



British Heart
Foundation

CYMRU

CVD STATISTICS – BHF FACTSHEET FOR WALES

Last reviewed and updated February 2018.

ABOUT THE BRITISH HEART FOUNDATION (BHF)

Our mission is to win the fight against heart and circulatory disease.

Our vision is a world in which people do not die prematurely or suffer from heart and circulatory disease.

For over 50 years we've pioneered research that has transformed the lives of millions of people living with heart disease.

We are the biggest independent funder of cardiovascular research in Wales.

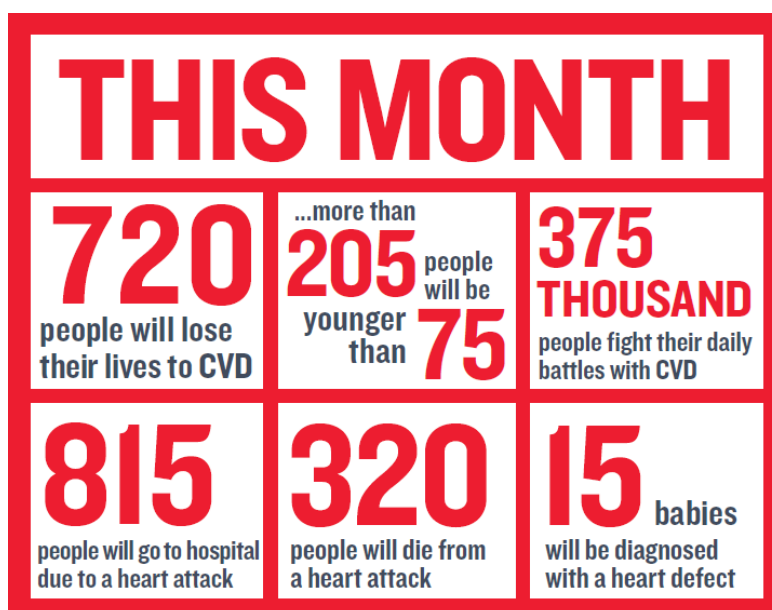
Our work has been central to the discoveries of vital treatments that are leading the fight against heart disease.

But **heart and circulatory disease still kills more than one in four people in Wales**, 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.

BHF HEART STATISTICS

Statistics are very important to the BHF. They give our staff, volunteers and supporters a sense of the scale of heart and circulatory disease's burden and the challenges we face as we fight for every heartbeat. We compile the most comprehensive statistics on the effects, prevention, treatment, costs and causes of heart disease in Wales and the UK. bhf.org.uk/statistics

For examples of how we are making a difference, look for the BHF sections throughout this factsheet.



QUICK LINKS – [Cardiovascular Disease \(CVD\)](#) - [Coronary Heart Disease \(CHD\)](#) - [Heart Attack](#) - [Heart Failure](#) - [Atrial Fibrillation](#) - [Stroke](#) - [Cardiac Arrest](#) - [Congenital](#) - [Inherited](#) - [Risk Factors](#) - [References](#) - [About Us](#)

Cardiovascular Disease (CVD; Heart and Circulatory Disease)

Cardiovascular disease (CVD) is an umbrella term that describes all diseases of the heart and circulation. It includes everything from conditions that are diagnosed at birth, or inherited, to developed conditions such as coronary heart disease, atrial fibrillation, heart failure, and stroke.

- Cardiovascular (heart and circulatory) disease causes more than a quarter (**26 per cent**) of all deaths in Wales, or **over 8,600 deaths** each year – that's an average of 24 people each day.
- CVD kills 4,400 men and 4,200 women in Wales each year.
- Since the BHF was established the annual number of CVD deaths in Wales has fallen by more than half.
- In 1961, 17,649 deaths - over half of all deaths that year in Wales - were attributed to CVD.
- Since 1961 the Welsh death rate from CVD has declined by more than **three quarters**. Death rates have fallen more quickly than the actual number of deaths because people in Wales are now living longer lives.
- **2,500 people** under the age of 75 in Wales die from CVD each year.



Cardiovascular disease causes more than a quarter of all deaths in Wales

DEATHS FROM CVD AND NUMBERS LIVING WITH CVD

Nation	Number of People Dying from CVD (2016)	Number 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 deaths include non-residents
Living with CVD estimates based on latest health surveys with CVD fieldwork and GP patient data

- There are an estimated **375,000 people** living with cardiovascular disease in Wales.
- An ageing and growing population and improved survival rates from cardiovascular events could see numbers rise still further.
- For more information about CVD, visit our website at bhf.org.uk/heart-health/conditions/cardiovascular-disease



AROUND 375,000
people in Wales are living with cardiovascular disease

BHF Thanks to research we funded, the use of statins to help prevent CVD is now routine, saving lives every year in Wales. Read our [research timeline](#) to find out more.

BHF A groundbreaking study, co-funded by the BHF, investigated the effect of social inequalities on health. This research has helped shape public health policy across the UK and around the world. Read our [research timeline](#) to find out more. Subsequently, addressing health inequalities has become a key component in all innovation programmes that the BHF has piloted to improve services for people living with or at risk of CVD.

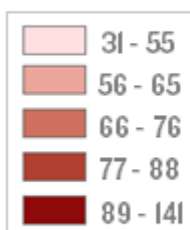
- Premature death rates from CVD (before the age of 75) are higher than in England.
- Death rates take the age structure (demography) of local areas into account to reveal the real differences in statistics. This is very important when there are big variations in the age profile of communities across the country.
- The highest premature CVD death rates by Welsh authority (2014-16) were for Blaenau Gwent and Merthyr Tydfil.

WELSH PREMATURE CVD DEATH RATES 2014-16 – TOP SEVEN (WALES AVERAGE = 86.4)		
Unitary Authority	Death Rate per 100,000 Population	Annual Number of CVD Deaths Under 75 Years Old
Blaenau Gwent	107.4	69
Merthyr Tydfil/ Merthyr Tudful	105.0	55
Caerphilly/ Caerffili	103.4	167
Rhondda Cynon Taf	100.2	211
Neath Port Talbot / Castell-nedd Port Talbot	97.2	129
Denbighshire / Sir Ddinbych	90.2	89
Swansea / Abertawe	90.0	188

PREMATURE CVD DEATH RATE

age standardised per 100,000 population

LOWEST



HIGHEST



BHF/University of Birmingham in collaboration with ONS (2014-16 data)

Our vision is a world where people do not die prematurely from cardiovascular disease (CVD).

People living in the poorest areas of the country are, on average, more likely to die early from CVD than those living in the richest.



The total annual healthcare cost of cardiovascular disease in Wales

- The premature (under 75) death rate for Blaenau Gwent (107.4 per 100,000) is almost twice as high as for The Vale of Glamorgan / Bro Morgannwg (53.8 per 100,000).
- Regional and local statistics and rankings for CVD deaths can be found on our website at bhf.org.uk/statistics
- Total NHS expenditure on CVD in Wales in 2014/15 was £446 million.

BHF A clinical trial, funded by us as part of a wider collaboration, showed that the benefits of treating high blood pressure in very elderly people outweighed the risk of side effects, allowing elderly people to receive the care they require. Read our [research timeline](#) to find out more.

BHF We have funded House of Care, an innovative programme designed to enable clinicians to empower patients to make informed decisions about their care, based on what is important to them, and provide support to patients to manage their own conditions from day to day. bhf.org.uk/houseofcare

Coronary Heart Disease (CHD; Ischaemic Heart Disease)

Coronary heart disease (CHD) is the most common type of cardiovascular 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).

- Coronary heart disease (CHD) is Wales's single biggest killer. It is also **the leading cause of death worldwide**.
- In Wales, more than 1 in 7 men and nearly 1 in 11 women die from coronary heart disease.
- CHD is responsible for over **3,800 deaths** in Wales each year; that's an average of 11 deaths each day.
- CHD kills 2,400 men and 1,400 women in Wales each year.
- Since the BHF was established the annual number of CHD deaths in Wales has fallen by more than half.
- In 1961, 9,082 deaths in Wales were attributed to CHD – over a quarter of all deaths that year.
- Since 1961 the age-standardised death rate from CHD has declined by more than three quarters.



Coronary heart disease is Wales's single biggest killer

BHF Our researchers have developed a scoring system to assess the risk of heart attack or death for patients with acute coronary syndrome (unstable angina or heart attack). The GRACE scoring system is now a reference standard, resulting in guideline changes in over 55 countries, leading to improved management of heart patients around the world.

bhf.org.uk/heartattackhistory

BHF A trial that we funded has led the way in demonstrating that MRI – a non-invasive imaging technique – is more effective than a CT scan in identifying people at high risk of death or heart attack following chest pain suspected to be angina. These findings are important as MRI does not expose people to radiation.

bhf.org.uk/MRIscans_highrisk

- Regional and local statistics and rankings for CHD deaths can be found on our website at bhf.org.uk/statistics
- CHD kills nearly three times as many women as breast cancer in Wales; it even kills more women prematurely.
- **Nearly 1,400 people** under the age of 75 in Wales die from CHD each year.
- Around **119,000 people** are living with CHD in Wales. Over 60 per cent are estimated to be men.
- Most deaths from coronary heart disease are caused by a heart attack.
- For more information about CHD, visit our website at bhf.org.uk/heart-health/conditions/coronary-heart-disease



Coronary heart disease kills nearly three times as many women as breast cancer in Wales



There are **119,000** people living with coronary heart disease in Wales

Heart Attack (Myocardial Infarction, MI)

- Most deaths from coronary heart disease are caused by a heart attack.
- In Wales nearly 9,800 **hospital visits** each year are attributed to heart attack: that's **1 every 54 minutes**.
- Around 50,000 people alive in Wales today (35,000 men and 15,000 women) have survived an MI.
- 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**.
- For more information on heart attacks visit our website at bhf.org.uk/heart-health/conditions/heart-attack

BHF Professor Michael Davies was one of the first scientists to clearly demonstrate that blood clots in the heart's coronary arteries cause heart attacks. This breakthrough in the 1970s paved the way for scientists around the world to investigate how to prevent and treat blood clots. This has led to the development of life saving, clot-busting drugs.
bhf.org.uk/heartattackhistory

BHF Large-scale studies, part-funded by us, showed that combined treatment with aspirin and a clot buster drug significantly increases survival rates after heart attacks. [BHF Research - Heart Attack](#)

BHF Research that we funded has shown that a new high-sensitivity blood test for troponin – a protein released from the heart during a heart attack – results in improved diagnosis of heart attack, particularly in women.
bhf.org.uk/heartattacktest

Atrial Fibrillation (AF)

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

- Around **68,000 people** in Wales have been diagnosed with atrial fibrillation.
- It is estimated that there are thousands more living with undiagnosed AF.
- For more on atrial fibrillation, visit bhf.org.uk/heart-health/conditions/atrial-fibrillation

BHF We have funded arrhythmia care coordinator (ACC) posts to improve outcomes for people with arrhythmias. The programme is already preventing thousands of hospital admissions and has been adopted as a NICE Quality, Innovation and Productivity case study.
bhf.org.uk/bestpractice

Heart Failure (HF)

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 **32,000 people** in Wales have been diagnosed with heart failure.
- For more information on heart failure, visit our website at bhf.org.uk/heart-health/conditions/heart-failure

BHF Our researchers helped to show that angiotensin converting enzyme (ACE) inhibitors – drugs that lower blood pressure – increase survival and improve quality of life in patients with heart failure.
bhf.org.uk/treatmentsresearch

BHF Our work has shown that heart failure specialist nurses (HFSNs) provide great benefit and comfort for heart patients and their carers. The use of HFSNs has been widely adopted across the country.
[Managing HF in the Community](#)

BHF We funded an innovative pilot delivering intravenous diuretics at home, leading to improved quality of life for heart failure patients. Patients preferred this over hospital-based treatment and the model has been replicated across the country.
bhf.org.uk/communityivd

Stroke (Cerebrovascular Disease)

A stroke occurs when the blood supply to part of the brain is cut off, causing brain cells to become damaged.

- Stroke causes over **2,100 deaths** in Wales each year.
- In Wales over **11,500 hospital visits** are attributed to stroke each year.
- Around **67,000 people** living in Wales have survived a stroke or transient ischaemic attack (TIA).
- Nearly half of stroke survivors in Wales are under the age of 75.
- Regional and local statistics and rankings for stroke deaths can be found on our website at bhf.org.uk/statistics
- For more health information on strokes visit our website at bhf.org.uk/heart-health/conditions/stroke

Out-of-Hospital Cardiac Arrest (OHCA)

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

- The overall UK OHCA survival rate to hospital discharge is **less than 1 in 10**.
- Each year Welsh emergency services deal with **thousands** of out-of-hospital cardiac arrests.
- Survival rates for Wales are not published.
- The Chain of Survival (below) 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 bhf.org.uk/heart-health/conditions/cardiac-arrest



BHF By providing access to innovative resources for cardiopulmonary resuscitation (CPR) training, we aim to give people the skills and confidence to act when they witness a cardiac arrest and improve survival rates, thereby building a Nation of Lifesavers. Millions of adults and schoolchildren have participated in our CPR training schemes and now have life saving skills.

BHF We have also helped fund and place thousands of public access defibrillators (PADs) in communities across the country. We are making further investments to increase defibrillator awareness for emergency medical services and the public to ensure that PADs can be accessed quickly in an emergency.

bhf.org.uk/survival



Less than 1 in 10 people survive an out-of-hospital cardiac arrest in the UK

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 15 each month in Wales - 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, visit bhf.org.uk/heart-health/conditions/congenital-heart-disease

BHF Professor Sir Magdi Yacoub developed surgical techniques to treat a complex congenital heart defect. The switch procedure which he pioneered is now used routinely, worldwide, to treat babies born with abnormally connected blood vessels.

BHF With our support, researchers at the Institute of Child Health mapped out the details of heart defects. This knowledge, combined with advances in imaging technology, helps to identify and treat abnormalities as early as possible, meaning babies have the best chance of survival bhf.org.uk/congenhistory



15 babies a month are diagnosed with a congenital heart defect in Wales

Inherited (Genetic) Conditions

These are conditions which can be passed on through families, affect people of any age and 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 **30,000 people** in Wales 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:-
bhf.org.uk/heart-health/conditions/inherited-heart-conditions
bhf.org.uk/heart-health/conditions/familial-hypercholesterolaemia



Around 30,000 people in Wales have a faulty gene that can cause an inherited heart-related condition

BHF Professor Steve Humphries and his team have pioneered the development of genetic tests for familial hypercholesterolaemia (FH), an inherited condition which results in exceptionally high levels of cholesterol in the blood. Left untreated, this can greatly increase the risk of developing heart disease at an early age. Read our [research timeline](#) to find out more. Based on this research, the BHF has piloted FH cascade screening programmes across the UK since 2010, ensuring access to genetic testing, and resulting in thousands being diagnosed and getting the treatment they need.

BHF Professor Hugh Watkins and his team have led in the identification of the faulty genes that cause hypertrophic cardiomyopathy (HCM) – a dangerous condition that can lead to sudden death. Through the Miles Frost Fund, the BHF will pilot a programme to help ensure access to genetic testing for immediate family members of those diagnosed with HCM.
bhf.org.uk/HCMresearch

Medical Risk Factors

Many different risk factors increase your likelihood of developing cardiovascular disease.

High Blood Pressure

- **One in five adults** in Wales report being treated for **high blood pressure**.
- 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 cardiovascular disease.

Diabetes

- Having diabetes can **double the risk** of developing cardiovascular disease.
- **Over 191,000 adults** in Wales 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 thousands more people in Wales are living with undiagnosed Type 2 diabetes.

For more information, visit our website:-

High Blood Pressure (Hypertension) bhf.org.uk/heart-health/risk-factors/high-blood-pressure

High Cholesterol bhf.org.uk/heart-health/risk-factors/high-cholesterol

Diabetes bhf.org.uk/heart-health/risk-factors/diabetes



Lifestyle Risk Factors

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

Smoking



1 in 5
adults in Wales smoke



1,100
Welsh cardiovascular disease
deaths are attributed to
smoking each year

- One in five adults **smoke cigarettes** in Wales – that's close to half a million adults.
- Around **5,500 smokers** in Wales die from smoking-related causes each year.
- Each year an estimated 1,100 Welsh deaths from cardiovascular disease can be attributed to smoking.
- Over **26,000 hospital admissions** for adults over 35 are attributable to smoking each year.

Overweight/Obesity

- An estimated 23 per cent of adults in Wales are **obese** and in addition more than a third are **overweight**.
- One third of children in Wales are overweight or obese.



23%
of adults in Wales
are obese

Diet and Exercise

- An estimated 46 per cent of adults in Wales do not meet current **physical activity** recommendations.
- Less than a quarter of adults in Wales consume the recommended five portions of **fruit and veg** per day.
- 73 per cent of school-age children report eating fruit every day and 62 per cent report eating veg every day.



46% of adults in Wales
do not meet physical
activity recommendations

Other Risk Factors

- Outdoor **air pollution** contributes to an estimated 40,000 premature deaths in the UK each year, with a significant impact on cardiovascular health.
- Other risk factors which can significantly increase the risk of developing cardiovascular disease include age, gender, family history and ethnicity.

BHF Groundbreaking studies by our researchers have greatly advanced our understanding of how maternal nutrition and lifestyle during pregnancy can affect a child's long-term health. Read our [research timeline](#) to find out more.

BHF Our research has provided evidence of a causal relationship between air pollutants and cardiovascular disease. The researchers have also shown that fitting particle traps to diesel engine exhausts helps to prevent the damaging effects of some types of pollution. Some European countries have already started to adopt this simple intervention to limit the detrimental effects of pollution on health. Visit our [website](#) to find out more.



CYMRU

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 Wales, 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. 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 bhf.org.uk/statistics

This factsheet is compiled by the British Heart Foundation.

Last reviewed and updated February 2018.

Statistics are the latest available from UK and Welsh 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, England, Scotland and Northern Ireland.

REFERENCES

STATISTIC	REFERENCE
CARDIOVASCULAR DISEASE (CVD; HEART & CIRCULATORY DISEASE)	
CVD deaths	England and Wales, Office for National Statistics (2017) Deaths registered by cause, gender and age. https://www.nomisweb.co.uk/home/release_group.asp?g=23
CVD death rates	BHF/University of Birmingham calculated rates in partnership with the Office for National Statistics (2014-16 data)
375k living with CVD	BHF estimate based on Welsh Government Quality & Outcomes Framework data 2016/17 http://gov.wales/statistics-and-research/general-medical-services-contract/?lang=en
£446m CVD cost	NHS expenditure, Public Health Wales 2014/15
CORONARY HEART DISEASE (CHD; ISCHAEMIC HEART DISEASE)	
CHD deaths, vs breast cancer ~ worldwide	England and Wales, Office for National Statistics (2017) Deaths registered by cause, gender and age. https://www.nomisweb.co.uk/home/release_group.asp?g=23 , World Health Organization, <i>The Top 10 Causes of Death</i>
CHD death rates	BHF/University of Birmingham calculated rates in partnership with the Office for National Statistics (2014-16 data)
119k living with CHD ~ gender split	StatsWales, Quality & Outcomes Framework, 2016/17 ~ BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates
HEART ATTACK (MYOCARDIAL INFARCTION, MI)	
9.8K heart attack hospital episodes	NHS Wales Informatics Service (2016). The Patient Episode Database for Wales- 2015/16. www.infoandstats.wales.nhs.uk (accessed Jan 2017).
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)
50k survived MI	BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates
ATRIAL FIBRILLATION (AF)	
68k diagnosed with AF ~ undiagnosed	Welsh Government Quality & Outcomes Framework data 2016/17 http://gov.wales/statistics-and-research/general-medical-services-contract/?lang=en
HEART FAILURE (HF)	
32k+ living with heart failure ~ by gender	Welsh Government Quality & Outcomes Framework data 2016/17 http://gov.wales/statistics-and-research/general-medical-services-contract/?lang=en ~ BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates
STROKE (CEREBROVASCULAR DISEASE)	
2.1k stroke deaths	England and Wales, Office for National Statistics (2017) Deaths registered by cause, gender and age. https://www.nomisweb.co.uk/home/release_group.asp?g=23
11.5k+ stroke hospital episodes	NHS Wales Informatics Service (2016). The Patient Episode Database for Wales- 2015/16. www.infoandstats.wales.nhs.uk (accessed Jan 2017).
67k stroke/TIA survivors	Welsh Government Quality & Outcomes Framework data 2016/17 http://gov.wales/statistics-and-research/general-medical-services-contract/?lang=en
U75 stroke survivors	BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates
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)
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)
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)
INHERITED (GENETIC) CONDITIONS	
30k with faulty gene	BHF estimate for Wales based on prevalence rates in PHG Foundation's <i>Heart to Heart: inherited cardiovascular conditions services</i> (2009); and revised FH prevalence estimates (see below) and DCM from Hershberger 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)
UK 12 cardiac deaths/week under-35s	Cardiac Risk in the Young (www.c-r-y.org.uk/statistics)

REFERENCES

STATISTIC	REFERENCE
OUT-OF-HOSPITAL CARDIAC ARREST (OHCA)	
UK survival rate less than 1 in 10	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)
RISK FACTORS	
191k adults diagnosed with diabetes ~ undiagnosed	Welsh Government Quality & Outcomes Framework data 2016/17 http://gov.wales/statistics-and-research/general-medical-services-contract/?lang=en ~ Diabetes UK, Diabetes: Facts and Stats 2016
Adults treated for HBP	Welsh Health Survey 2015 Results
Adults smoke ~ 500k smokers	National Survey for Wales 2016/17 and ONS Population estimates
5.5k smokers die, 26k hospital admissions	Adult smoking habits in the UK: 2016 ONS https://www.ons.gov.uk/releases/adultsmokinghabitsingreatbritain2016 Public Health Wales http://www.wales.nhs.uk/sitesplus/888/news/46444
1.1K CVD deaths due to smoking	BHF estimate for Wales based on Statistics on Smoking, England – 201; NHS Digital https://digital.nhs.uk/catalogue/PUB24228
Physical activity, obesity, 5-a-day	National Survey for Wales 2016/17
air pollution	Royal College of Physicians report (2016) (link)