



**British Heart
Foundation**

UK Factsheet

August 2018

Our vision is a world without heart and circulatory diseases. We want to end the heartbreak that they cause

Key Statistics

Today

420

people will lose
their lives to CVD

...more than
115 people
will be
younger than **75**

7m

people live with
CVD

545

hospital visits are
due to coronary
heart disease

180

people will die
from coronary
heart disease

12

babies will be
diagnosed with
a heart defect

Quick Links

Key Statistics

**Heart and Circulatory
Diseases**

Cost

**Coronary Heart
Disease**

Heart Attack

Atrial Fibrillation

Heart Failure

Stroke

**Out-of-Hospital
Cardiac Arrest**

**Congenital Heart
Disease**

**Inherited (Genetic)
Conditions**

**Vascular
Dementia**

**Risk
Factors**

Heart and Circulatory Diseases (Cardiovascular Disease; CVD)

Heart and circulatory diseases is an umbrella term that describes all diseases of the heart and circulation. It includes everything from conditions that are inherited, or that a person is born with, to those that develop later such as coronary heart disease, atrial fibrillation, heart failure, and stroke.

- Heart and circulatory diseases cause more than a quarter (**26 per cent**) of all deaths in the UK; that's over 150,000 deaths each year - an average of 420 people each day or one death every three minutes.
- Around 42,000 people under the age of 75 in the UK die from CVD each year.
- Since the BHF was established the annual number of deaths from heart and circulatory diseases in the UK has **fallen by more than half**.
- In 1961, more than half of all deaths in the UK were attributed to CVD (320,000 deaths).
- Since 1961 the UK death rate from heart and circulatory diseases has declined by more than **three quarters**. Death rates have fallen more quickly than the actual number of deaths because people in this country are now living longer.
- There are around 7 million people living with heart and circulatory diseases in the UK - an ageing and growing population and improved survival rates from heart and circulatory events could see these numbers rise still further.

 Around **7 million** people live with heart and circulatory diseases in the UK

Linked conditions

81 percent of people with heart and circulatory diseases have at least one other condition

Deaths from and numbers living with Heart and Circulatory Diseases

Nation	No. of People Dying from CVD (2016)	No. of People Under 75 Years Old Dying from CVD (2016)	Estimated Number of People Living with CVD
England (2016/17)	124,615	33,812	5.9 million
Scotland (2015/16)	15,131	4,644	685,000
Wales (2016/17)	8,655	2,495	375,000
Northern Ireland (2016/17)	3,629	1,070	225,000
United Kingdom	152,465	42,311	7 million +

Deaths BHF/University of Birmingham analysis from latest official statistics (ONS/NISRA/NRS); UK total includes non-residents (ONS data)
Living with CVD estimates based on latest health surveys with CVD fieldwork and GP patient data

- Early deaths from CVD (before the age of 75) are most common in the north of England, central Scotland and the south of Wales, and lowest in the south of England.
- Death rates take the age structure (demography) of local areas into account to reveal the real differences in statistics. This is very important when there are big variations in the age profile of communities across the UK.
- The premature (under 75) death rate for Manchester (140.7 per 100,000) is nearly 4 times higher than that for Mid Suffolk in the East of England (37.0 per 100,000)
- Regional and local UK statistics and rankings for heart and circulatory deaths can be found on [our website](#)

UK premature (under 75 years) death rates 2014-16

Local Authority	Location	Under 75 Death Rate per 100,000 Population	Under 75 Annual Number of CVD Deaths
Manchester	North West	140.7	376
Glasgow City	Scotland	138.8	586
North Lanarkshire	Scotland	121.6	350
East Ayrshire	Scotland	121.1	139
West Dunbartonshire	Scotland	120.6	96

The Cost of Heart and Circulatory Diseases

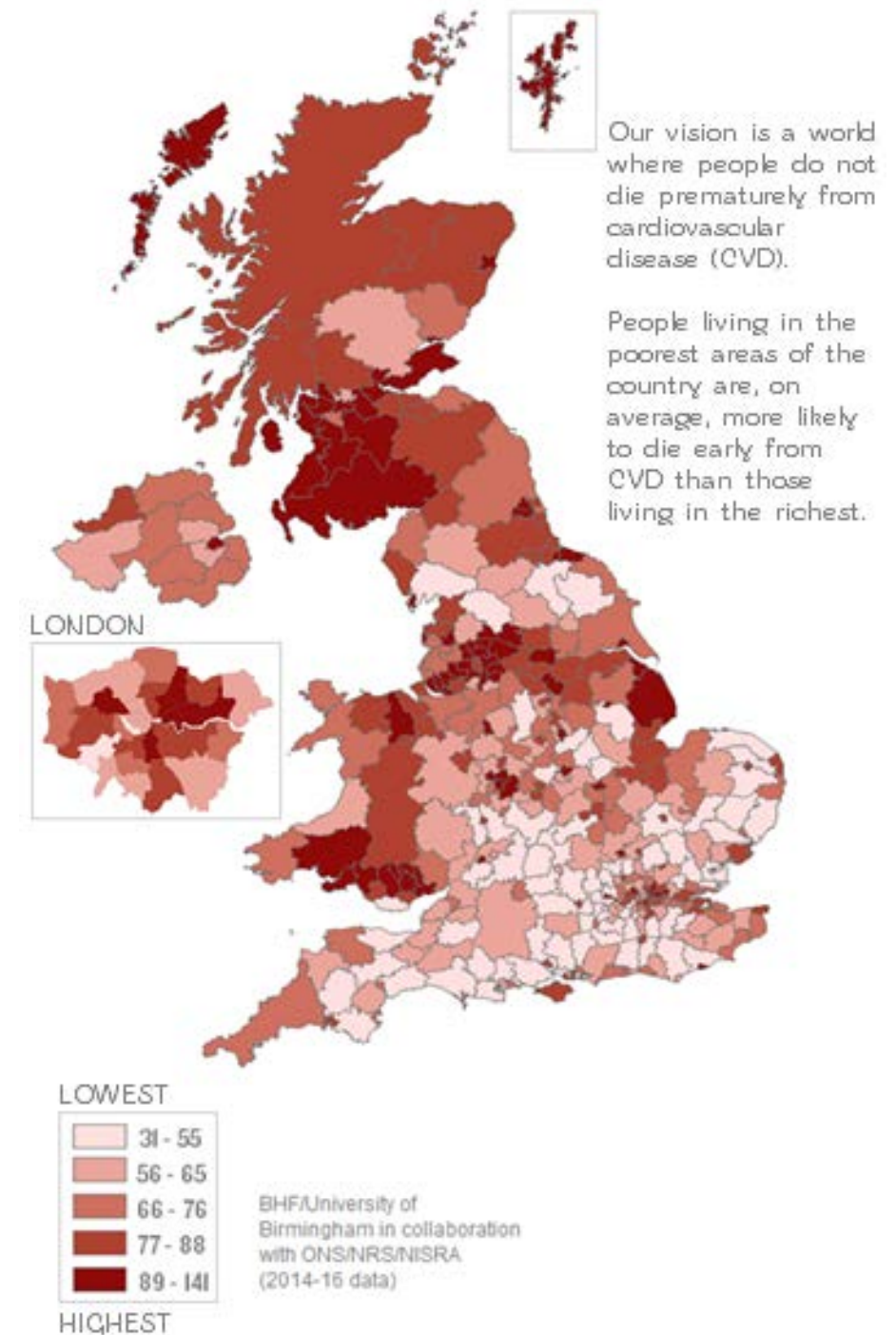
- Healthcare costs relating to heart and circulatory diseases are estimated at £9 billion each year.
- CVD's cost to the UK economy (including premature death, disability and informal costs) is estimated to be £19 billion each year.

The total annual healthcare cost of heart and circulatory disease in the UK is



PREMATURE CVD DEATH RATE

age-standardised per 100,000 population



Coronary Heart Disease (CHD; Ischaemic Heart Disease)

Coronary heart disease (CHD) is the most common type of heart and circulatory disease. It occurs when coronary arteries become narrowed by a build-up of atheroma, a fatty material within their walls. The pain or discomfort felt from such narrowing is called angina and if a blockage occurs it can cause a myocardial infarction (heart attack).

- CHD is the one of the UK's leading causes of death.
- It is also the **leading cause of death worldwide**.
- In the UK, nearly one in seven men and one in twelve women die from coronary heart disease.
- CHD is responsible for **over 66,000** deaths in the UK each year, an average of 180 people each day, or one death around every eight minutes.
- Nearly **22,000** people under the age of 75 in the UK die from CHD each year.
- CHD kills more than twice as many women in the UK as breast cancer.
- CHD death rates are highest in Scotland and the north of England and lowest in the south of England.
- Since the BHF was established the annual number of CHD deaths in the UK has fallen by more than half.
- Coronary heart disease is the leading cause of heart attacks

For more information please visit our website:

[Regional and local UK statistics for CHD deaths](#)

[Coronary Heart Disease](#)

- **2.3 million** people are living with CHD in the UK ~ over 60% are male



**Every
8 minutes**
someone in the UK
dies from coronary
heart disease

Heart Attack (Myocardial Infarction, MI)

- In the UK there are over 200,000 hospital visits each year due to heart attacks: that's **1 every 3 minutes**.
- In the 1960s more than 7 out of 10 heart attacks in the UK were fatal. Today at least **7 out of 10 people survive**.
- An estimated 915,000 people alive in the UK today (640,000 men and 275,000 women) have survived a heart attack.

For more information on heart attacks, visit [our website](#)



Atrial Fibrillation (AF)

Atrial fibrillation is one of the most common forms of abnormal heart rhythm (arrhythmia) and a major cause of stroke.

- Around 1.3 million people in the UK have been diagnosed with atrial fibrillation.
- It is estimated that there are over 500,000 people living with undiagnosed AF in the UK.

For more on atrial fibrillation, visit [our website](#)



Heart Failure

Heart failure occurs when the heart is not pumping blood around the body as well as it should, most commonly when the heart muscle has been damaged – for example, after a heart attack.

- Over **920,000** people in the UK are living with heart failure.

For more information on heart failure, visit [our website](#)

Stroke (Cerebrovascular Disease)

A stroke occurs when the blood supply to part of the brain is cut off, causing brain cells to become damaged. A transient ischaemic attack (TIA) is also known as a "mini-stroke" and is caused by a temporary disruption in the blood supply to part of the brain.

- Strokes cause over **38,000 deaths** in the UK each year.
- In the UK over 245,000 hospital visits are attributed to stroke each year.
- Over **1.2 million** people living in the UK have survived a stroke or transient ischaemic attack (TIA).

Regional and local UK statistics and rankings for stroke deaths can be found on [our website](#)

For more information on strokes visit [our website](#)

Linked conditions

- Individuals with coronary heart disease, or who have had a heart attack, are more than twice as likely to have a stroke as those who haven't.
- People with heart failure are 2-3 times more likely to have a stroke.
- People with diabetes are twice as likely to have a stroke as people without diabetes

Out-of-Hospital Cardiac Arrest (OHCA)

Cardiac arrest is a critical medical emergency, where the heart stops pumping blood around the body. Unless treated immediately, it leads to death within minutes.

- There are **more than 30,000** out-of-hospital cardiac arrests (OHCAs) in the UK each year.
- The overall survival rate in the UK is **less than 1 in 10**.
- The Chain of Survival is a sequence of steps that together maximise the chance of survival following cardiac arrest.
- Every minute without cardiopulmonary resuscitation (CPR) and defibrillation reduces the chance of survival by up to 10 per cent.
- Performing CPR can double the chances of survival in some cases (ventricular fibrillation).

For more on cardiac arrest visit [our website](#)



There are more
than **30,000**
out-of-hospital
cardiac arrests in
the UK each year

Congenital Heart Disease

Congenital heart disease is a heart condition or defect that develops in the womb before a baby is born.

- Heart defects are diagnosed in at least 1 in 180 births - that's an average of **12 babies** each day in the UK - with more diagnoses later in life.
- Estimates suggest that as many as 1-2 per cent of the population may be affected.
- Before the BHF existed, the majority of babies born in the UK with a heart defect did not survive to their first birthday. Today, thanks to research, around **8 out of 10** survive to adulthood.

For more information congenital heart disease, visit [our website](#)



12 babies a day are diagnosed with a congenital heart defect in the UK

Inherited (Genetic) Conditions

These are conditions which can be passed on through families, affect people of any age and may be life-threatening.

- They include hypertrophic cardiomyopathy (HCM; estimated 1 in 500 people) and familial hypercholesterolaemia (FH; 1 in 250).
- It's estimated that around **620,000 people** in the UK have a faulty gene which puts them at an unusually high risk of developing heart disease or dying suddenly at a young age.
- In the UK it is estimated that at least 12 young people (aged under 35) die every week from an undiagnosed heart condition.

For more information, visit our website:-

[Inherited heart conditions](#)

[Familial hypercholesterolemia](#)



Around 620,000 people in the UK have a faulty gene that can cause an inherited heart-related condition

Vascular Dementia

Vascular dementia happens when there's a problem with the blood supply to an area of your brain. The cells in the affected area of your brain don't get enough oxygen or nutrients and start to die. This leads to symptoms such as concentration problems and personality changes.

- Vascular Dementia is estimated to affect around 150,000 people in the UK.

For more information on vascular dementia, visit [our website](#)

Medical Risk Factors

Many different risk factors increase your likelihood of developing heart and circulatory diseases.

High Blood Pressure

- Nearly 30% of adults in the UK have high blood pressure and half of them are not receiving treatment
- People with high blood pressure are up to three times more likely to develop heart disease or have a stroke.


High Blood Cholesterol

- High blood cholesterol is a significant risk factor for developing heart and circulatory diseases.

Linked conditions

- People with a history of heart disease are at least twice as likely to develop vascular dementia
 - People with diabetes are 2-3 times more likely to develop vascular dementia
-
- Around 50% of heart attacks and strokes are associated with high blood pressure

Around **50%** of heart attacks and strokes are associated with high blood pressure



Diabetes

Diabetes is a condition in which blood sugar levels are elevated over a prolonged period of time. This results in damage to the inner lining of blood vessels. Consequently, diabetes is an important risk factor for CVD.

- Nearly 3.7 million adults in the UK have been diagnosed with diabetes.
- Around 10 per cent of those diagnosed are living with Type 1 diabetes and 90 per cent have Type 2.
- It's estimated that over 1 million people in the UK are living with undiagnosed Type 2 diabetes.

Linked conditions

- Adults with diabetes are 2-3 times more likely to develop CVD, and are nearly twice as likely to die from heart disease or stroke as those without diabetes
- At least 65% of people with diabetes actually die of heart disease or stroke

Other Risk Factors

- Poor air quality contributes to up to 36,000 deaths per year in the UK, with a significant impact on heart and circulatory health.
- Other risk factors can significantly increase your risk of developing heart and circulatory diseases, including age, gender, family history and ethnicity.



65% of adults with diabetes die from a heart or circulatory disease

For more information, visit our website:

- *High Blood Pressure (Hypertension)*
- *High Cholesterol*
- *Vascular Dementia*
- *Diabetes*

Lifestyle Risk Factors

Modifiable risk factors (e.g. cigarette smoking, physical inactivity and poor diet) contribute significantly to the risk of CVD.

Smoking

- More than one in six adults smoke cigarettes in the UK— that's over 8 million adults.
- **Nearly 100,000** smokers in the UK die from smoking-related causes each year.
- It's estimated that about **20,000 deaths** in the UK each year from heart and circulatory diseases can be attributed to smoking.



Overweight/Obesity

- An estimated **26 per cent** of adults in the UK are obese and in addition more than a third are overweight (by BMI)
- It's estimated that around **28 per cent** of children in the UK are overweight or obese.

Diet and Exercise

- **Two out of five** adults in the UK do not achieve recommended levels of physical activity.
- Only around a quarter of UK adults and one in six children in England and Scotland consume the recommended minimum five portions of fruit and vegetables per day.
- Around **a quarter of adults** in the UK exceed national guidelines for weekly alcohol intake; no level of use is without risk.



About the British Heart Foundation (BHF)

For over 50 years we've pioneered research that has transformed the lives of millions of people living with heart disease. Our work has been central to the discoveries of vital treatments that are leading the fight against heart disease.

But heart and circulatory disease still kills more than one in four people in the UK, stealing them away from their families and loved ones. From babies born with life-threatening heart problems, to the many mums, dads and grandparents who survive a heart attack or endure their daily battles with heart failure.

Join our fight for every heartbeat in the UK. Every pound raised, minute of your time and donation to our shops will help make a difference to people's lives.

bhf.org.uk/donate

More BHF CVD Statistics

Including exclusive content, local statistics and maps
Visit [our website](#)

This factsheet is compiled by the British Heart Foundation.

Last reviewed and updated August 2018.

Statistics are the latest available from the UK's health and statistical agencies.
For any queries, please [contact us](#) and we will do our best to help.

Factsheets are also available for the UK, Scotland, Wales and Northern Ireland.



References

STATISTIC	REFERENCE
HEART AND CIRCULATORY DISEASES (CARDIOVASCULAR DISEASE; CVD)	
CVD deaths, men/women	BHF analysis of latest UK mortality statistics: ONS/NRS/NISRA (2016 data)
CVD ASDRs (death rates); UK CVD map	BHF/University of Birmingham calculated rates in partnership with UK statistical agencies: ONS/NRS/NISRA (2014-16 data)
Numbers living with CVD	BHF estimate based on Quality & Outcomes Framework prevalence data: 2015/16/17; NHS Digital/ISD Scotland/StatsWales/DH Northern Ireland and latest UK health surveys with CVD fieldwork: 2015/16/17; NHS Digital/Scottish Government/ StatsWales/ DH Northern Ireland
£19bn CVD economic cost ~ £9bn healthcare costs for CVD	BHF analysis of European Cardiovascular Disease Statistics 2017, EHN (www.ehnheart.org/cvd-statistics/cvd-statistics-2017.html)
<i>Linked conditions:</i> 81% people with CVD have one other condition	Tran J, Norton R, Conrad N, Rahimian F, Canoy D, Nazarzadeh M, et al. Patterns and temporal trends of comorbidity among adult patients with incident cardiovascular disease in the UK between 2000 and 2014: A population-based cohort study. PLoS Med. 2018; 15(3):e1002513. https://doi.org/10.1371/journal.pmed.1002513 PMID: 29509757
CORONARY HEART DISEASE (CHD; ISCHAEMIC HEART DISEASE)	
CHD deaths, vs breast cancer, biggest killer worldwide	BHF analysis of latest UK mortality statistics: ONS/NRS/NISRA (2016 data) World Health Organization, <i>The Top 10 Causes of Death</i>
CHD ASDRs (death rates)	BHF/University of Birmingham calculated rates in partnership with UK statistical agencies: ONS/NRS/NISRA (2014-16 data)
2.3m living with CHD	Quality & Outcomes Framework prevalence data 2015/16/17; NHS Digital/ISD Scotland/StatsWales/DH Northern Ireland
Living with CHD gender split	BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates
HEART ATTACK (MYOCARDIAL INFARCTION, MI)	
198k heart attack hospital visits	UK hospital episode statistics, 2015/16/17; NHS Digital/ISD Scotland/NHS Wales/DH Northern Ireland
7/10 people survive heart attack ~ 1960s estimate	Case fatality rates in Smolina's 2012 BMJ paper on acute MI mortality (www.bmj.com/content/344/bmj.d8059) ~ Goldacre's 2003 paper on myocardial infarction (Oxon)
915k survived MI	BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates
ATRIAL FIBRILLATION (AF)	
1.3m UK diagnosed with AF ~ undiagnosed	Quality & Outcomes Framework prevalence data 2016/17; NHS Digital/ISD Scotland/StatsWales/DH Northern Ireland ~ Atrial Fibrillation Association/NCVIN (Public Health England)
HEART FAILURE (HF)	
500k+ living with heart failure	Quality & Outcomes Framework prevalence data 2015/16/17; NHS Digital/ISD Scotland/StatsWales/DH Northern Ireland

STATISTIC	REFERENCE
STROKE (CEREBROVASCULAR DISEASE)	
38k UK stroke deaths	BHF analysis of latest UK mortality statistics: ONS/NRS/NISRA (2016 data)
245k+ stroke hospital visits	UK hospital episode statistics, 2016/17; NHS Digital/ISD Scotland/NHS Wales/DH Northern Ireland
1.2m UK stroke/TIA survivors	Quality & Outcomes Framework prevalence data 2016/17; NHS Digital/ISD Scotland/StatsWales/DH Northern Ireland
U75 stroke survivors	BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates
<i>Linked conditions:</i> CHD or heart attack more than twice as likely to have a stroke	http://stroke.ahajournals.org/content/22/8/983
<i>Linked conditions:</i> People with heart failure are 2-3 times more likely to have a stroke.	http://stroke.ahajournals.org/content/42/10/2977
<i>Linked conditions:</i> People with diabetes are twice as likely to have a stroke as people without diabetes	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5298897/
CONGENITAL HEART DISEASE	
1:180 babies diagnosed	BHF/Oxford University analysis of EUROCAT congenital anomaly registers 2010-14 (NB cases exclude BAV - bicuspid aortic valve)
survival comparison (pre-BHF/today)	MacMahon BMJ (http://heart.bmj.com/content/heartjnl/15/2/121.full.pdf) and Wren & O'Sullivan, BMJ (http://heart.bmj.com/content/85/4/438.long)
1-2% prevalence	various estimates including Hoffman & Kaplan, JACC –19 per 1,000 includes BAVs which will eventually need cardiologic care (www.sciencedirect.com/science/article/pii/S0735109702018867)
INHERITED (GENETIC) CONDITIONS	
600k+ UK with faulty gene	PHG Foundation, <i>Heart to Heart: inherited cardiovascular conditions services</i> (2009); with revised FH prevalence estimates (see below) and DCM from Hersherberger et al 2013 (www.nature.com/nrcardio/journal/v10/n9/full/nrcardio.2013.105.html)
1:250 with familial hypercholesterolaemia (FH)	Benn, Watts et al. J Clin Endocrinol Metab Aug 2012 (www.ncbi.nlm.nih.gov/pubmed/22893714) – with erratum Dec 2014; also in Eur Heart J Aug 2013, Nordestgaard et al (eurheartj.oxfordjournals.org/content/early/2013/08/15/eurheartj.eht273)
1:500 with hypertrophic cardiomyopathy (HCM)	Priori et al, Task Force on Sudden Cardiac Death ESC (eurheartj.oxfordjournals.org/content/ehj/22/16/1374.full.pdf)
sudden cardiac deaths under-35s	Cardiac Risk in the Young (www.c-r-y.org.uk/statistics)
OUT-OF-HOSPITAL CARDIAC ARREST (OHCA)	
30k+ UK OHCA's/year, less than 10% survival	BHF UK estimate - volumes and survival rates are only routinely published for England: NHS England (2017). Ambulance Quality Indicators. Analytical Service (www.england.nhs.uk/statistics/statistical-work-areas/ambulance-quality-indicators/) Out-of-Hospital Cardiac Arrest: A Strategy for Scotland, 2015 (www.gov.scot/Publications/2015/03/7484) DHNI, Community Resuscitation Strategy Northern Ireland, 2014 (www.health-ni.gov.uk/publications/community-resuscitation-strategy-and-reports) No data available for Wales
Every min & CPR doubles survival	European Resuscitation Council, Guidelines for Resuscitation 2015 (www.cprguidelines.eu)

STATISTIC	REFERENCE
RISK FACTORS	
3.7m adults diagnosed with diabetes ~ undiagnosed*, type and double risk	QOF prevalence data 2016/17; NHS Digital/ISD Scotland/StatsWales/DH Northern Ireland ~ Diabetes UK, <i>Diabetes: Facts and Stats</i> – *updated following PHE revisions
Smoking; number of smokers High blood pressure (hypertension)	BHF analysis of UK surveys (NHS Digital/ Scottish Government/StatsWales/DH Northern Ireland) and ONS population estimates
High BP/CVD risk	Vasan et al NEJM 2001 (www.ncbi.nlm.nih.gov/pubmed/11794147/)
100k/20k smoking attributable CVD deaths	Adult smoking habits in the UK: 2016 ONS https://www.ons.gov.uk/releases/adultsmokinghabitsingreatbritain2016
Obesity, physical activity, 5-a-day, alcohol	BHF analysis of UK health surveys (NHS Digital/Scottish Government/StatsWales/DH Northern Ireland)
Air pollution	COMEAP, 2018 https://www.gov.uk/government/publications/nitrogen-dioxide-effects-on-mortality/associations-of-long-term-average-concentrations-of-nitrogen-dioxide-with-mortality-2018-comeap-summary
Linked Conditions	
<i>Diabetes</i> : Adults with diabetes are 2-3 times more likely to develop CVD, and are nearly twice as likely to die from heart disease or stroke as those without diabetes	http://circ.ahajournals.org/content/59/1/8.short https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2809299/
<i>Diabetes</i> : At least 65% of people with diabetes actually die of heart disease or stroke	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3028955/
<i>Diabetes</i> : People with diabetes are 65% more likely to have heart failure than the rest of the population	https://digital.nhs.uk/catalogue/PUB06325
<i>Vascular dementia</i> : People with a history of heart disease are at least twice as likely to develop vascular dementia	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2924456/
<i>Vascular dementia</i> : People with diabetes are 2-3 times more likely to develop vascular dementia	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2174783/