Our vision is a world free from the fear of heart and circulatory diseases.
Today in Northern Ireland

Coronavirus is having a devastating impact, and more research is required to understand it, including how heart and circulatory diseases and their risk factors affect COVID-19 risk and outcomes. BHF-funded researchers are contributing to these efforts. For info/support visit bhf.org.uk/coronavirus

We are continuing our work to help and support the 225,000 people living with heart and circulatory diseases in Northern Ireland.

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Heart and Circulatory Diseases (Cardiovascular Disease; CVD)

Heart and circulatory diseases is an umbrella term for 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 are develop later, such as coronary heart disease, atrial fibrillation, heart failure, stroke and vascular dementia.

- Heart and circulatory diseases cause a quarter (25%) of all deaths in Northern Ireland, or around 4,000 deaths each year – that’s an average of 11 people each day.
- Around 1,100 people under the age of 75 in Northern Ireland die from heart and circulatory diseases (CVD) each year.
- Since the 1960s, CVD death rates in Northern Ireland have fallen by three-quarters.
- Death rates have fallen more quickly than the actual number of deaths because people in Northern Ireland are now living longer.
- There are an estimated 225,000 people living with heart and circulatory diseases in Northern Ireland - an ageing and growing population and improved survival rates from heart and circulatory events could see these numbers rise still further.

For more information about heart and circulatory diseases, visit our website

Deaths from and numbers living with heart and circulatory diseases (CVD)

<table>
<thead>
<tr>
<th>Nation</th>
<th>No. of People Dying from CVD (2018)</th>
<th>No. of People Under 75 Years Old Dying from CVD (2018)</th>
<th>Estimated Number of People Living with CVD</th>
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<td>Northern Ireland</td>
<td>3,938</td>
<td>1,085</td>
<td>225,000</td>
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Deaths BHF/University of Birmingham analysis from latest official statistics (NISRA); Living with CVD estimates by BHF - based on latest health surveys and GP patient data
• Premature death rates from heart and circulatory diseases (before the age of 75) in Northern Ireland are broadly similar to those for 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 premature (under 75) death rate for CVD in Belfast (87.1 per 100,000) is two-thirds higher than for North Down & Ards (62.1 per 100,000).

• Regional and local UK statistics and rankings for heart and circulatory deaths can be found on our website.

NI premature (under 75 years) death rates, heart and circulatory diseases (CVD) 2016-18

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<tr>
<th>Local Authority – Top Five</th>
<th>Under 75 CVD Death Rate per 100,000 Population</th>
<th>Under 75 Annual Number of CVD Deaths</th>
</tr>
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<tbody>
<tr>
<td>Belfast</td>
<td>87.1</td>
<td>215</td>
</tr>
<tr>
<td>Derry City &amp; Strabane</td>
<td>80.7</td>
<td>95</td>
</tr>
<tr>
<td>Armagh City, Banbridge &amp; Craigavon</td>
<td>73.1</td>
<td>121</td>
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<tr>
<td>Mid Ulster</td>
<td>69.4</td>
<td>75</td>
</tr>
<tr>
<td>Causeway Coast &amp; Glens</td>
<td>68.5</td>
<td>86</td>
</tr>
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</table>

The Cost of Heart and Circulatory Diseases

Total NHS expenditure on CVD in Northern Ireland in 2014/15 was £412 million.
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).

- Around 74,000 people are living with CHD in Northern Ireland
- CHD is the one of Northern Ireland’s leading causes of death and biggest single cause of premature deaths (those before the age of 75).
- It is also the leading cause of death worldwide.
- In Northern Ireland, 1 in 8 men and more than 1 in 14 women die from coronary heart disease.
- CHD is responsible for around 1,500 deaths in Northern Ireland each year, an average of around 5 deaths each day.
- Around 600 people under the age of 75 in Northern Ireland die from CHD each year.
- CHD kills nearly twice as many women in Northern Ireland as breast cancer.
- Coronary heart disease is the leading cause of heart attacks

Linked conditions
- Individuals with coronary heart disease, or who have had a heart attack, are twice as likely to have a stroke as those who haven’t.

For more info please visit:
Coronary Heart Disease

Premature CHD death rate by local authority 2016-18

Death rate per 100,000

- 29-34
- 35-40
- 41-48
Heart Attack (Myocardial Infarction, MI)

- There are around **4,200 hospital admissions** for heart attack in Northern Ireland each year: that’s 12 each day or 1 every 120 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.

Atrial Fibrillation (AF)

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

- More than **39,000 people** in Northern Ireland have been diagnosed with atrial fibrillation.

- It is estimated that there are thousands more living with undiagnosed atrial fibrillation.

**Linked conditions**

- People with AF are five times more likely to have a stroke
- AF is a contributing factor to one in five strokes

For more info please visit:
- Heart Attacks
- Atrial Fibrillation
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.

- Around 18,300 people in Northern Ireland have been diagnosed with heart failure by their GP.
- Estimates which include diagnoses at hospital show there are thousands more people living with the condition across the nation.

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 more than 900 deaths in Northern Ireland each year.
- In Northern Ireland there are around 1,300 hospital admissions for stroke each year.
- More than 38,000 people living in Northern Ireland today have survived a stroke or transient ischaemic attack (TIA).
- Over half (54 per cent) of stroke survivors in Northern Ireland are under the age of 75.

Linked conditions

- 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.
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 causes hundreds of deaths each year in Northern Ireland – numbers could be higher as it can be difficult to diagnose the different types of dementia.
- Vascular dementia is the second most common type of dementia, seen in around 1 in 4 cases.
- Vascular dementia is estimated to affect at least 150,000 people in the UK.
- By 2050 it’s predicted that the numbers living with vascular dementia could double.

Linked conditions

- People with a history of heart diseases are at least **twice as likely** to develop vascular dementia
- Vascular dementia accounts for **three quarters** of dementia cases in stroke survivors
- People with diabetes are **2-3 times** more likely to develop vascular dementia

For more info please visit:

> Vascular dementia
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 1,400 out-of-hospital cardiac arrests (OHCAs) in Northern Ireland each year.
- Less than 1 in 10 people survive an out-of-hospital cardiac arrest in Northern Ireland.
- Every minute without cardiopulmonary resuscitation (CPR) and defibrillation reduces the chance of survival by up to 10 per cent.
- Performing CPR can more than double the chances of survival in some cases (ventricular fibrillation).
- It’s estimated that public-access defibrillators (PADs) are used in less than five per cent of OHCAs.
- The Chain of Survival (below) is a sequence of steps that together maximise the chance of survival following cardiac arrest.

There are around 1,400 out-of-hospital cardiac arrests in Northern Ireland each year

For more info please visit: Cardiac arrest
**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 150 births - that’s an average of 13 babies each month in Northern Ireland - with more diagnoses later in life.
- Estimates suggest that in total 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.

**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 17,500 people in Northern Ireland 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.
- Using high intensity statins can reduce cholesterol levels by half. For many people with FH this will be reduced to a safe level, lowering the risk of death from heart disease.
Medical Risk Factors

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

High Blood Pressure (Hypertension)

- High blood pressure is the leading risk factor for heart and circulatory disease in Northern Ireland.

- An estimated 400,000 people in Northern Ireland have hypertension.

- More than 270,000 people are on their GP’s hypertension register, meaning up to 130,000 people in Northern Ireland are undiagnosed.

Linked conditions

- 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 heart and circulatory diseases (CVD).

- Around 100,000 adults in Northern Ireland have been diagnosed with diabetes
- Around 90 per cent of those diagnosed are living with Type 2 diabetes and 10 per cent have either Type 1 or rarer types.
- It’s estimated that thousands of people across Northern Ireland 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
- In the UK, one third of adults with diabetes die from a heart or circulatory disease

High Blood Cholesterol

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

In the UK one third of adults with diabetes die from a heart or circulatory disease
Other Risk Factors

- Each year around 800 deaths in Northern Ireland are attributable to air pollution, 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.

For more information, visit our website:
- High Blood Pressure (Hypertension)
- High Cholesterol
- Diabetes
Lifestyle Risk Factors

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

Smoking
- Nearly one in five adults smoke cigarettes in Northern Ireland— that’s up to 270,000 adults
- Around 2,300 deaths each year in Northern Ireland are attributable to smoking-related causes
- Around 18,000 hospital admissions are attributed to smoking each year.

Overweight/Obesity
- An estimated 25 per cent of adults in Northern Ireland are obese and in addition more than a third are overweight (by BMI)
- More than a quarter (27 per cent) of children in Northern Ireland are overweight or obese.

Diet and Exercise
- An estimated 45 per cent of adults in Northern Ireland do not achieve recommended levels of physical activity.
- Over half (54 per cent) of adults in Northern Ireland do not eat the recommended five portions of fruit and vegetables per day.
- One in five adults in Northern Ireland regularly exceed national guidelines for weekly alcohol intake; no level of use is without risk
About the British Heart Foundation (BHF)

One in four of us in the UK and one in three globally die from heart and circulatory diseases. That’s why the British Heart Foundation funds world-leading research into their causes, prevention, treatment and cure. Advances from our research have saved and improved millions of lives, but heart diseases, stroke, vascular dementia and their risk factors such as diabetes still cause heartbreak on every street. With the public’s support, our funding will drive the new discoveries to end that heartbreak.

We are the biggest independent funder of heart and circulatory disease research in Northern Ireland and the UK.

Find out more at bhf.org.uk

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 July 2020.

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.

Other factsheets: Global, UK, England, Scotland, Wales and coronavirus
## References

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<td>CVD ASDRs (death rates)</td>
<td>BHF/University of Birmingham in collaboration with Northern Ireland: Rates calculated in partnership with Northern Ireland Statistics and Research Agency (2016-18 data)</td>
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<tr>
<td>225k living with CVD</td>
<td>BHF estimate based on latest Quality &amp; Outcomes Framework prevalence data from Northern Ireland Department of Health</td>
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<td>£412m CVD cost</td>
<td>Hospital Information Branch, DHNI 2014/15</td>
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<td><strong>CORONARY HEART DISEASE (CHD; ISCHAEMIC HEART DISEASE)</strong></td>
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<td>CHD ASDRs (death rates)</td>
<td>BHF/University of Birmingham in collaboration with Northern Ireland: Rates calculated in partnership with Northern Ireland Statistics and Research Agency (2016-18 data)</td>
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<tr>
<td>CHD biggest killer worldwide</td>
<td>World Health Organization, The Top 10 Causes of Death</td>
</tr>
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<td><strong>HEART ATTACK (MYOCARDIAL INFARCTION, MI)</strong></td>
<td></td>
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<td>4.2k heart attack admissions</td>
<td>Hospital Information Branch (2019). Northern Ireland Episode Based Inpatient and Day Case Activity Data (2018/19) <a href="https://www.health-ni.gov.uk/">https://www.health-ni.gov.uk/</a></td>
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<tr>
<td>7/10 people survive heart attack ~ 1960s estimate</td>
<td>Case fatality rates in Smolina’s 2012 BMJ paper on acute MI mortality (<a href="http://www.bmj.com/">www.bmj.com/content/344/bmj.d8059</a> ~ Goldacre’s 2005 paper on myocardial infarction (Oxon))</td>
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<tr>
<td><strong>ATRIAL FIBRILLATION (AF)</strong></td>
<td></td>
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<tr>
<td>5 times more likely to have a stroke</td>
<td>Marinii C, De Santis F, Sacco S, Contribution atrial fibrillation to incidence and outcome of ischemic stroke: results from a population-based study, <a href="https://www.ncbi.nlm.nih.gov/pubmed/15879330">https://www.ncbi.nlm.nih.gov/pubmed/15879330</a></td>
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<td>18.3k diagnosed with heart failure</td>
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<td>Stroke deaths</td>
<td></td>
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<td>U75 stroke survivors</td>
<td>The Health Intelligence Network (THIN). 2018</td>
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<tr>
<td>Linked conditions: CHD or heart attack more than twice as likely to have a stroke</td>
<td><a href="http://stroke.ahajournals.org/content/22/8/983">http://stroke.ahajournals.org/content/22/8/983</a></td>
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<tr>
<td>Linked conditions: People with heart failure are 2-3 times more likely to have a stroke.</td>
<td><a href="http://stroke.ahajournals.org/content/42/10/2977">http://stroke.ahajournals.org/content/42/10/2977</a></td>
</tr>
<tr>
<td>Linked conditions: People with diabetes are twice as likely to have a stroke as people without diabetes</td>
<td><a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5298897/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5298897/</a></td>
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<td><strong>VASCULAR DEMENTIA</strong></td>
<td>Northern Ireland, Statistics and Research Agency (NISRA) – deaths by sex, age and cause 2018</td>
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<td>NI deaths; underestimate/diagnoses</td>
<td>Alzheimer’s Society <a href="https://www.alzheimers.org.uk/about-dementia/types-dementia/diagnosis-vascular-dementia">https://www.alzheimers.org.uk/about-dementia/types-dementia/diagnosis-vascular-dementia</a></td>
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<tr>
<td>Linked conditions: People with a history of heart disease are at least twice as likely to develop vascular dementia</td>
<td><a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC294456/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC294456/</a></td>
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<td>Linked conditions: ¾ cases in stroke survivors</td>
<td><a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3235556/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3235556/</a></td>
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<td>Linked conditions: People with diabetes are 2-3 times more likely to develop vascular dementia</td>
<td><a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2174783/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2174783/</a></td>
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<td>1:150 babies diagnosed</td>
<td></td>
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<tr>
<td>Survival comparison (pre-BHF/today)</td>
<td>MacMahon BMJ <a href="http://heart.bmj.com/content/heartjnl/15/2/121.full.pdf">http://heart.bmj.com/content/heartjnl/15/2/121.full.pdf</a> and Wren &amp; O’Sullivan, BMJ <a href="http://heart.bmj.com/content/85/4/438.long">http://heart.bmj.com/content/85/4/438.long</a></td>
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<td>1-2% prevalence</td>
<td>Various estimates including Hoffman &amp; Kaplan, JACC –19 per 1,000 includes BAVs which will eventually need cardiologic care <a href="www.sciencedirect.com/science/article/pii/S0735109702018667">www.sciencedirect.com/science/article/pii/S0735109702018667</a></td>
</tr>
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### STATISTIC | REFERENCE
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#### INHERITED (GENETIC) CONDITIONS
17.5k with faulty gene | BHF Ni estimate derived from PHG Foundation, Heart to Heart: inherited cardiovascular conditions services (2009); updated to reflect revised FH/DCM prevalence estimates
1:250 with familial hypercholesterolaemia (FH) | NB average recent prevalence is 1:250 but our preferred reference reports 1:273
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)
1,400 OHCAs/survival less than 1 in 10 | DHNI, Community Resuscitation Strategy Northern Ireland, 2014 (www.health-ni.gov.uk/publications/community-resuscitation-strategy-and-reports)
Every min & CPR increases survival | European Resuscitation Council, Guidelines for Resuscitation 2015 (www.cprguidelines.eu)
#### RISK FACTORS
### Hypertension - High Blood Pressure
Adults high BP | BHF estimate based on UK health survey data
#1 risk factor | Global Burden of Disease (GBD) risk burden estimate for CVD in Northern Ireland 2017 (premature death and disability)
270k+ diagnosed hypertension | Quality & Outcomes Framework prevalence data from Northern Ireland Department of Health (2018/19)
Linked conditions: Around 50% of heart attacks and strokes are associated with high blood pressure | Global Burden of Disease (GBD) UK risk burden estimate 2017 – also more than half in Northern Ireland
### Diabetes
100k adults diagnosed with diabetes – undiagnosed | Quality & Outcomes Framework prevalence data from Northern Ireland Department of Health (2018/19)
| Diabetes UK www.diabetes.org.uk/professionals/position-statements-reports/statistics
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 | https://www.ncbi.nlm.nih.gov/pubmed/20609967
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2809299/
https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(10)60484-9/fulltext
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<td>Other Risk Factors</td>
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<td>Adults 18%+ smoke ~ 270k cigarette smokers</td>
<td>Health Survey Northern Ireland: first results 2018/19 and ONS Population estimates</td>
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<td>smoking/air pollution-attributable deaths</td>
<td>Global Burden of Disease 2017 NI estimates</td>
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<tr>
<td>18K hospital admissions from smoking-related causes</td>
<td>Tobacco Control Northern Ireland 2015; Public Health Agency</td>
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<td>Obesity, 5-a-day, alcohol, physical activity</td>
<td>Health Survey Northern Ireland: first results 2018/19 (PA 2016/17; Alcohol 2017/18)</td>
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