe.org.uk/profile/nhs-health-check-detailed /
Time period	2014/15
Unit	%
Definition	The five-year cumulative percentage of the eligible population aged 40-74 offered an NHS Health Check.
Definition of numerator	Number of people aged 40-74 eligible for an NHS Health Check who were offered an NHS Health Check in the five-year period.
Definition of denominator	Number of people aged 40-74 eligible for an NHS Health Check in the five-year period.
Methodology	The cumulative percentage of the eligible population aged 40-74 offered an NHS Health Check during the five-year period 2013/14 to 2017/18: the number of people aged 40-74 eligible for an NHS Health Check who were offered an NHS Health Check in the five-year period is divided by the number of people aged 40-74 eligible for an NHS Health Check in the five-year period and multiplied by 100. NHS Health check data is published at upper tier local authority levels. In the local authority health profiles the upper tier profile percentage is used. When more than one local authority is contained within a CCG. Complete local authority prevalence data have been allocated to CCGs and aggregated up to give an estimated CCG percentage
Age group	Age 40-74 years
Further Information	The NHS Health Check dataset is a relatively new data collection that received full mandation from the Information Standards Board in June 2011. Before April 2013, primary care trusts (PCTs) had responsibility for commissioning the programme. From April 2013 local authorities had a legal duty to provide the NHS Health Check programme and since then have been required to offer the programme to 100% of their population over a five-year period, ie 20% of the eligible population invited for a NHS Health Check each year during the period 2013/14 to 2017/18. This indicator reports cumulative progress towards delivery over the five-year period. The eligible population for each area is based on mid-year population estimates for the latest year minus a 30% adjustment, except for some local areas where the eligible population has been identified from their GP registered population. The GP registered population may not be an accurate reflection of the local authority resident population and as different methods have been used to estimate the eligible population this could lead to variation in the quality of the data. As data quality issues may affect the indicator, and England comparator values, these should be interpreted together, and with some degree of caution. Further information can be found at www.healthcheck.nhs.uk.
Copyright	NHS healthcheck 2015

Cumulative percentage of the eligible population aged 40-74 offered an NHS Health Check who received an NHS Health Check

Data source	Public Health England
Time period	2014/15
Unit	%
Definition	The five-year cumulative percentage of the eligible population aged 40-74 offered an NHS Health Check who received an NHS Health Check.
Definition of numerator	Number of people aged 40-74 eligible for an NHS Health Check who have received an NHS Health Check in the five-year period.
Definition of denominator	Number of people aged 40-74 eligible for an NHS Health Check who were offered an NHS Health Check in the five-year period.
Methodology	The cumulative percentage of the eligible population offered an NHS Health Check who received an NHS Health Check during the five-year period 2013/14 to 2017/18: the number of people aged 40-74 eligible for an NHS Health Check who received an NHS Health Check is divided by the number of people aged 40-74 eligible for an NHS Health Check who were offered an NHS Health Check during the five-year period and multiplied by 100. NHS Health check data is published at upper tier local authority levels. In the local authority health profiles the upper tier profile percentage is used. When more than one local authority is contained within a CCG. Complete local authority prevalence data have been allocated to CCGs and aggregated up to give an estimated CCG percentage
Age group	Age 40-74 years
Further information	http://www.healthcheck.nhs.uk/interactive_map/
Copyright	NHS healthcheck 2015

Coronary heart disease - Last blood pressure reading measured in last 12 months is <=150/90 mmHg (denominator includes exceptions)

Data source	Quality and Outcomes Framework (QOF) – CHD002
Time period	2014/15
Unit	%
Definition	The percentage of patients with coronary heart disease in whom the last blood pressure reading (measured in the previous 12 months) is 150/90 mmHg or less.
Definition of numerator	Patients on the CHD register whose last recorded blood pressure is 150/90 mmHg or less. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Definition of denominator	The number of patients on the CHD register. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Methodology	Numerator divided by denominator expressed as a percentage In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	All ages
Further information	http://www.hscic.gov.uk/catalogue/PUB18887/qof-1415-prac-cardiovasculargroup.zip
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Chronic Kidney Disease last blood pressure reading measured in last 12 months is 140/85 or less (denominator includes exceptions)

Data source	Quality and Outcomes Framework (QOF) – CKD002
Time period	2014/15
Unit	%
Definition	The percentage of patients on the CKD register in whom the last blood pressure reading, measured in the previous 12 months, is 140/85 mmHg or less.
Definition of numerator	Patients on the CKD register whose last recorded blood pressure measurement is 140/85 mmHg or less. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Definition of denominator	Total number of patients on the CKD register (including exceptions) Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Methodology	Numerator divided by denominator expressed as a percentage. In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	18+ yrs
Further information	Further information can be found at www.hscic.gov.uk/qof http://www.hscic.gov.uk/catalogue/PUB18887/qof-1415-prac-cardiovasculargroup.zip
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Stroke last blood pressure reading in last 12 months is 150/90 or less (denominator includes exceptions)

Data source	Quality and Outcomes Framework (QOF) – STIA003
Time period	2014/15
Unit	%
Definition	The percentage of patients with a history of TIA or stroke in whom the last blood pressure reading (measured in the previous 12 months) is 150/90 mmHg or less.
Definition of numerator	The number of patients with a history of TIA or stroke in whom the last blood pressure reading (measured in the previous 12 months) is 150/90 mmHg or less. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Definition of denominator	The total number of patients on the stroke or TIA register (including exceptions). Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Methodology	Numerator divided by denominator and expressed as a percentage. In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	All ages
Further information	Further information can be found at www.hscic.gov.uk/qof http://www.hscic.gov.uk/catalogue/PUB18887/qof-1415-prac-cardiovasculargroup.zip
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Hypertension last blood pressure is less than or equal to 150/90 (denominator includes exceptions)

Data source	Quality and Outcomes Framework (QOF) – HYP006
Time period	2014/15
Unit	%
Definition	The percentage of patients with hypertension in whom the last blood pressure (measured in the preceding 12 months) is 150/90 mmHg or less.
Definition of numerator	The number of patients with hypertension in whom the last blood pressure (measured in the preceding 12 months) is 150/90 mmHg or less. Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Definition of denominator	Total number of patients on the hypertension register including those excepted from this indicator(including exceptions). Counts for local authorities were calculated by aggregating general practice level data (see methodology for further information)
Methodology	Numerator divided by denominator expressed as a percentage. In order to produce estimates for local authorities, numerator and denominator counts were estimated by aggregating general practice level data. Each general practice was allocated to a located authority wtihin which its main surgery is located, using the NHS Postcode Directory. General practice postcodes were downloaded from http://systems.hscic.gov.uk/data/ods/datadownloads/data-files/epraccur.zip
Age group	All ages
Further information	Further information can be found at www.hscic.gov.uk/qof http://www.hscic.gov.uk/catalogue/PUB18887/qof-1415-prac-cardiovasculargroup.zip
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Total cost of all hypertension and heart failure prescription items per adult with hypertension

Data source	HSCIC
Time period	2014/15
Unit	£
Definition	Total cost of all hypertension and heart failure prescription items per The percentage of patients with hypertension in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less.
Definition of numerator	Sum of the net ingredient cost of all hypertension and heart failure prescription items (British National Formulary chapter 2.5) dispensed in primary care. In the local authority hypertension profiles numerators and denominators were constructed from GP prescribers attributed to that local authority by their postcode. There are additional prescribers which make up the CCG figures which can not attibuted to a particular local authorities. This can cause variation the overall numerators and denominators in some coterminous local authority and CCGs.
Definition of denominator	The percentage of patients with hypertension in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less.
Methodology	Numerator divided by denominator expressed as £ per adult aged 79 or under with hypertension of 150/90 or less
Age group	All patients aged 79 or under with hypertension in whom the last blood pressure reading is 150/90 or less (including exceptions).
Further information	Data relates to prescriptions issued in primary care and dispensed in England. The numerator includes prescriptions dispensed in primary care for children aged 16 years and younger, but this will only account for a very small proportion of prescriptions and therefore is unlikely to alter the results shown. http://www.hscic.gov.uk/gpprescribingdata
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Average cost of anti hypertension prescription items

Data source	HSCIC
Time period	2014/15
Unit	£
Definition	Average cost of hypertension and heart failure prescription items
Definition of numerator	Sum of the net ingredient cost of all hypertension and heart failure prescription items (British National Formulary chapter 2.5) dispensed in primary care. In the local authority hypertension profiles numerators and denominators were constructed from GP prescribers attributed to that local authority by their postcode. There are additional prescribers which make up the CCG figures which can not attibuted to a particular local authorities. This can cause variation the overall numerators and denominators in some coterminous local authority and CCGs.
Definition of denominator	Number of hypertension and heart failure prescription items prescribed and dispensed in primary care
Methodology	Numerator divided by denominator expressed as £ per item
Age group	All ages
Further information	Data relates to prescriptions issued in primary care and dispensed in England http://www.hscic.gov.uk/gpprescribingdata
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References

Page 1 – Background

High blood pressure is the one of the leading risk factors for premature death and disability, and can lead to conditions including stroke, heart attack, heart failure, chronic kidney disease and dementia.

Murray CJL et al. UK health performance: findings of the Global Burden of Disease Study 2010.*Lancet* 2013; 381: 997–1020 www.ncbi.nlm.nih.gov/pubmed/23668584

A blood pressure reading over 140/90mmHg indicates hypertension, which should be confirmed by tests on separate occasions to reach a diagnosis. http://www.nhs.uk/conditions/Blood-pressure-(high)/Pages/Introduction.aspx

Diseases caused by high blood pressure cost the NHS over £2billion every year, by reducing the blood pressure of the nation as a whole, £850million of NHS and social care spend could be avoided over 10 years.

Optimity Matrix. *Cost-effectiveness review of blood pressure interventions*. 2014. http://www.bloodpressureuk.org/mediacentre/Newsreleases/Newbloodpressureboardtotacklehighbloodpressure

Internationally, whereas around four in ten adults in England with high blood pressure are both diagnosed and controlled to recommended levels, this is seven in ten in Canada (achieved with similar resources). www.gov.uk/government/uploads/system/uploads/attachment_data/file/404881/Tackling_high_blood_pressure_-_FINAL.pdf

Joffres M et al. Hypertension prevalence, awareness, treatment and control in national surveys from England, the USA and Canada, and correlation with stroke and ischaemic heart disease mortality: a cross-sectional study. *BMJ Open* 2013; 3(8). [Global Burden of Disease Figure 3B for stroke/IHD] http://bmjopen.bmj.com/content/3/8/e003423.full

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High blood pressure is often preventable. Even individuals with blood pressure currently in the ‘normal’ range could reduce their future risk of cardiovascular disease by lowering their blood pressure still further down to a threshold of 115/75mmHg. There are both modifiable risk factors (such as excess weight, dietary salt or alcohol) and non-

modifiable risk factors (such as old age, family history or ethnicity) for high blood pressure. The burden of high blood pressure is greatest among individuals from low-income households and those living in deprived areas.

Tackling high blood pressure From evidence into action.
www.gov.uk/government/uploads/system/uploads/attachment_data/file/404881/Tackling_high_blood_pressure_-_FINAL.pdf

Page 2 – paragraph 2

Hypertension disproportionately affects some ethnic groups including black Africans and Caribbeans.

Hypertension and ethnic group.
www.bmj.com/content/332/7545/833

Page 2 – paragraph 3

Reducing salt consumption and improving overall nutrition at population-level.

Improving calorie balance to reduce excess body weight at population-level.

Personal behaviour change on diet, physical activity, alcohol and smoking, particularly prompted through individuals' regular contacts with healthcare and other institutions.

Tackling high blood pressure From evidence into action.
www.gov.uk/government/uploads/system/uploads/attachment_data/file/404881/Tackling_high_blood_pressure_-_FINAL.pdf

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Testing advisable at least every five years, more frequent re-testing for those with high-normal blood pressure or in high risk groups.

Under NICE guidelines, diagnosis never based on a single test, normally confirmed by ambulatory (24 hour monitor) or home testing.

Hypertension: Clinical management of primary hypertension in adults. NICE guidance CG127 August 2011.
www.nice.org.uk/guidance/cg127/chapter/1-Guidance

Vast majority of diagnosis currently occurs in General Practice, but NHS Health Check, pharmacy, voluntary sector and home are also important testing venues and potential growth areas to maximise detection.

Blood Pressure UK. *Know Your Numbers 2013*
www.bloodpressureuk.org/microsites/kyn/Home/AboutKYN/KYN2013
Stroke Association. *Know Your Blood Pressure*. www.stroke.org.uk/kybp

Lloydspharmacy. Briefing note to Public Health England. 2014 (unpublished)

Page 3 – paragraph 2

Diagnosed hypertension is taken from the Quality and Outcomes Framework and represents all adults who have been diagnosed with hypertension and included on GP registers. The expected prevalence estimates of hypertension are modelled from the Health Survey for England data. This model has some known limitations: for example diagnosis of hypertension was based on three blood pressure readings in a single sitting rather than the ambulatory monitoring recommended by NICE; and the model was developed from 2003/04 survey data. Nevertheless the model is accepted as a reasonable indicative estimate of hypertension, and this suggests that in England there may be in excess of five million people living with undiagnosed hypertension.

Hypertension Prevalence Modelling Briefing Document Hannah Walford, Laurence Ramsay. ERPHO December 2011.
www.apho.org.uk/resource/view.aspx?RID=111139

Page 4 – paragraph 1

The NHS Health Check programme aims to help prevent heart disease, stroke, diabetes, kidney disease and certain types of dementia. Everyone between the ages of 40 and 74, who has not already been diagnosed with one of these conditions, will be invited once every five years to assess their risk of developing these conditions. They are given support and advice to help them reduce or manage that risk. During a health check a blood pressure check is made.

NHS Health Check [Internet]. London: Department of Health; 2014 [cited 2015 Jun 29].
www.healthcheck.nhs.uk

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NICE recommend lifestyle treatment for all with hypertension – with good adherence can achieve significant blood pressure reduction.

Drug therapy for all over 160/90mmHg and over 140/90 when other risks present. Quality of blood pressure control varies substantially between practices. Four-step approach to incremental drug treatment set out by NICE. 80% of people require two or more agents to achieve blood pressure control.

NICE treatment target (for adults under 80 years) 140/90mmHg.

Hypertension: Clinical management of primary hypertension in adults. NICE guidance CG127 August 2011
www.nice.org.uk/guidance/cg127/chapter/1-Guidance

Page 5 – paragraph 4

Seventy-eight per cent of patients with high blood pressure have one or more other condition in parallel – common multi-morbidities include diabetes, coronary heart disease, heart failure and stroke. This can make management more challenging but offers additional opportunities for monitoring.

www.gov.uk/government/uploads/system/uploads/attachment_data/file/404881/Tackling_high_blood_pressure_-_FINAL.pdf