

PUBLIC HEALTH INTELLIGENCE

Camden Profile Alcohol-related hospital admissions

March 2013





About this profile



North Central London

PURPOSE

This public health intelligence profile describes the trends and patterns in alcohol-related and alcohol-specific hospital admissions in Camden.

This work will support and inform:

- Commissioners, public health teams, and Camden's clinical commissioning group;
- individual general practices in Camden.

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FURTHER INFORMATION AND FEEDBACK

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We would also very much welcome your comments on these profiles and how they could better suit your individual or practice requirements, so please do contact us with your ideas.



Recommendations and key messages

OVERVIEW & RECOMMENDATIONS

- 1. Alcohol-related* hospital admissions place a significant burden on health services in Camden.** Local hospital data estimates around 6% of all hospital admissions are caused by alcohol in Camden. The directly standardised rate of admissions per 100,000 is higher than England and London averages but is not significantly different. Reducing levels of alcohol consumption would lessen the burden on local health services.
- 2. Hypertensive diseases and mental and behavioural disorders due to alcohol make up a large proportion of alcohol-related* hospital admissions.** There are a wide range of diseases and injuries in which alcohol plays a part. Raising awareness among health professionals and the public of the role alcohol may play in some of the more common conditions such as hypertension may help to reduce levels of alcohol consumption in this group. Continued expansion of brief intervention (BI) in hospitals may benefit people admitted for alcohol related causes.
- 3. Men, older people, and people living in more deprived areas of Camden have higher standardised rates of alcohol-related* hospital admissions.** It is important that interventions are designed to help reduce these inequalities.

KEY MESSAGES

Alcohol-related* hospital admissions in context

- There was a total of 4,313** alcohol-related admissions in Camden's responsible*** population from 7,102 individuals in 2011/12 (see page 6 for methods).
- In 2011/12 Camden ranked 15th out of 33 London boroughs and 76nd out of 152 England local authorities for its rate of alcohol-related hospital admissions. The rate of alcohol-related admissions in Camden more than doubled between 2002/2003 and 2011/2012 to reach a rate of 1,997 per 100,000 population.

Local demographics

- Compared to the Camden average, the level of alcohol-related hospital admissions (i.e. admissions from conditions *wholly* and *partly* caused by the use of alcohol) in Camden are higher in:
 - men (35% higher than the Camden average).
 - people living in more deprived areas, (27% higher than Camden Average in quintile 1, the most deprived quintile).
- Alcohol-specific* hospital admissions (i.e. admissions only from conditions *wholly* linked to alcohol) constitute more than a third of the rate of alcohol-related admissions. The indirectly standardised ratios are higher in:
 - men (45% higher than Camden average)
 - people living in more deprived areas, (39% higher than the Camden average in quintile 1, the most deprived quintile).

*see page 5 for definitions of alcohol-related and alcohol-specific admissions

** this figure is slightly higher than the published figure of 4,093 on page 9, see page 9 note for cause of difference

***see page 6 for a definition of responsible population



Recommendations and key messages

KEY MESSAGES (cont.)

Local demographics (cont.)

- 77% of alcohol admissions (both related and specific) are in people aged 50 and over, and the highest age-specific rate of alcohol-related admissions is in those aged 80 and over.
- Percentages of alcohol-specific hospital admissions are higher in middle-aged people (45-49 years) particularly in men (fewer than one in three alcohol-specific admissions are in people aged 60 and over)
- Alcohol-related admissions ratios are no different than expected for White, Black and Asian ethnic groups while the ratio for Other ethnic group is substantially higher than expected. This may be due to the overuse of the category Other in hospital admission records.

Breakdown of alcohol-related admissions in Camden

- Hypertensive diseases (28%), mental and behavioural disorders due to the use of alcohol (28%) and cardiac arrhythmias (13%) make up the majority (69%) of alcohol-related hospital admissions.
- Mental and behavioural disorders due to the use of alcohol (74%), alcoholic liver disease (17%) make up the majority (91%) of alcohol-specific hospital admissions.
- On the whole, women and men had very similar causes of alcohol-related admissions. However, a higher proportion of alcohol-related admissions in men were from mental and behavioural disorders due to the use of alcohol than in women (32% compared to 21%), and women had a higher proportion of admissions due to epilepsy than men (11% compared to 4%).
- Fortune Green ward has the largest proportion (37%) of alcohol-related hospital admissions from hypertensive diseases. Kentish Town ward has the highest proportion (37%) of alcohol-related admissions due to mental and behavioural disorders due to the use of alcohol.
- Among GP practices the largest proportions of admissions due to hypertensive disease are seen in Plender Street Surgery (43%). Camden Health Improvement Practice has the largest proportions of admissions due to mental and behavioural disorders due to the use of alcohol (63%). This can be explained by the fact that the practice provides health care to homeless people sleeping out or in temporary accommodation (night shelters, hostels, hotels, with friends, squats) and those with substance misuse or mental health problems.
- The majority of alcohol-related and alcohol-specific hospital admissions are emergency admissions (65% and 83%, respectively).

Repeat Admissions

- 66% of patients were only admitted once for an alcohol related admission, however, a third of individuals were admitted 2 times or more.
- 64 individuals were admitted at least 11 times.
- 59% of patients were admitted only once for an alcohol-specific admission. 29 individuals (3%) were admitted more than 6 times for alcohol-specific conditions.



How to use these analyses

It is important to bear in mind the following when looking at this profile (or any other public health intelligence products):

- **It is the variation that is important**

In this profile, it is the variation between geographical areas (wards and deprivation quintiles) and Camden GP practices, as well as variation by demographic factors such as age and sex, that should be the main point of reflection rather than overall figures for Camden. It is the *unexplained variation* (defined as: *variation in the utilisation of health care services that cannot be explained by differences in patient populations or patient preferences*) that is important, as this can highlight areas for potential improvements. For example, it may highlight under- or over- use of some interventions and services, or it may identify the use of lower value or less effective activities.

The data alone cannot tell us whether or not there are good and valid reasons for the variation. It only highlights areas for further investigation and reflection. A perfectly valid outcome of investigations is that the variation is as expected. However, to improve the quality of care and population health outcomes in Camden, a better understanding of reasons behind the variation at a geographical area or a GP practice level with clear identification of areas for improvement is needed.

- **Populations not individuals**

Epidemiology is about the health of the population, not the individual. In this profile this is either all of Camden's resident or registered population, a geographical area population or a GP practice population.

- **Beware of small numbers**

Some of the graphs have small numbers in them. They have been left in so that all GP practices can see what is happening in their practice (according to the data). In these cases, the wide 95% confidence intervals will signify the uncertainty around the percentages, but be careful when interpreting them.

- **Hospital admissions**

The analysis in this profile is based on hospital admissions and does not include attendances at Accident and Emergency. People who attend Accident and Emergency as a result of alcohol but are not admitted to hospital are therefore not included.

This profile contains admission-based, person-based analysis and individual-based analysis. The admission-based analysis relates to the number of *admissions* to hospital for alcohol-related and alcohol-specific conditions (individuals may be counted more than once in any one year). The person-based analysis relates to the number of *people* admitted to hospital each year for alcohol-related and alcohol-specific conditions (individuals are counted only once in any one year). Analysis of individuals refers to the actual number of *people contributing* to alcohol-related and alcohol-specific admissions. The number of individuals is higher than the number of admissions because it is the actual number of persons before any alcohol attributable fractions have been applied.

Further details are provided in the next section under 'Alcohol-related and alcohol-specific hospital admissions: methodology' on page 5.



Secondary Uses Service (SUS) dataset

- The epidemiological analysis in this profile has been undertaken using a hospital admissions dataset (SUS) provided by the NHS North Central London Informatics team.

Alcohol-related and alcohol-specific hospital admissions: definitions

- **Alcohol-specific** admissions are admissions caused *wholly* by the use of alcohol (e.g. admissions due to alcoholic liver disease or alcohol poisoning).
- **Alcohol-related** admissions are admissions caused either *wholly* (i.e. alcohol-specific) or *partly* by the use of alcohol (e.g. admissions from hypertension). Alcohol-related admissions include alcohol-specific admissions.
- **Alcohol-attributable fractions (AAFs)** are used to estimate the number of hospital admissions attributable to alcohol consumption. An AAF is the proportion of a condition attributable to exposure to alcohol in a given population. Alcohol-related conditions have attributable fractions ranging from greater than zero to one. Alcohol-specific conditions have an attributable fraction of one (i.e. wholly caused by the use of alcohol). A table listing 45 conditions, either wholly or partly related to alcohol, and their corresponding AAFs split by age and sex is available from the Local Alcohol Profiles for England (LAPE) 2012 User Guide: Updated August 2012, (www.lape.org.uk/downloads/Lape_guidance_and_methods.pdf). These fractions, based on age and sex, are applied to each hospital admission with an alcohol-related condition recorded in any diagnosis field. The sum of the AAFs gives the total estimated number of admissions due to alcohol. AAFs for under 16 year olds are only available for alcohol-specific conditions (i.e. the attributable fraction is one). Figure 1 demonstrates four scenarios that make up the equivalent of two alcohol-related admissions. The AAFs are shown underneath each individual admission. This demonstrates how alcohol-related admissions can be made up of many admissions. The total number of admissions contributing to alcohol-related admissions will always be greater than the total number of alcohol-related admissions.

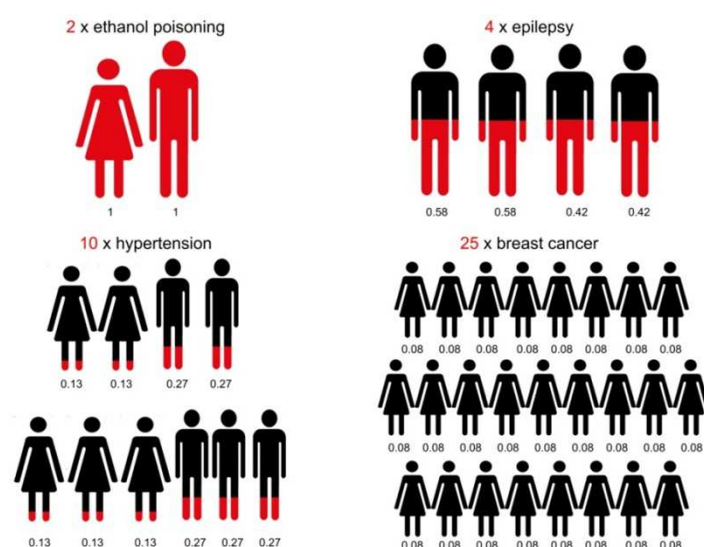


Figure 1: Four examples of two alcohol-related hospital admissions calculated using AAFs.

Source: Adapted from original diagram: Verity Bellamy et al, East Midlands Public Health Observatory



Alcohol-related and alcohol-specific hospital admissions: methodology

- This profile estimates the number of:
 - alcohol-related and alcohol-specific hospital *admissions* (with AAFs applied)
 - *people* admitted to hospital for alcohol-related and alcohol-specific conditions (with AAFs applied)
 - *people contributing* to alcohol-related and alcohol-specific admissions, termed individuals in this profile (no AAFs applied).

The admission-based estimates record multiple admissions from the same individual (i.e. includes people admitted more than once), making this a more useful measure of the burden of alcohol-related harm on hospital services and suitable for analysis at GP practice level. The person-based estimates (counting only one admission per person) are a more appropriate measure of prevalence of alcohol-related harm in a population and so have been used for some of the demographic analyses, specifically deprivation quintiles and ward. Finally, age and sex breakdowns have been provided at an individual level before AAFs have been applied.

- To calculate the number of alcohol-related and alcohol-specific hospital *admissions* AAFs were applied to all SUS hospital admission records that contained any diagnosis (ICD10 code) categorised as attributable to alcohol (in either the primary diagnosis or any of the secondary diagnoses). The age and sex specific AAFs used in this profile are those given in the Local Alcohol Profiles for England 2012 User Guide: Updated August 2012 (www.lape.org.uk/downloads/Lape_guidance_and_methods.pdf). Where there was more than one alcohol-related ICD10 code in the same admission record, the ICD10 code with the largest AAF was used. If a record contained two or more ICD10 codes with the same AAF then the first ICD10 code was used (i.e. the ICD10 code in the lowest diagnostic position). AAFs were then summed to give the total number of alcohol-related and alcohol-specific hospital admissions. Full details of the methodology are given in the 'admission episodes for alcohol-attributable conditions' indicator in the LAPE 2012 user guide (web link above).
- To calculate the number of *person-based* alcohol-related admissions the methodology above was used to select the AAF for the main admission. The main admission was selected by linking hospital admission records for each person using their NHS number (where present). Admissions with the largest AAF were selected. If there was more than one admission with the same high AAF then the admission with the earliest start date was selected. If there were still two or more admissions, the admission with the ICD10 code in the lowest diagnostic position was used. This is based on the methodology for person-based analysis used by the North West Public Health Observatory described in the LAPE 2012, User Guide (web link above). The AAFs are then summed to give the total number of person-based alcohol-related or alcohol-specific hospital admissions.
- To calculate the number and details such as age, sex, cause and type of admission for *individuals* contributing to alcohol-related or alcohol-specific hospital admissions (with no AAFs applied) the main hospital admission was selected for each individual (as described above).

Populations

- The population used in these analyses is predominantly Camden's responsible population. This is the population that resides within Camden, including those who are not registered with a GP practice in Camden. The registered population is used for analysis by GP practice. Ward and deprivation analysis was based on the registered and resident population. Ethnicity analysis is based on the resident population.



SUS dataset and case definition



North Central London

Populations (cont.)

- Where rates or percentages for Camden's responsible population have been calculated we have used the registered population as a denominator. This will result in a slight overestimation of rates. Ratios for Camden GP practices were calculated using the registered population for each practice as a denominator. For analysis by ward and deprivation quintile, registered and resident population data was extracted from Open Exeter and used as the denominator for calculating indirectly standardised ratios. GLA population estimates were used as a denominator for the analysis of resident population by ethnicity.

Data Quality

- The SUS data extract provided by NCL Informatics included hospital admissions for NCL PCTs' responsible population only. This will result in a slight undercount of admissions for Camden's resident population as it does not include people living in Camden but registered with a PCT outside of NCL.
- 4.5% (n=608) of hospital admission records with an alcohol-related code in Camden's responsible and/or resident population were missing an NHS number which means that it is not possible to tell whether some of these were repeat attenders. This will mean that the percentage of people who re-attend is likely to be slightly underestimated.



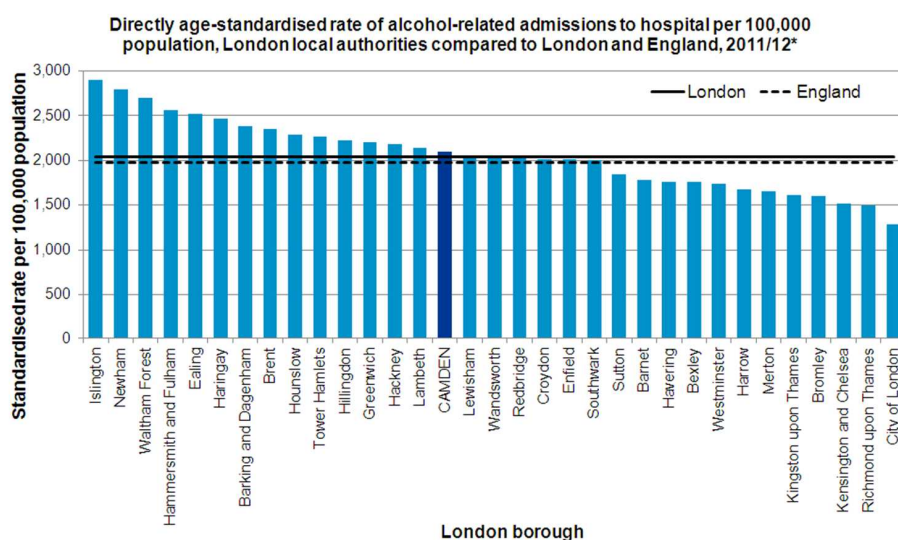
ALCOHOL-RELATED HOSPITAL ADMISSIONS: OVERVIEW

Alcohol-related hospital admissions include 45 alcohol-related conditions. The analysis presented in this section relates to the number of admissions for alcohol-related conditions. Some people will have more than one alcohol-related admission within the year. See methodology section on page 6 for further details.

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Alcohol-related hospital admissions by London LA



- There were 4,093* alcohol-related admissions in Camden in 2011/12 (a rate of 1,997 per 100,000 resident population).
- National statistics for 2011/12 show that Camden had the 15th highest rate of alcohol-related hospital admissions in London, and was higher than the rates for London (2,038) and England (1,974).

*provisional as at September 2012

Note: This analysis relates to the number of alcohol-related admissions (some people will have more than one alcohol-related admission within the year)

Source: North West Public Health Observatory, 2012

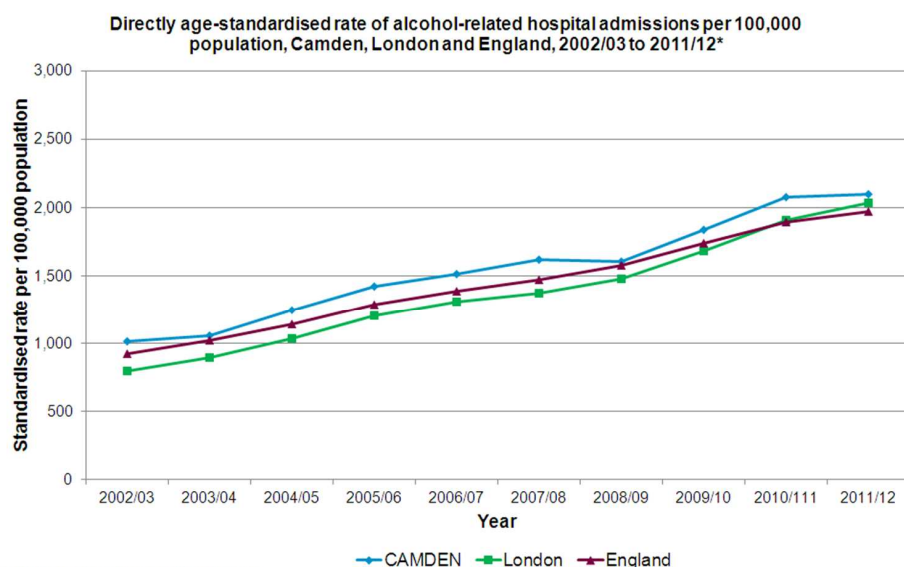
*This is different to the 4,313 admissions in the local dataset, a total difference of 220 admissions (around a 5% difference).

This difference could be due to differences between HES and SUS data. Data on SUS will continue to change, but HES data is fixed as it was when that particular extract was taken. This is why there are likely to be differences between analyses from SUS and from HES. HES validates and cleans the SUS extract, before deriving new items and making the information available in the data warehouse.

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Alcohol-related hospital admissions in Camden: trend over time



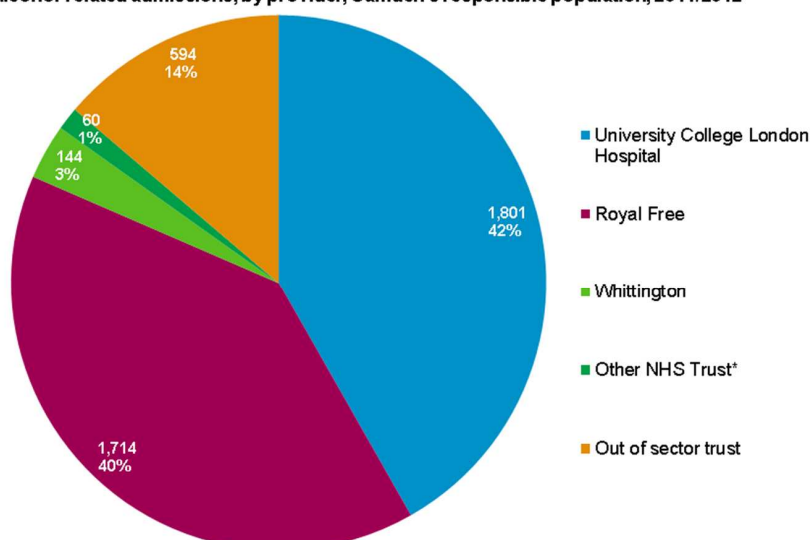
- The rate of alcohol-related hospital admissions in Camden more than doubled between 2002/03 (1,016 per 100,000 population) and 2011/12 (1,997 per 100,000 population).
- The gap between the rate for Camden and the rates for London and England has narrowed between 2007/08 and 2011/12.

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Alcohol-related hospital admissions by provider

Alcohol-related admissions, by provider, Camden's responsible population, 2011/2012



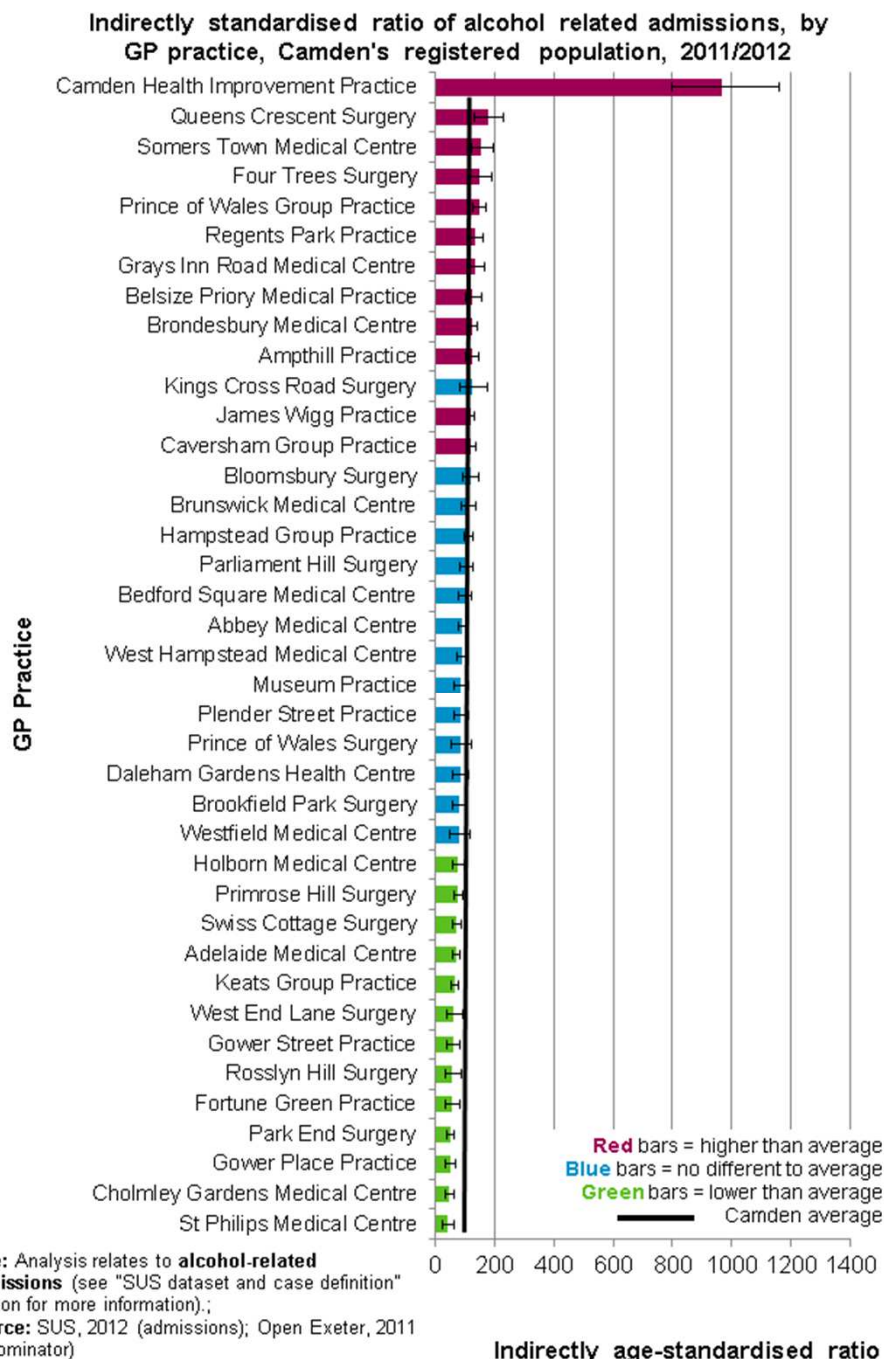
- Based on local hospital data for 2011/12 there were 4,313 alcohol-related hospital admissions in Camden's responsible population.
- The majority of alcohol-related hospital admissions for Camden's responsible population were at University College London Hospital (42%, n=1,801), followed by Royal Free Hospital (40%, n=1,714).

*Includes RNOH, GOSH, BCF, NIMH and Moorfields (aggregated due to small numbers); Note: This analysis relates to the number of alcohol-related admissions (See "SUS dataset and case definition" section for more information; Some people will have more than one alcohol-related admission within the year); Source: SUS, 2012

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Alcohol-related hospital admissions by GP practice

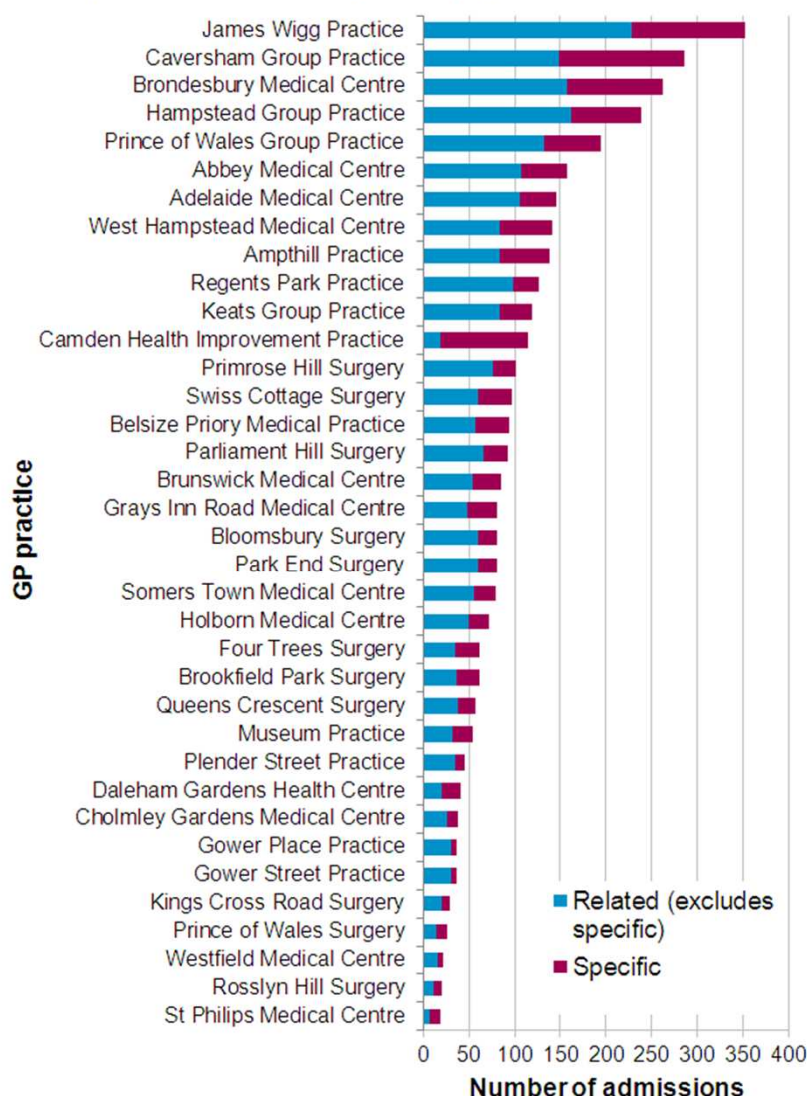


- Adjusted for the age structure of the population, the level of alcohol-related hospital admissions varies by practice.
- 12 practices have significantly higher than expected levels of alcohol-related hospital admissions.
- Of particular note is Camden Health Improvement Practice, the practice provides health care to homeless people sleeping out or in temporary accommodation (night shelters, hostels, hotels, with friends, squats) and those with substance misuse or mental health problems. Due to this special population there is a huge difference between this practice and the Camden average.
- 13 practices are significantly below the Camden average.



Alcohol-related and alcohol-specific hospital admissions, by GP practice

Numbers of alcohol-related admissions, by GP practice, Camden's registered population, 2011/2012



Note: This analysis relates to the number of **alcohol-related/specific admissions** (See "SUS dataset and case definition" section for more information; Some people will have more than one alcohol-related admission within the year); 3 practices excluded due to disclosive numbers;
Source: SUS, 2012

- The total number of alcohol-related hospital admissions varies by practice, from 18 at St Phillips Medical Centre to 352 at James Wigg Practice (this number includes alcohol-specific hospital admissions).
- The total number of alcohol-specific hospital admissions ranges from 6 at Westfield Medical Centre, Gower Street and Gower Place Practice's to 137 at Caversham Practice.
- Camden Health Improvement Practice has an unusual split between specific and related admissions, with specific admissions accounting for around 85% of all admissions.
- This is largely due to the practice providing health care to homeless people and those with substance misuse or mental health problems which has an attributable fraction of 1.



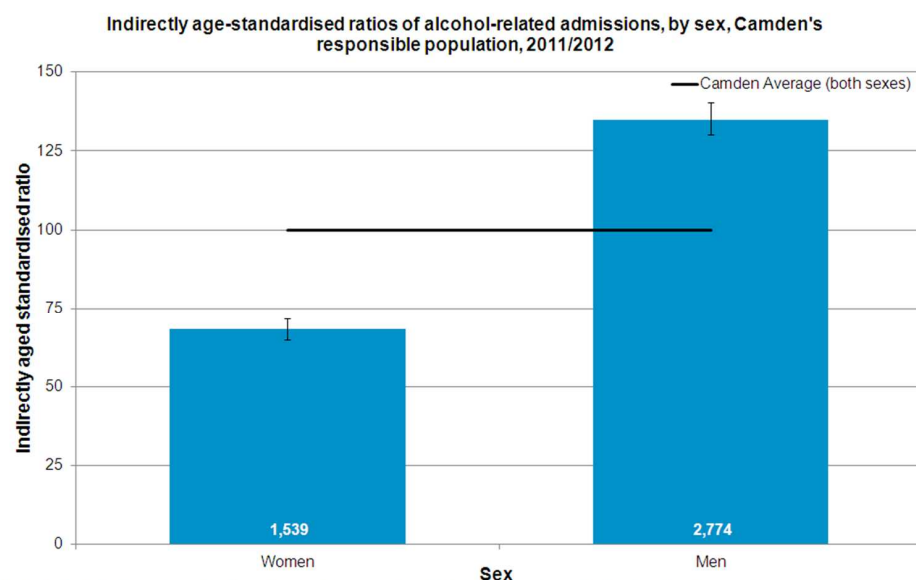
ALCOHOL-RELATED HOSPITAL ADMISSIONS: DEMOGRAPHICS

Some of the analysis presented in this section relates to the number of people admitted for alcohol-related conditions, rather than the number of admissions for alcohol-related conditions. Person-based analysis involves applying alcohol attributable fractions (AAFs) to an individual's main admission. See methodology section on page 6 for further details.

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Alcohol-related hospital admissions by sex



Note: Data relates to number of alcohol-related admissions (see "SUS dataset and case definition" section for more information; some people will have more than one alcohol-related admission within the year) **Source:** SUS, 2012 Open Exeter 2011

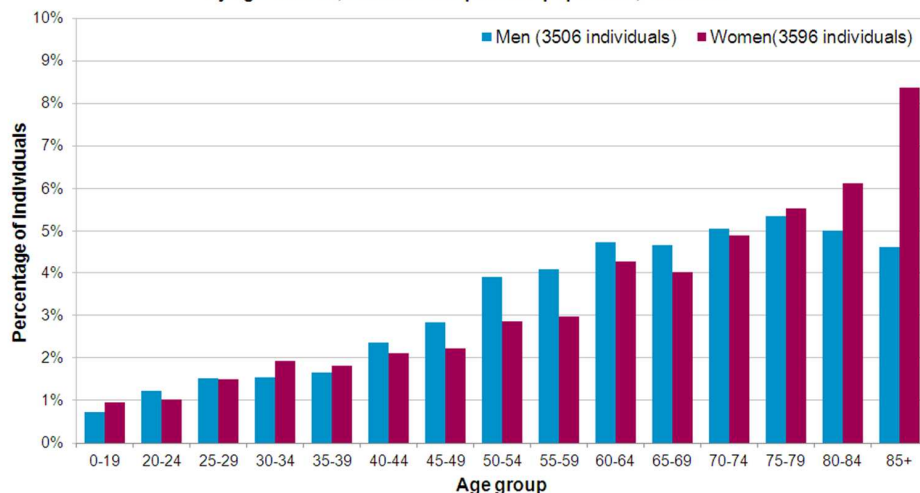
- In 2011/12 there were 35% more admissions in men than expected, compared to the Camden average adjusted for age.
- Admissions in women are over 30% below the Camden average.

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Alcohol-related hospital admissions by age and sex: percentage of individuals

Percentage of individuals admitted who contributed to alcohol-related admissions, by age and sex, Camden's responsible population, 2011/2012



Notes: This analysis relates to the number of individual people admitted for alcohol-related conditions before AAFs have been applied (people are counted only once within the year). Percentages add to 100%. Age groups below 20 years have been aggregated due to small numbers.
Source: SUS, 2012

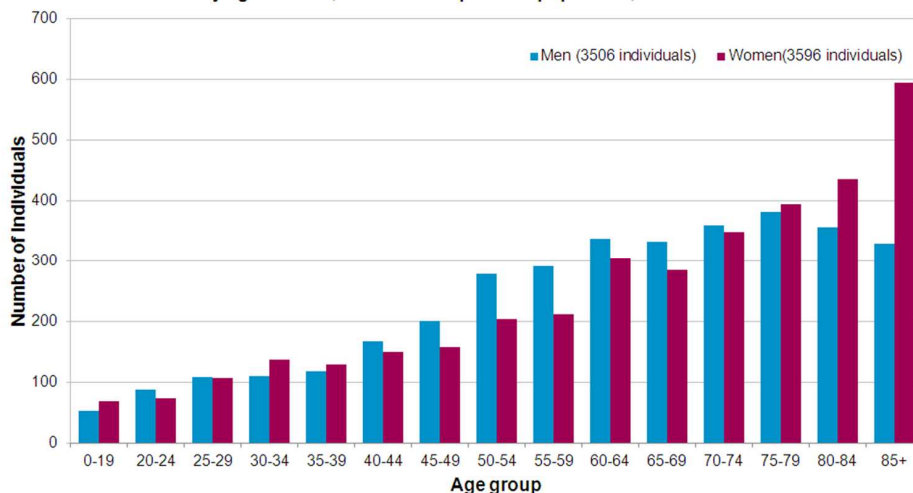
- 51% of individuals (3,596) contributing to alcohol-related hospital admissions during 2011/12 were women.
- The percentage of individuals admitted for alcohol-related conditions generally increased with age. Over 60% were aged 60 and over.
- Individuals admitted for alcohol-related conditions had an older age distribution than for alcohol-specific conditions where 36% were aged 60 and over (see page 44). This reflects the age profile of the various conditions included in alcohol-related admissions.

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Alcohol-related hospital admissions by age and sex: number of individuals

Number of individuals admitted who contributed to alcohol-related admissions, by age and sex, Camden's responsible population, 2011/2012



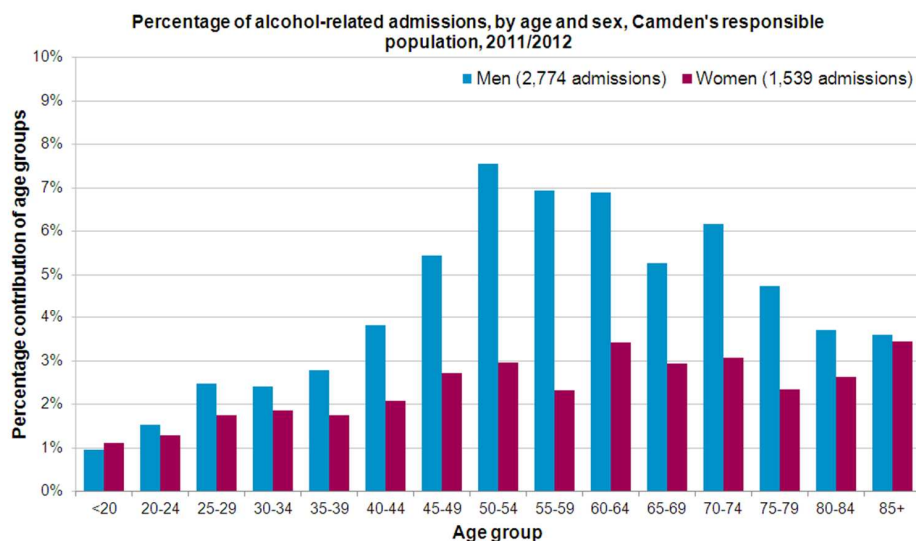
Notes: This analysis relates to the number of individual people admitted for alcohol-related conditions before AAFs have been applied (people are counted only once within the year). Age groups below 20 years have been aggregated due to small numbers.
Source: SUS, 2012

- 7,102 individuals contributed to alcohol-related hospital admissions during 2011/12.
- The number of individuals admitted for alcohol-related conditions generally increased with age; 5,440 of them (77%) are aged 50 and over.

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Alcohol-related hospital admissions by age and sex: percentage of admissions



Note: Data relates to number of alcohol-related admissions (see "SUS dataset and case definition" section for more information; some people will have more than one alcohol-related admission within the year); Age groups below 20 years have been aggregated due to small numbers;
Source: SUS, 2012

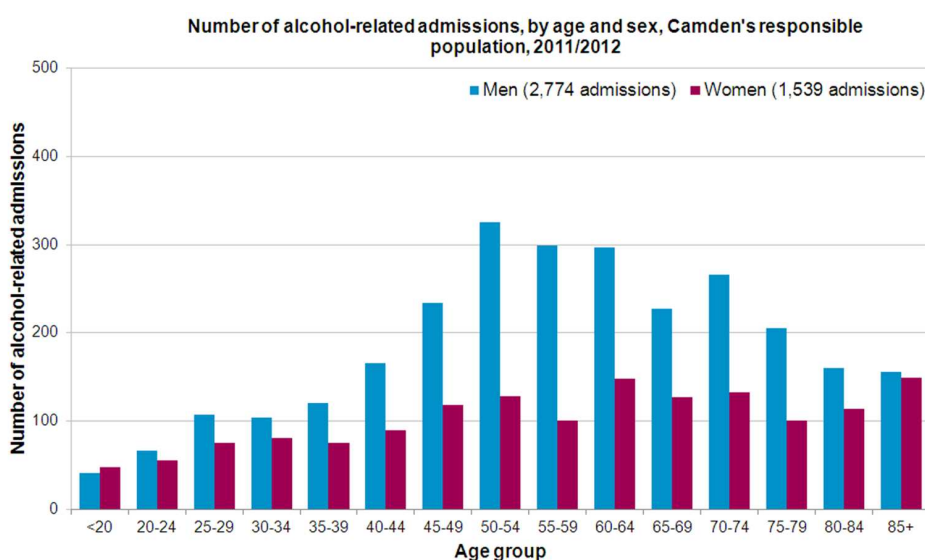
- Although women make up a slightly larger proportion of the individuals admitted (51%), they only contribute 36% to alcohol-related hospital admissions once age and sex specific AAFs are applied.*
- Alcohol-related hospital admissions are more prevalent in older people. Around 68% of admissions are in people aged 50 and over.

*See pages 4-7 for more information on alcohol-attributable fractions (AAFs)

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Alcohol-related hospital admissions by age and sex: number of admissions



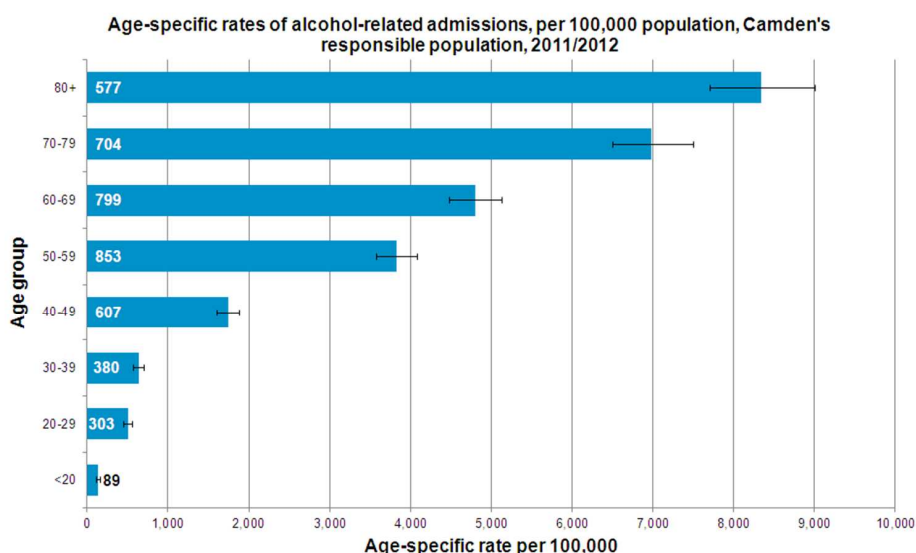
Note: Data relates to number of alcohol-related admissions (see "SUS dataset and case definition" section for more information; some people will have more than one alcohol-related admission within the year); Age groups below 20 years have been aggregated due to small numbers;
Source: SUS, 2012

- The number of alcohol-related admissions generally increases with age. There were 2,934 alcohol-related admissions in people aged 50 and over in 2011/12.
- The number of admissions reaches a peak at age group 50-54, with 454, and then declines.

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Alcohol-related hospital admissions by 10 year age bands



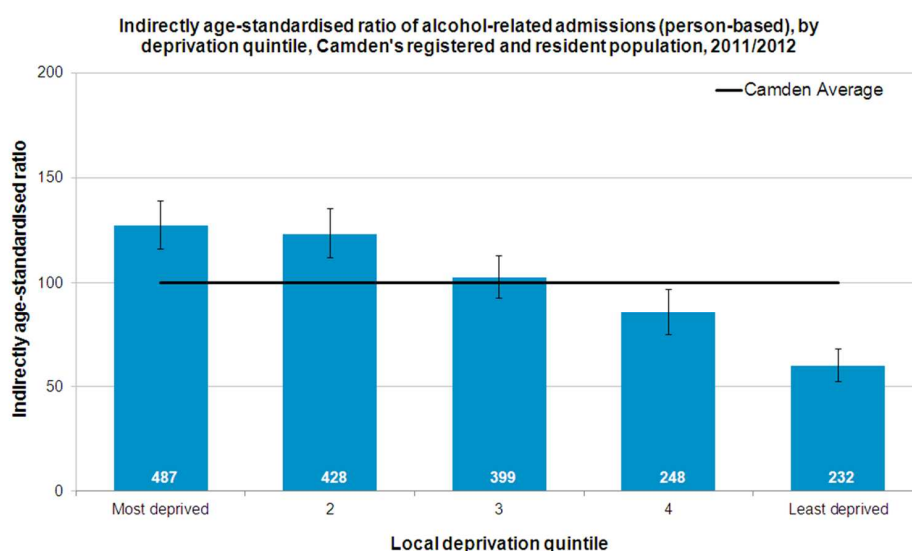
Note: Data relates to number of alcohol-related admissions (see "SUS dataset and case definition" section for more information; some people will have more than one alcohol-related admission within the year); Age groups below 20 years have been aggregated due to small numbers;
Source: SUS, 2012 (admissions); Open Exeter, 2011 (population)

- The highest rates of alcohol-related hospital admissions are seen in the older age groups, particularly those aged 80 and over.
- A total of 577 admissions were seen in the over 80's population in 2011/12.

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Alcohol-related hospital admissions by deprivation quintile



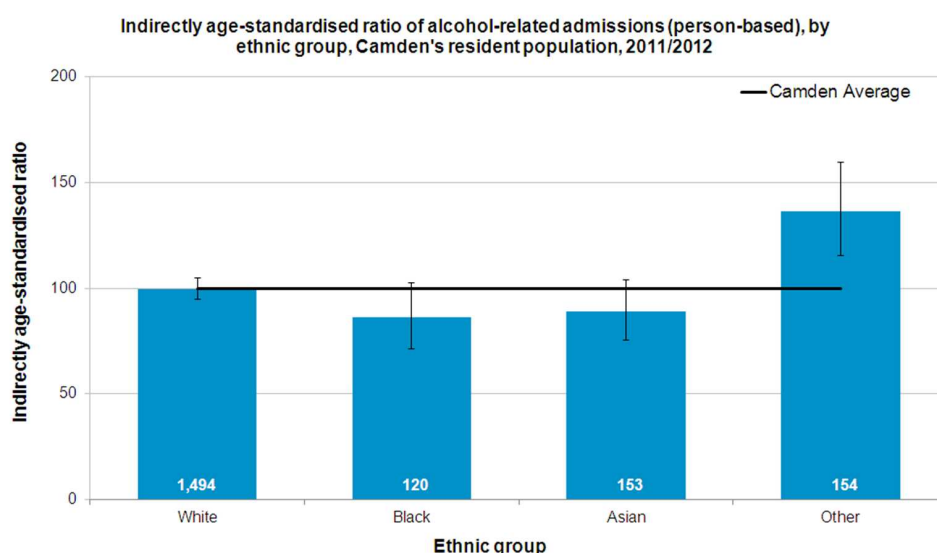
Note: This analysis relates to the number of people (AAF applied to main admission) admitted for alcohol-related conditions (people are counted only once within the year). Excludes admissions with no NHS number.
Source: SUS 2012 (admissions); Open Exeter, 2011

- The number of alcohol-related admissions ranged from 232 in the least deprived to 487 in the most deprived.
- Two most deprived quintiles have significantly more alcohol-related admissions than expected when compared to the Camden average adjusted for age (27% and 23% more than expected, respectively).
- The least deprived group have significantly (40%) lower admissions than expected compared to the average.

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Alcohol-related hospital admissions by ethnicity



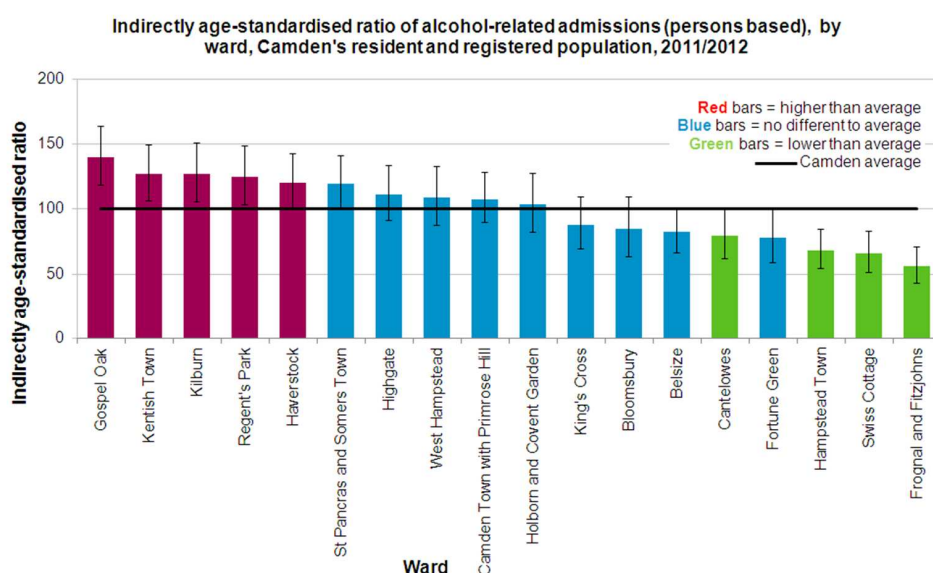
- The number of alcohol-related admissions ranged from 120 in the Black ethnic group to 1,494 in the White ethnic group.
- The White, Black and Asian ethnic groups have levels of admissions no different when compared to the Camden average adjusted for age.
- The category Other had a significantly higher ratio than expected (36% higher) compared to the Camden average in 2011/12.

Note: This analysis relates to the number of **people** (AAF applied to main admission) admitted for alcohol-related conditions (people are counted only once within the year). Excludes admissions with no NHS number and 102 admissions with unknown ethnicity.
Source: SUS 2012 (admissions); GLA, 2012 (population denominator)

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Alcohol-related hospital admissions (persons based) by ward



- Gospel Oak, Kentish Town, Kilburn, Regent's Park and Haverstock all have significantly higher alcohol-related admissions than the Camden average.
- Four wards have fewer alcohol-related admissions than expected compared to the Camden average. These are Cantelowes, Hampstead Town, Swiss Cottage and Frognal and Fitzjohns.

Note: This analysis relates to the number of **people** (AAF applied to main admission) admitted for alcohol-related conditions (people are counted only once within the year). Excludes admissions with no NHS number; **Source:** SUS 2012 (admissions); Open Exeter, 2011

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ALCOHOL-RELATED HOSPITAL ADMISSIONS: TYPE OF ADMISSION

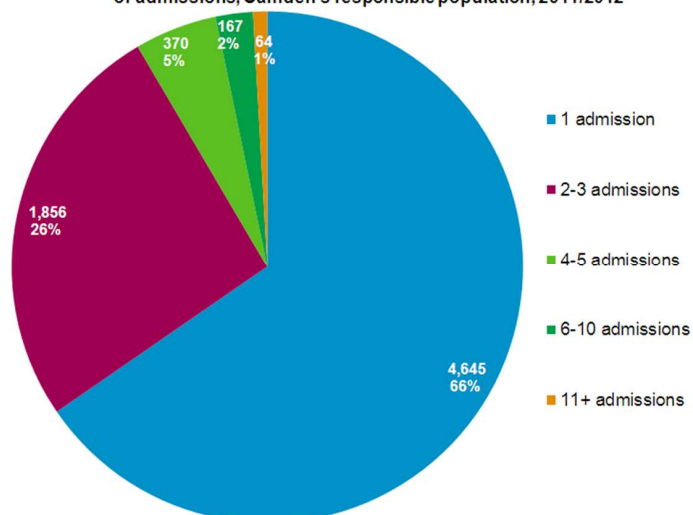
The majority of the analysis presented in this section relates to the number of admissions for alcohol-related conditions. Some people will have more than one alcohol-related admission within the year. See methodology section on page 6 for further details.

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Alcohol-related hospital admissions: repeat admissions

Repeat admissions for alcohol-related conditions, percentage of individuals by number of admissions, Camden's responsible population, 2011/2012



Note: This analysis relates to the number of people by number of admissions for alcohol-related conditions (before AAFs have been applied). Excludes admissions with no NHS number; **Source:** SUS, 2012

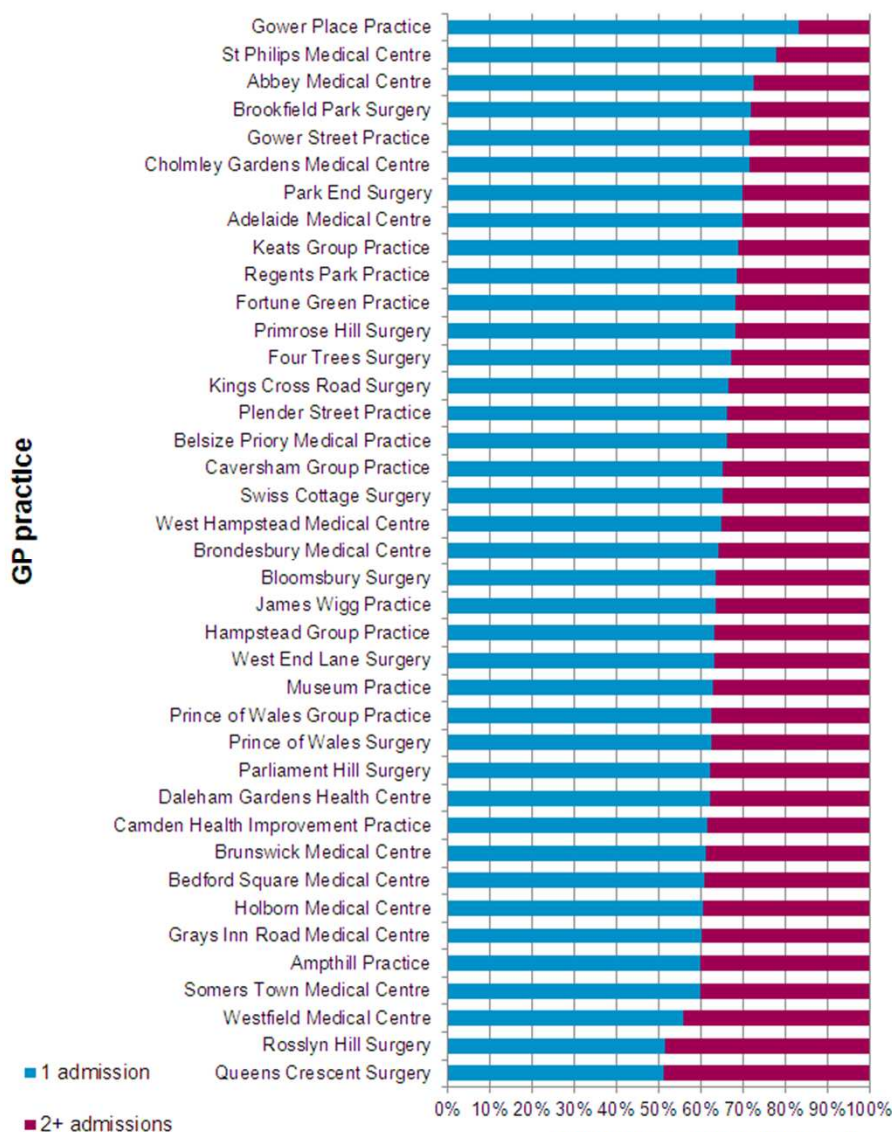
- 66% of individuals were admitted only once in 2011/12.
- A third of individuals were admitted twice or more in 2011/12.
- 64 individuals were admitted at least 11 times in 2011/12.

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Repeat alcohol-related admissions by GP practice

Repeat admissions for alcohol-related conditions,
number of individuals by number of admissions, by GP
practice, Camden's registered population, 2011/2012



- The proportion of individuals admitted to hospital on more than one occasion for a alcohol-related condition in 2011/12 varies by GP practice within Camden from 17% in Gower Street Practice to 49% in Queens Crescent Surgery.

Note: This analysis relates to the number of people and admissions for alcohol-related conditions before AAFs have been applied. Individuals assigned to GP practice based on first admission. Excludes admissions with no NHS number. **Source:** SUS, 2012



Alcohol-related hospital admissions by cause of admission

Main causes of alcohol-related admissions, Camden's responsible population, 2011/12

Cause	Alcohol-related admissions*	Percentage of all alcohol-related admissions	Main admission for each individual**	Percentage of all individuals
Mental and behavioural disorders	1,223	28%	676	9%
Hypertensive diseases	1,195	28%	3,252	45%
Cardiac arrhythmias	570	13%	1,107	15%
Alcoholic liver disease	286	7%	129	2%
Epilepsy	283	7%	304	4%
Liver cirrhosis	115	3%	95	1%
Fall injuries	76	2%	442	6%
Malignant neoplasm of lip, oral cavity and pharynx	75	2%	29	0%
Chronic pancreatitis (alcohol induced)	59	1%	21	0%
Ethanol poisoning	58	1%	42	1%
Intentional self-harm/Event of undetermined intent	52	1%	106	1%
Malignant neoplasm of breast	45	1%	124	2%
Assault	41	1%	110	2%
Spontaneous abortion	37	1%	150	2%
Psoriasis	34	1%	68	1%
Other causes	164	4%	561	8%
All alcohol-related causes	4,313	100%	7,216	100%

Note: percentages may not add up to 100 due to rounding

Source: SUS 2011/12

*Some people will have more than one alcohol-related admission within the year.

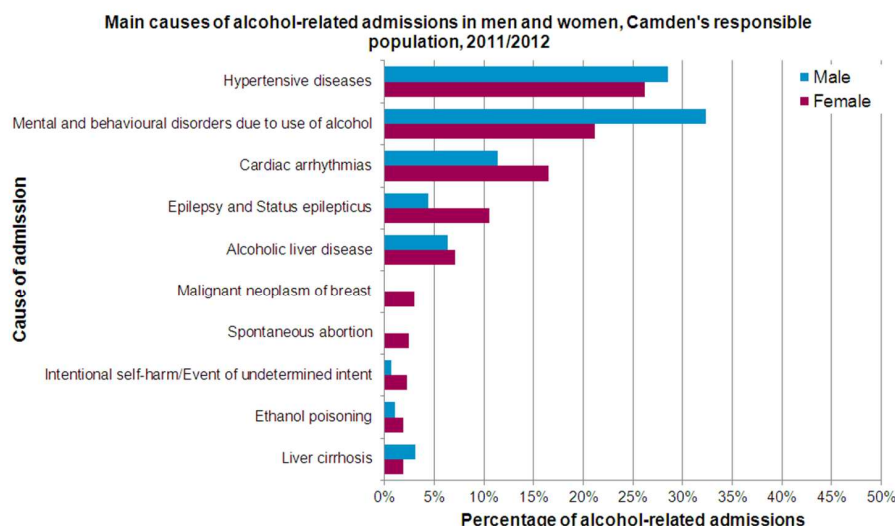
**This is the number of people admitted for alcohol-related conditions (people are counted only once within the year).

- The three top causes of alcohol-related hospital admissions (69% of the total) in 2011/12 were:
 - mental and behavioural disorders due to the use of alcohol (28%)
 - hypertensive diseases (28%)
 - cardiac arrhythmias (13%).
- These are also the three top causes for the main admission individuals, although hypertension accounts for a larger proportion before age and sex AAFs are applied (45%).

27



Alcohol-related hospital admissions by cause of admission: men and women



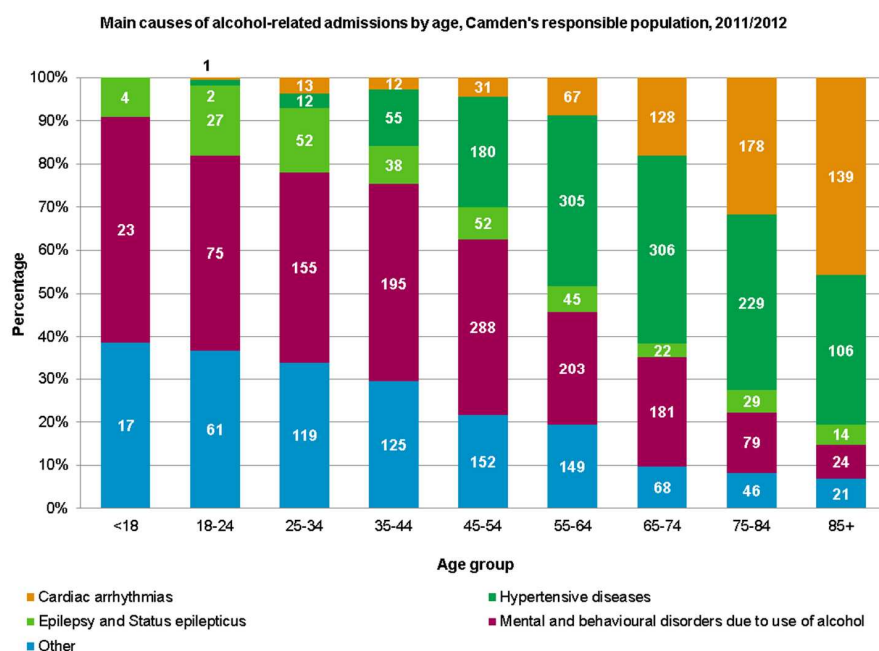
Note: Data relates to number of alcohol-related admissions (see "SUS dataset and case definition" section for more information; some people will have more than one alcohol-related admission within the year). Source: SUS, 2012

- Men have a slightly higher proportion of admissions than women for hypertension (29% compared to 26%).
- Men have a higher proportion of admissions for mental and behavioural disorders due to the use of alcohol compared to women (32% and 21%, respectively).
- Women have higher admissions for epilepsy (11% compared to 4%).
- The proportion of admissions due to cardiac arrhythmias is (11% for men and 16% for women).
- Similar admissions due to alcoholic liver disease 7% for women and 6% for men

28



Alcohol-related hospital admissions by age group



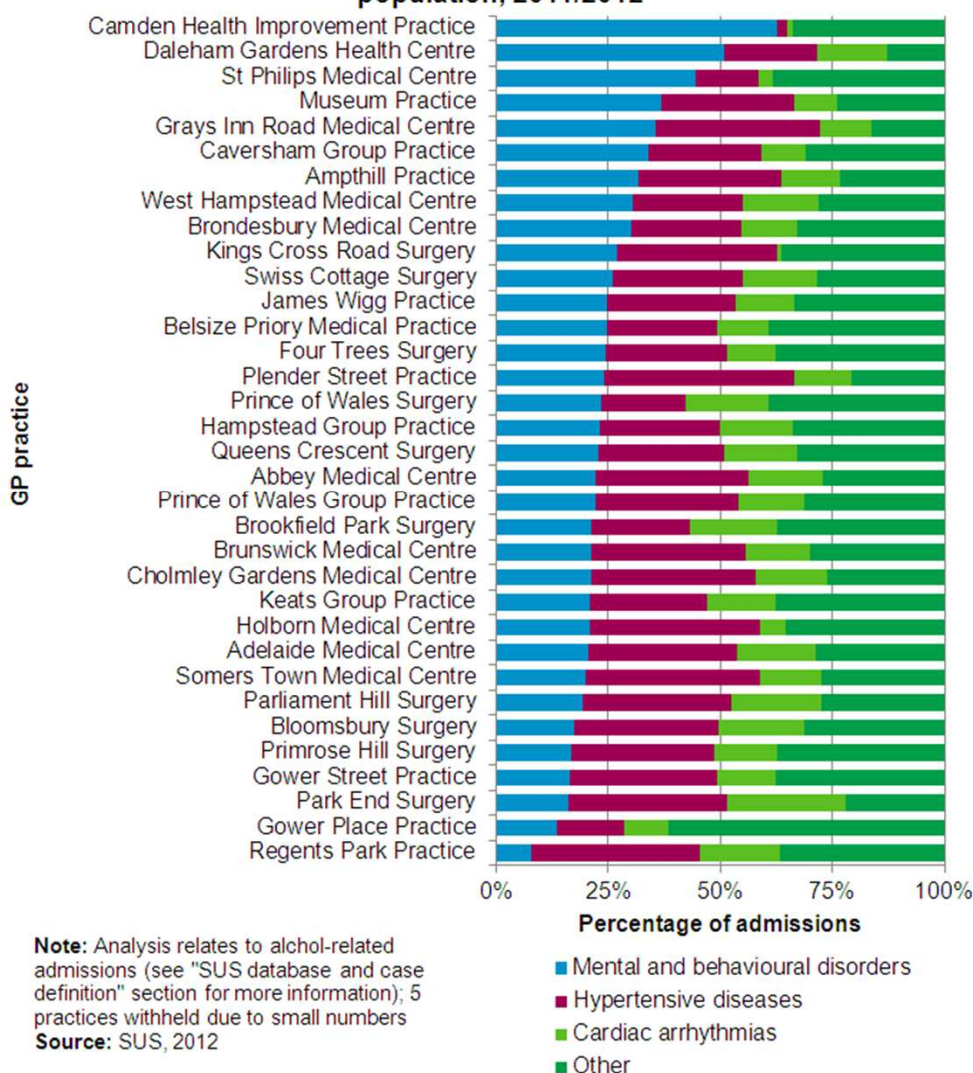
- The main cause of alcohol related admission varies by age group.
- Younger age groups have a greater proportion of admissions due to mental and behavioural disorders due to the use of alcohol and epilepsy.
- Older people, especially those aged 55 and over, have proportionately more admissions due to hypertensive diseases and cardiac arrhythmias.

Note: Data relates to number of alcohol-related admissions ("see SUS dataset and case definition" section for more information; some people will have more than one alcohol-related admission within the year)



Causes of alcohol-related admissions, by GP practice

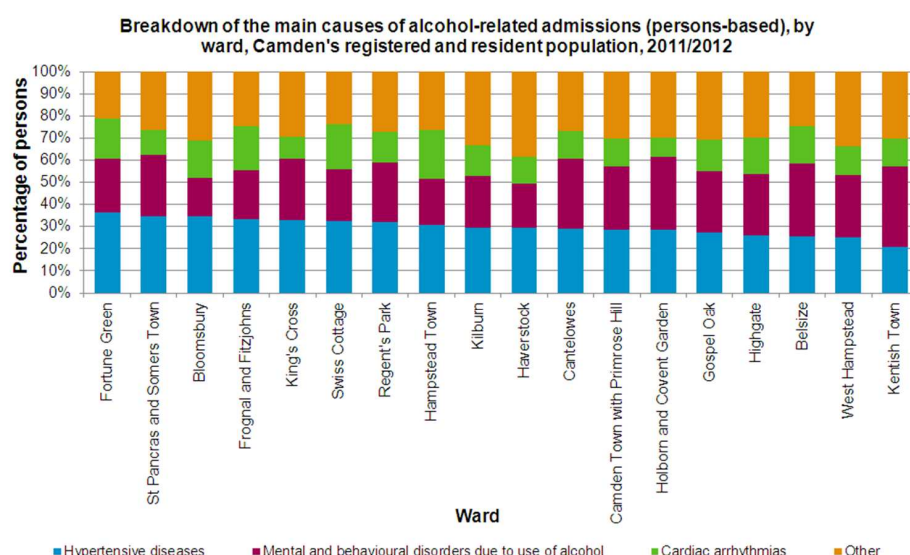
Breakdown of the main causes of alcohol-related admissions, by GP practice, Camden's registered population, 2011/2012



- Camden Health Improvement Practice has the highest proportion of alcohol related admissions due to mental and behavioural disorders (63%, n=72). This is largely due to the practice providing health care to those with mental health problems.
- Plender Street Practice has the highest proportion of admissions due to hypertensive diseases (43% n=20).



Alcohol-related hospital admissions (persons-based) by cause and ward



- The main causes of alcohol-related admissions are similar across wards.
- Fortune Green ward has the highest proportion of people admitted due to hypertensive disorders due to the use of alcohol (37%).
- Kentish Town has the highest proportion of people admitted due to mental and behavioural disorders due to use of alcohol (37%).

Note: Analysis relates to the number of people (AAF applied to main admission) admitted for alcohol-related conditions (people are counted only once within the year). Excludes admissions with no NHS numbers; Source: SUS, 2012

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Alcohol-related hospital admissions by method of admission

Admission method for alcohol-related admissions, Camden responsible population, 2011/12

Admission method	Alcohol-related admissions	Percentage of all alcohol-related admissions
Emergency	2,810	65%
Elective	1,427	33%
Other	76	2%
All admissions	4,313	100%

Note: percentages may not add up to 100 due to rounding

Source: SUS 2011/12

*Some people will have more than one alcohol-related admission within the year.

**This is the number of people admitted for alcohol-related conditions (people are counted only once within the year).

- The majority of alcohol-related hospital admissions are emergency admissions (65%).

32

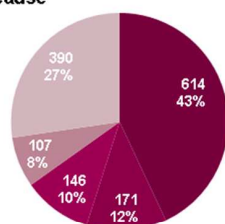


Alcohol-related hospital admissions by method of admission and cause

Admission method and main causes for alcohol-related admissions, Camden's responsible population, 2011/2012

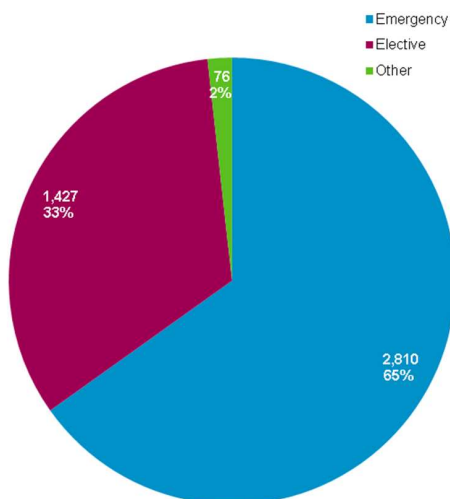
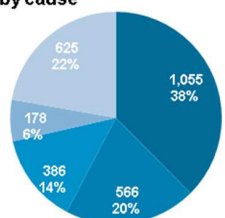
Elective admissions by cause

- Hypertensive diseases
- Cardiac arrhythmias
- Mental & behavioural disorders
- Alcoholic liver disease
- Other



Emergency admissions by cause

- Mental & behavioural disorders
- Hypertensive diseases
- Cardiac arrhythmias
- Alcoholic liver disease
- Other



Note: This analysis relates to the number of alcohol related admissions (some people will have more than one alcohol-related admissions within the year).
Source: SUS 2011/12

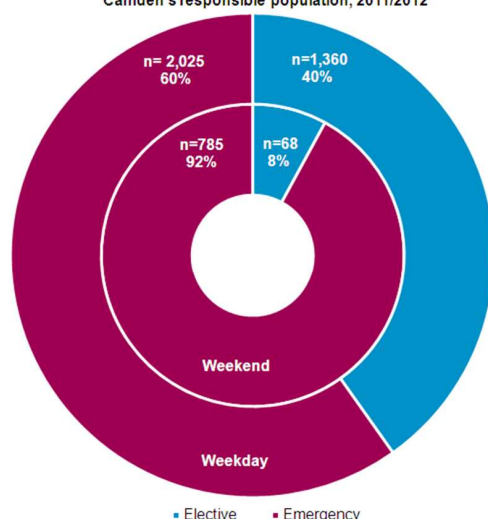
- The main causes of emergency admissions for alcohol-related conditions in 2011/12 were:
 - mental and behavioural disorders due to the use of alcohol (38%, n=1,055)
 - hypertensive diseases (20%, n=566)
 - cardiac arrhythmias (14%, n=386).
- The main causes of elective admissions for alcohol-related conditions in 2011/12 were:
 - hypertensive diseases (43%, n=614)
 - cardiac arrhythmias (12%, n=171).

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Alcohol-related admissions by weekend/weekday and method of admission

Breakdown of alcohol-related admissions, by weekday/weekend and by method of admission, Camden's responsible population, 2011/2012



Note: This analysis relates to the number of alcohol-related admissions (See "SUS dataset and case definition" section for more information; Some people will have more than one alcohol-related admission within the year);
Source: SUS, 2012

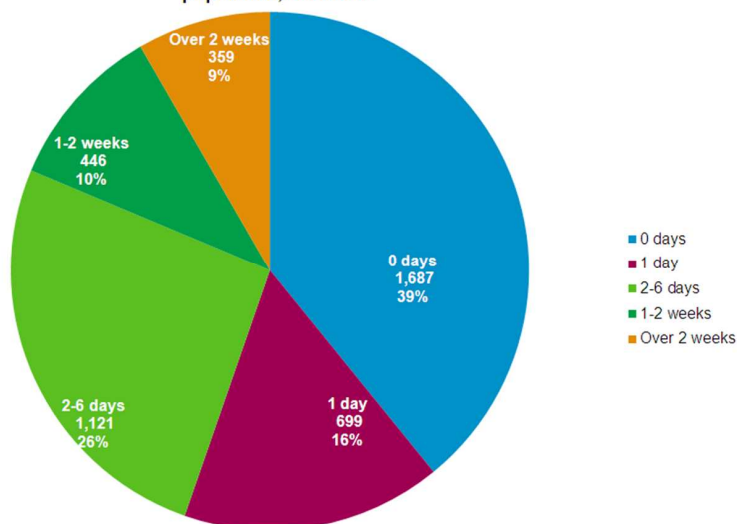
- Elective admissions constitute a much smaller proportion of weekend admissions than weekday admissions (8% at weekends compared to 40% on weekdays).

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Alcohol-related admissions by length of stay

Breakdown of alcohol-related admissions, by length of stay, Camden's responsible population, 2011/2012



- 39% of alcohol-related admissions in Camden in 2011/12 did not require overnight hospital stay (n=1,687).
- 9% of alcohol related admissions in Camden required a stay of over 2 weeks (n=359)

Note: This analysis relates to the number of **alcohol-related admissions** (See "SUS dataset and case definition" section for more information; Some people will have more than one alcohol-related admission within the year). **Source:** SUS, 2012



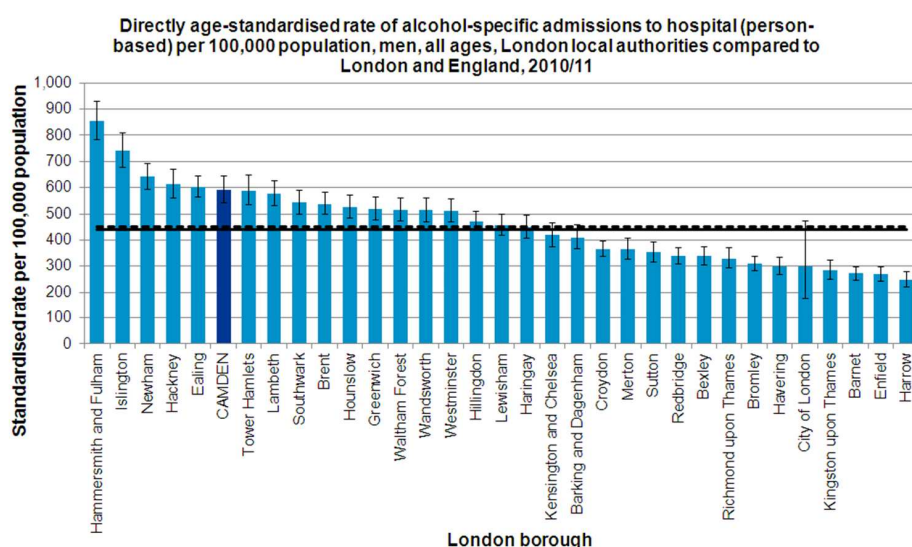
ALCOHOL-SPECIFIC HOSPITAL ADMISSIONS: OVERVIEW

Alcohol-specific hospital admissions include 13 alcohol-specific conditions. The analysis presented in this section relates both to the number of alcohol-specific hospital admissions and the number of people admitted to hospital for alcohol-specific conditions. Some people will have more than one alcohol-specific hospital admission within the year. See methodology section on page 6 for further details.

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Alcohol-specific hospital admissions (persons-based) by London LA: men



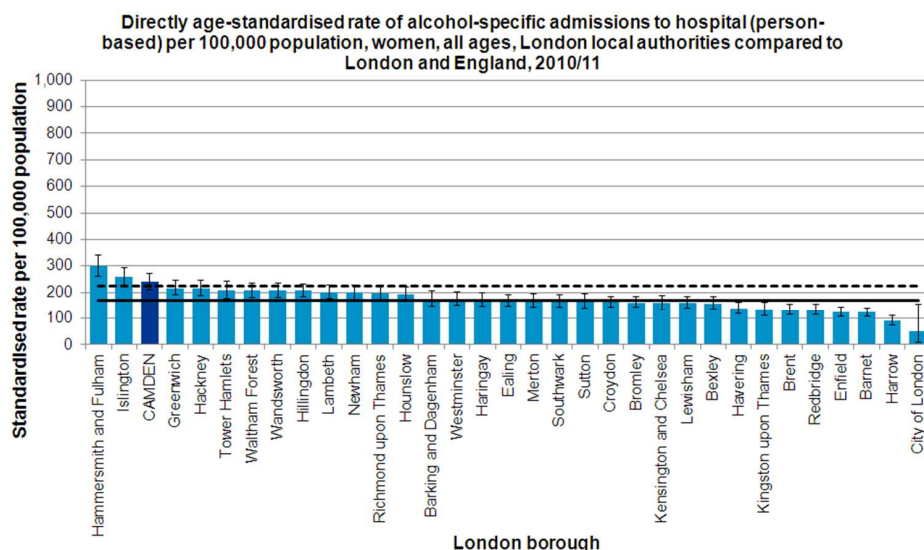
- Nationally produced statistics for 2010/11 show that Camden's (person-based) alcohol-specific rate of hospital admissions for men (593 per 100,000 population) was significantly higher than both London and England rates.
- In number terms, 575 men in Camden were admitted to hospital for alcohol-specific conditions in 2010/11.

Note: This analysis relates to the number of **people** admitted for alcohol-specific conditions (people are counted only once within the year).
Source: Local Alcohol Profiles for England 2012, North West Public Health Observatory

37



Alcohol-specific hospital admissions (persons-based) by London LA: women



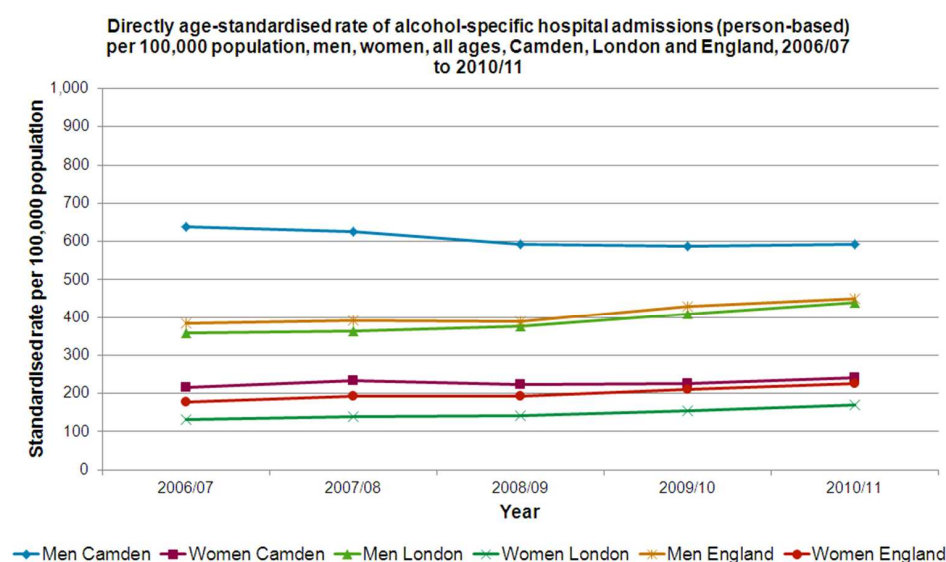
- Nationally produced statistics for 2010/11 show that Camden's alcohol-specific hospital admissions rate (person-based) for women of 241 per 100,000 was significantly higher than the London rate but not different to England.
- In terms of numbers, 259 women in Camden were admitted to hospital for alcohol-specific conditions in 2010/11.

Note: This analysis relates to the number of **people** admitted for alcohol-specific conditions (people are counted only once within the year).
Source: Local Alcohol Profiles for England 2012, North West Public Health Observatory

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Alcohol-specific hospital admissions (person-based) Camden: trend over time



- The rate for men in Camden was more than twice as high as for Camden women in 2010/11.
- Rates for men in Camden were significantly higher than both London and England in 2010/11.
- Rates for women are significantly higher than London but no different to England.

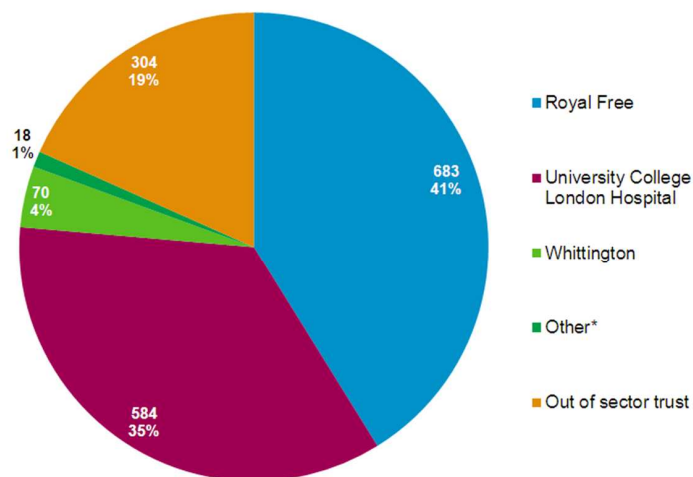
Note: This analysis relates to the number of **people** admitted for alcohol-specific conditions (people are counted only once within the year).
Source: Local Alcohol Profiles for England 2012, North West Public Health Observatory

39



Alcohol-specific hospital admissions by provider

Alcohol-specific admissions, by provider, Camden's responsible population, 2011/2012



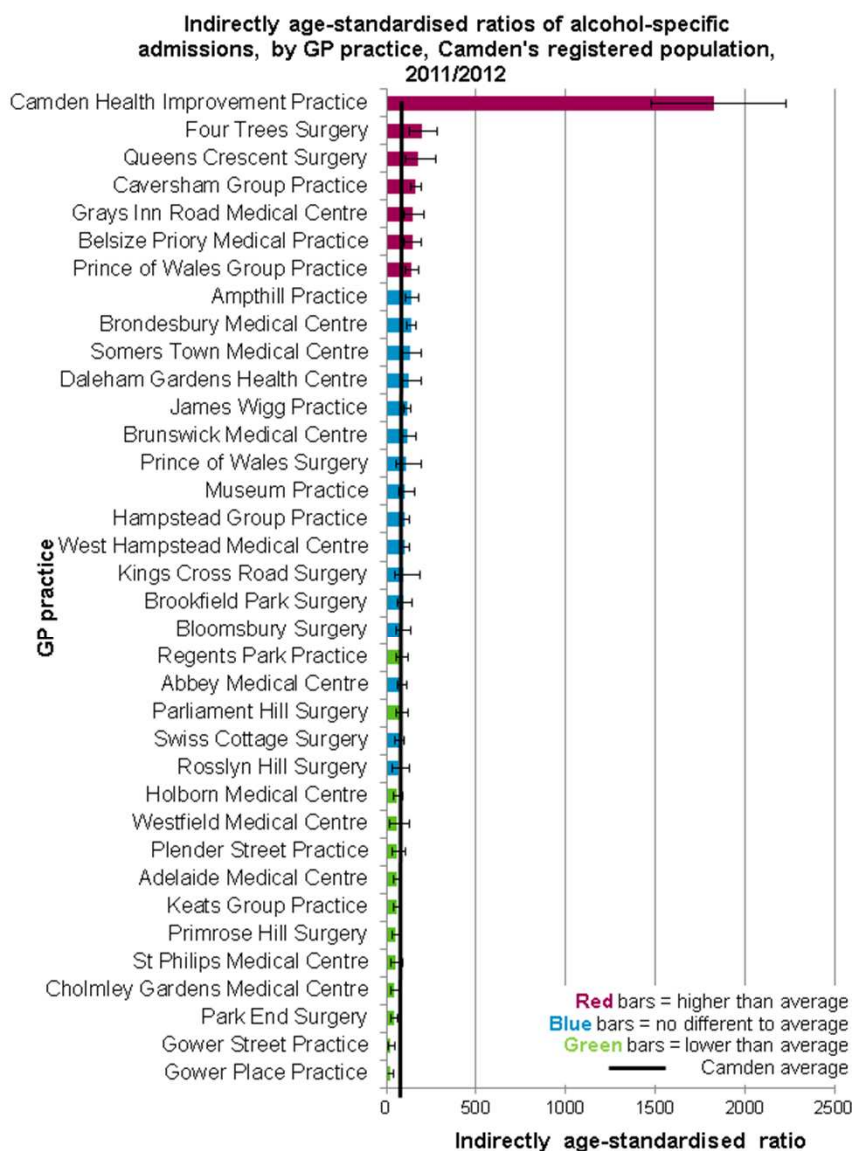
- The majority of alcohol-specific hospital admissions for Camden's responsible population are at Royal Free Hospital (41%, n=683), followed by University College London Hospital (35%, n=584).

*Includes North Middlesex University Hospital, Moorfields and Barnet and Chase Farm Hospital

Note: This analysis relates to the number of alcohol-specific admissions (some people will have more than one alcohol-specific admission within the year); **Source:** SUS, 2012



Alcohol-specific hospital admissions, by GP practice



Note: This analysis relates to the number of alcohol-related/specific admissions (See "SUS dataset and case definition" section for more information; Some people will have more than one alcohol-related admission within the year); 3 practices have been excluded due to disclosive numbers

Source: SUS, 2012 (numerator); Open exeter, 2011 (denominator)

- Adjusted for the age structure of the population, the level of alcohol-specific hospital admission varies by practice.
- 7 practices have levels that are significantly above the Camden average. 13 practices fall significantly below the Camden average.
- Camden Health Improvement Practice has an extremely high rate due to a special population with a very different structure. The practice comprises of homeless people sleeping out or in temporary accommodation (night shelters, hostels, hotels, with friends, squats) and those with substance misuse or mental health problems.



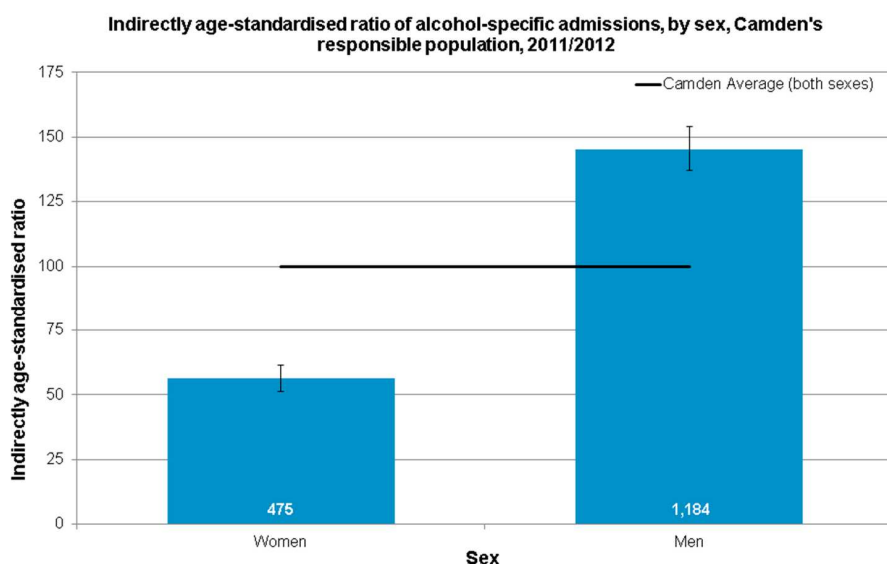
ALCOHOL-SPECIFIC HOSPITAL ADMISSIONS: DEMOGRAPHICS

Some of the analysis presented in this section relates to the number of people admitted for alcohol-specific conditions, rather than the number of admissions for alcohol-specific conditions. See methodology section on page 6 for further details.

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Alcohol-specific admissions by sex



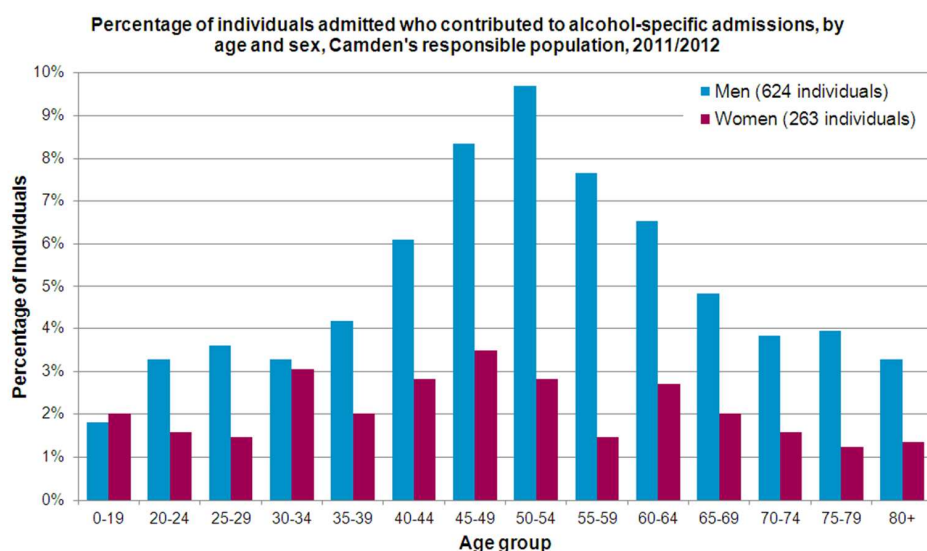
Note: Data relates to number of alcohol-related admissions (see "SUS dataset and case definition" section for more information; some people will have more than one alcohol-related admission within the year) **Source:** SUS, 2012 Open Exeter 2011 (denominator)

- Local hospital data for Camden in 2011/12 showed that there were 1,659 alcohol-specific hospital admissions.
- Men had more than double the number alcohol-specific admissions of women.
- Men had over 40% more alcohol-specific admissions than expected, compared to the Camden average adjusted for age.

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Alcohol-specific hospital admissions by age and sex: percentage of individuals



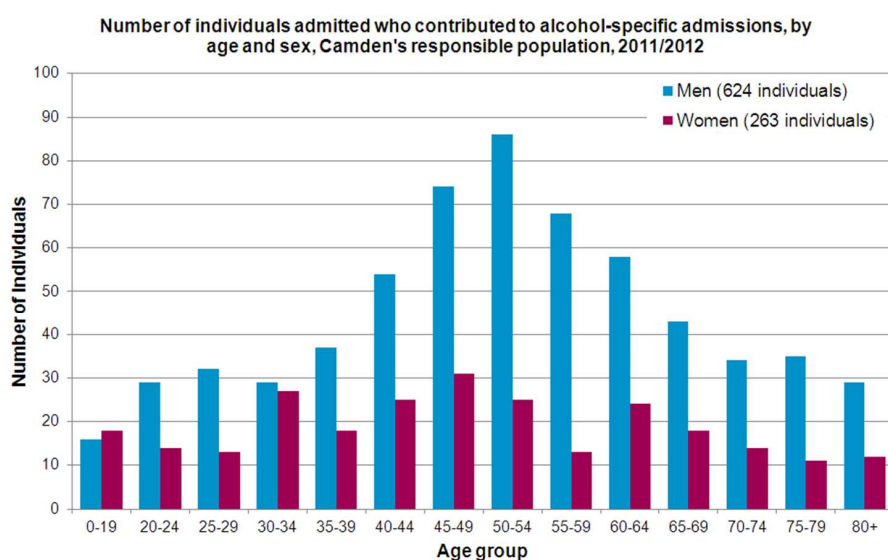
Notes: This analysis relates to the number of people admitted for alcohol-specific conditions (people are counted only once within the year). Percentages add up to 100%. Age groups below 20 years and above 80 years have been aggregated due to small numbers. Source: SUS 2011/2012

- 70% of individuals contributing to alcohol-related hospital admissions during 2011/12 were men.
- The proportion of individuals admitted for alcohol-specific conditions peaks between 50 and 54 for men and age 45-49 for women.
- Individuals admitted for alcohol-specific conditions have a younger age distribution than those admitted for alcohol-related conditions where over 60% are aged 60 and over (see page 16).
- Only a small proportion (15%) of alcohol-specific admissions are in those aged 70 and over.

44



Alcohol-specific hospital admissions by age and sex: number of individuals



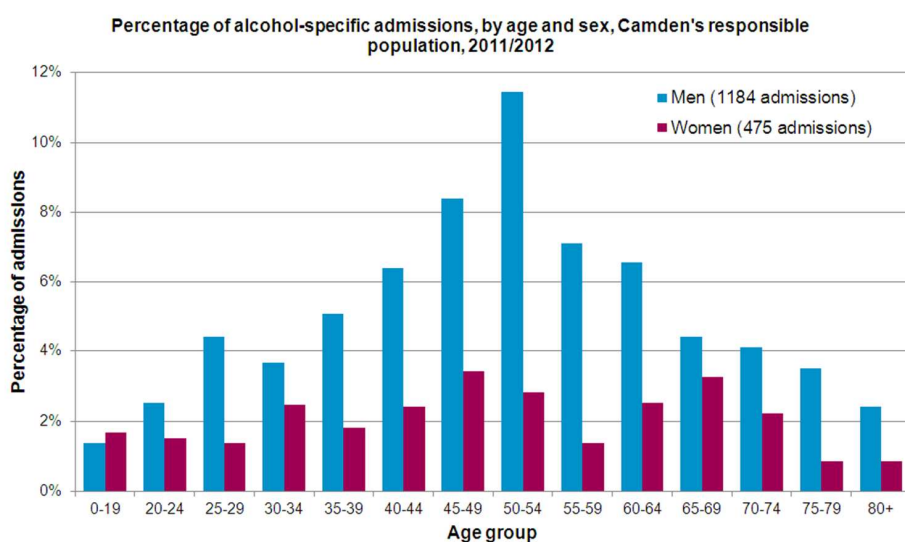
Notes: This analysis relates to the number of people admitted for alcohol-specific conditions (people are counted only once within the year). Age groups below 20 years/ above 80 years have been aggregated due to small numbers. Source: SUS 2011/2012

- 887 individuals contributed to alcohol-specific hospital admissions during 2011/12.
- The number of individuals admitted for alcohol-specific conditions peaked in the group 50-54 for men and age 45-49 for women.

45



Alcohol-specific hospital admissions by age and sex: percentage of admissions



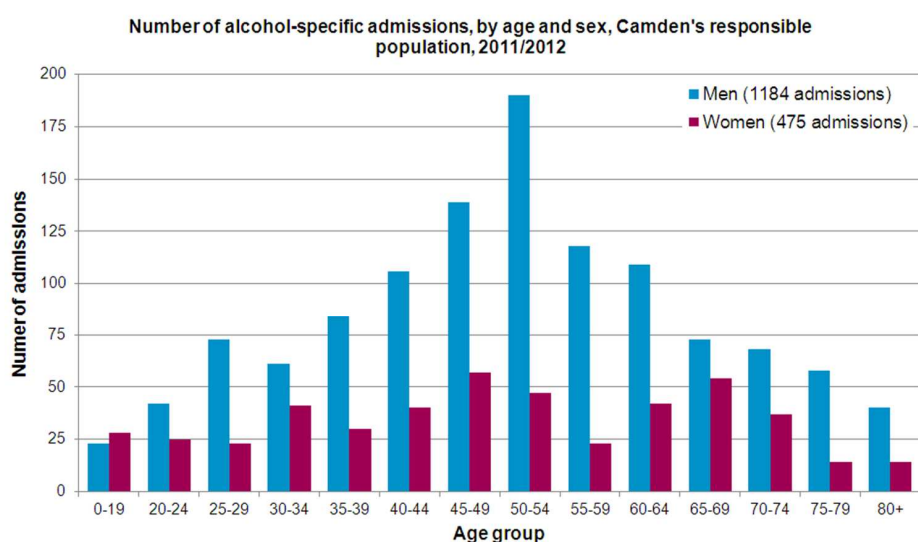
Notes: This analysis relates to the number of alcohol-specific admissions (some people will have more than one alcohol-specific admissions within the year). Percentages add to 100%. Age groups below 20 years/above 80 years have been aggregated due to small numbers.
Source: SUS 2011/2012.

- The majority (70%) of alcohol-specific hospital admissions in 2011/12 were men.
- The age distribution for admissions was similar to that for individuals, with a peak around middle age (50-54) for men and 45-49 for women.

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Alcohol-specific hospital admissions by age and sex: number of admissions



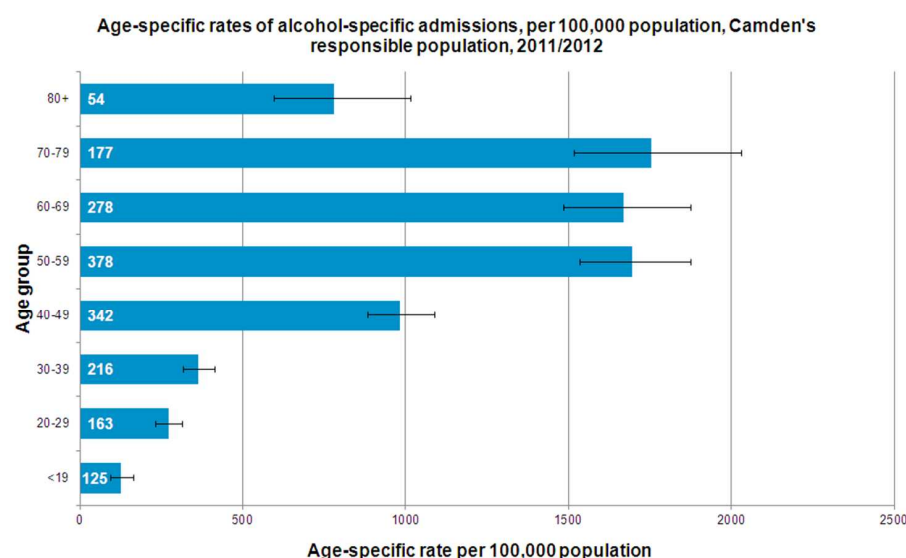
Notes: This analysis relates to the number of alcohol-specific admissions (some people will have more than one alcohol-specific admissions within the year). Age groups below 20 years/above 80 years have been aggregated due to small numbers.
Source: SUS 2011/2012.

- The number of alcohol-specific admissions peaked in men aged 50-54, and in women 45-49 (admissions in women age 65-69 were almost as high).
- Fewer admissions occurred in younger men and men aged 70 and over.
- The distribution of admissions in women was quite consistent between the age groups.

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Alcohol-specific hospital admissions by 10 year age bands



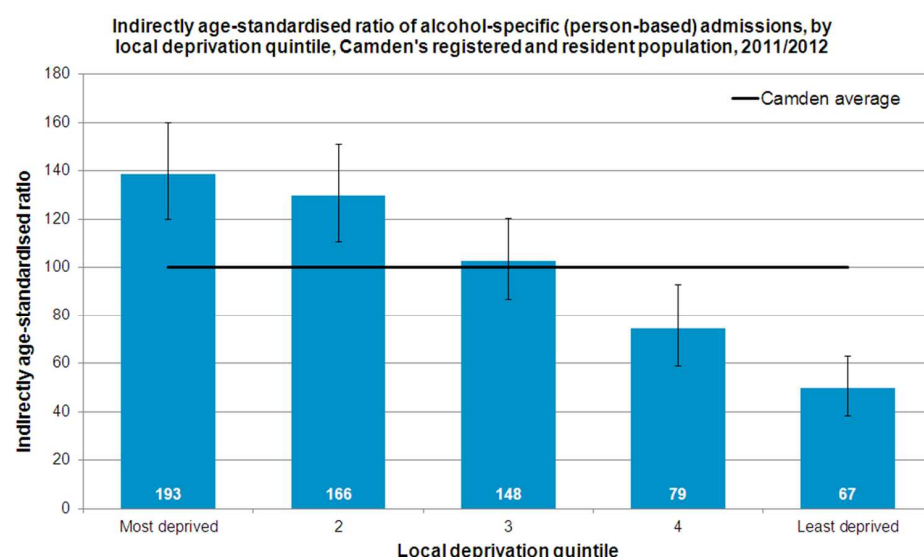
Note: Data relates to alcohol-specific admissions (some people will have more than one admission within the year); Source: SUS, 2012 (admissions); Open Exeter 2011 (denominator)

- The highest rates of alcohol-specific hospital admissions are seen in the 50-79 age groups. These rates are significantly higher than all other age group's.
- This is different from the higher rates seen in those aged 80 and over for alcohol-related admissions (slide 20).
- This difference is probably due to the types of disorders resulting in hospital admissions. 41% of alcohol-related admissions were caused by either cardiac arrhythmias or hypertensive disorders, diseases more likely to occur in the oldest age group.

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Alcohol-specific hospital admissions by deprivation quintile



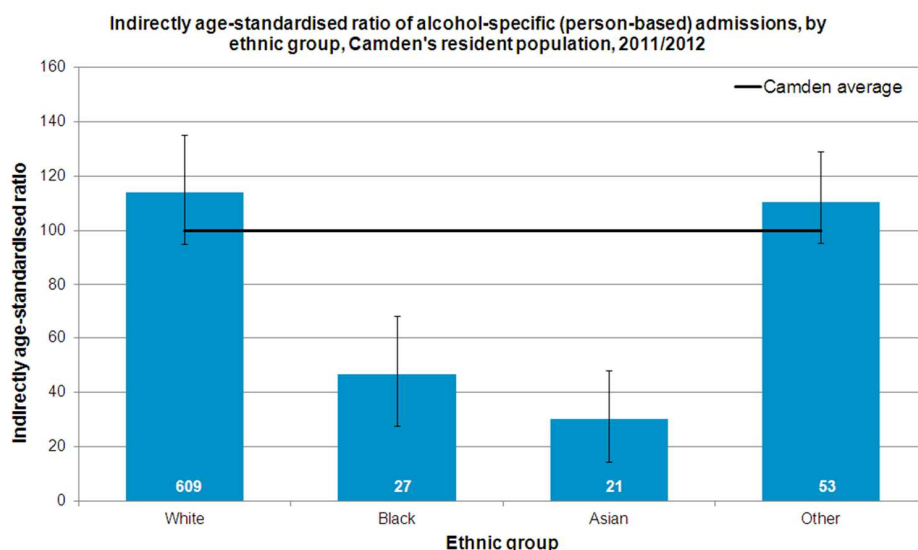
Note: this analysis relates to the number of people admitted for alcohol-specific conditions (people are counted only once within the year). Source: SUS 2011/2012 (admissions); Open Exeter 2011 (population denominator)

- The number of alcohol-specific admissions ranges from 67 in the least deprived local quintile to 193 in the most deprived local quintile.
- The most deprived group has almost 40% higher than expected, admissions, compared to the Camden average adjusted for age.
- The least deprived group has around 50% fewer admissions than expected, compared to the Camden average adjusted for age.

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Alcohol-specific hospital admissions by ethnicity



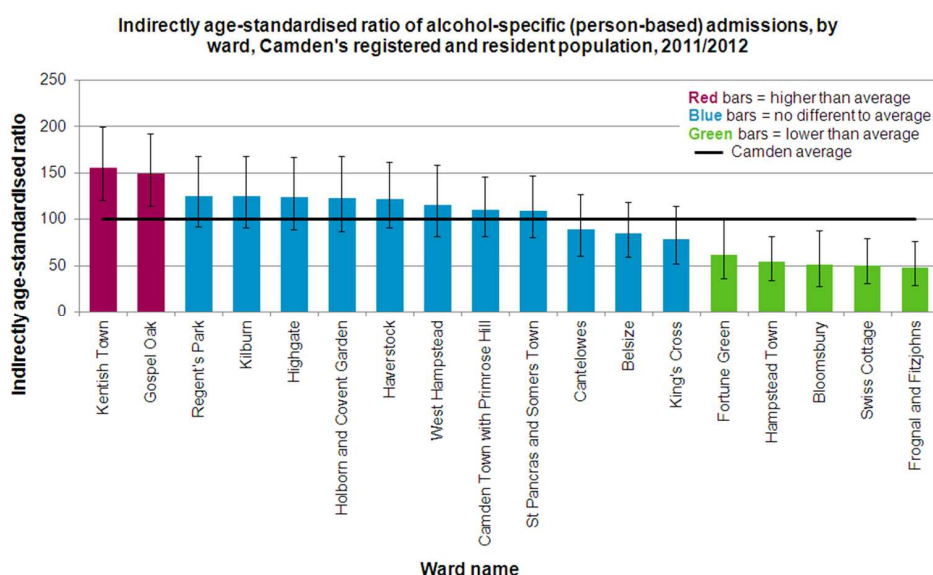
- The number of alcohol-specific admissions ranged from 21 in the Asian ethnic group to 609 in the White ethnic group.
- Both the Black and Asian ethnic groups have significantly fewer admissions than expected, when compared to the Camden average, adjusted for age.

Note: this analysis relates to the number of people admitted for alcohol-specific conditions (people are counted only once within the year).
Source: SUS 2011/2012 (admissions); GLA, 2012 (population denominator)

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Alcohol-specific hospital admissions (person-based) by ward



- Kentish Town and Gospel Oak wards have significantly more alcohol-specific person based admissions, with around 50% more (persons-based) than the Camden average, adjusted for age.
- Frognal and Fitzjohns, Hampstead Town, Bloomsbury, Swiss Cottage and Fortune Green have significantly fewer admissions than expected, compared to the Camden average.

Note: this analysis relates to the number of people admitted for alcohol-specific conditions (people are counted only once within the year);
Source: SUS 2011/2012 (admissions); Open Exeter, 2011 (population denominator)

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ALCOHOL-SPECIFIC HOSPITAL ADMISSIONS: TYPE OF ADMISSION

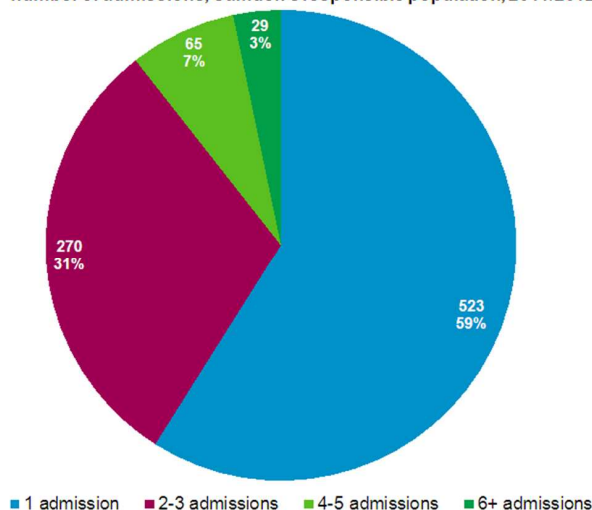
The majority of the analysis presented in this section relates to the number of admissions for alcohol-specific conditions. Some people will have more than one alcohol-specific admission within the year. See methodology section on page 6 for further details.

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Alcohol-specific hospital admissions: repeat admissions

Repeat admissions for alcohol-specific conditions, percentage of individuals by number of admissions, Camden's responsible population, 2011/2012



Source: SUS, 2012

- 59% of individuals were admitted only once in 2011/12 for alcohol-specific conditions.
- 29 individuals (3%) were admitted more than 6 times during 2011/12 for an alcohol-specific condition.

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Alcohol-specific hospital admissions by cause of admission

Main causes of alcohol-specific admissions, Camden's responsible population, 2011/2012

Cause	Alcohol-specific admissions*	Percentage of all alcohol-specific admissions	Main admission for each individual**	Percentage of all individuals
Mental and behavioural disorders	1,223	74%	676	76%
Alcoholic liver disease	286	17%	129	15%
Alcohol poisoning	58	3%	42	5%
Chronic pancreatitis (alcohol induced)	59	4%	21	2%
Other causes	33	2%	19	2%
All alcohol specific causes	1,659	100%	887	100%

Note: percentages may not add up to 100 due to rounding

Source: SUS 2011/2012

*Some people will have more than one alcohol-specific admission within the year.

**This is the number of people admitted for alcohol-specific conditions (people are counted only once within the year).

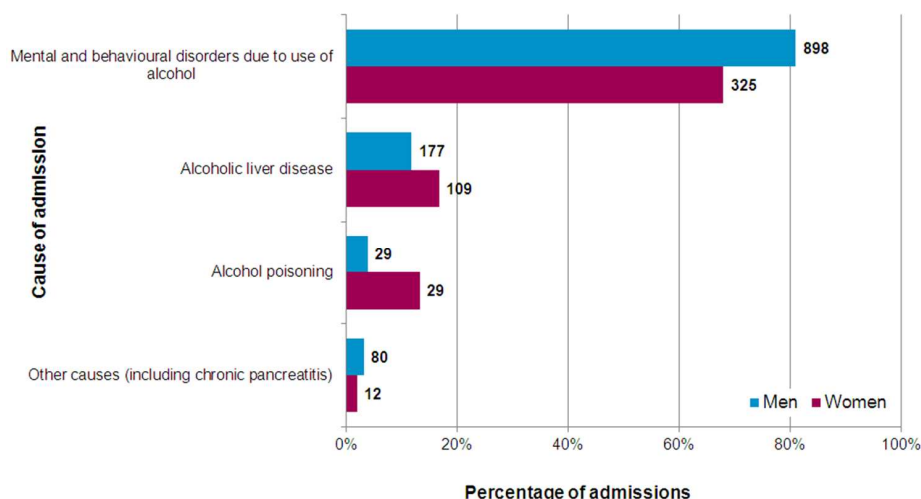
- Alcohol-specific conditions are those *wholly* caused by the consumption of alcohol.
- Within Camden the two main causes of alcohol-specific hospital admissions (91% of the total) are:
 - mental and behavioural disorders due to the use of alcohol (74%)
 - alcoholic liver disease (17%)

54



Alcohol-specific hospital admissions by sex and cause of admission

Alcohol-specific admissions by cause and sex, Camden's responsible population, 2011/12



Note: This analysis relates to the number of alcohol-specific admissions (some people will have more than one alcohol-specific admission within the year). Source: SUS 2011/12

- There are similar patterns of cause of admission for both men and women.
- Mental and behavioural disorders due to the use of alcohol are the most common cause of alcohol-specific admissions in men (76%) and women (68%).
- 15% of alcohol-specific admissions in men and 23% of admissions in women are due to alcoholic liver disease.
- 2% of admissions in men and 6% of admissions in women are admitted due to alcohol poisoning.

55



Alcohol-specific hospital admissions by method of admission

Admission method for alcohol-specific admissions, Camden responsible population, 2011/12

Admission method	Alcohol-specific admissions	Percentage of all alcohol-specific admissions
Emergency	1,375	83%
Elective	260	16%
Other	24	1%
All admissions	1,659	100%

Note: percentages may not add up to 100 due to rounding
Source: SUS 2011/12
*Some people will have more than one alcohol-specific admission within the year.
**This is the number of people admitted for alcohol-specific conditions (people are counted only once within the year).

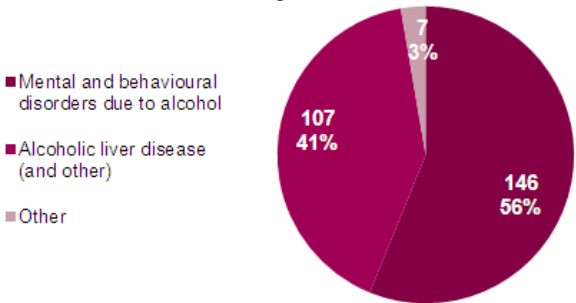
- The majority of alcohol-specific hospital admissions are emergency admissions (83%, n=1,375).
- Emergency admissions account for a larger percentage of alcohol-specific admissions than for alcohol-related admissions (65%, n=2,810).



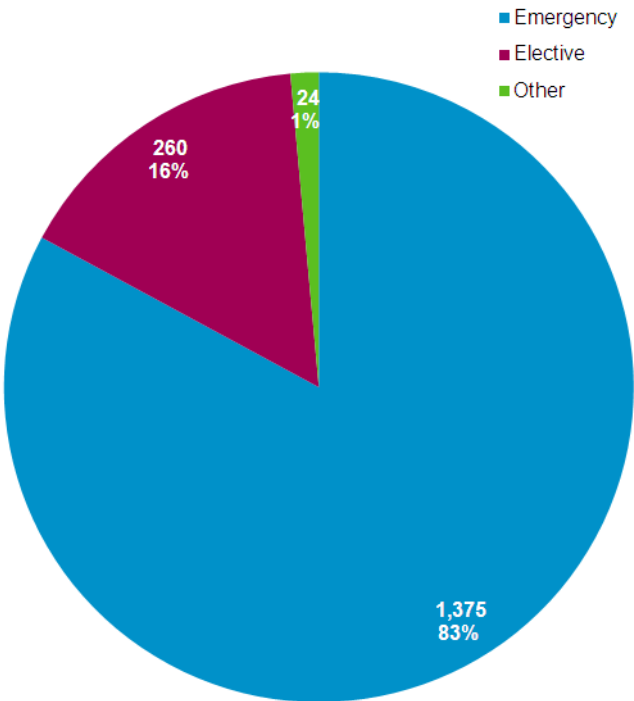
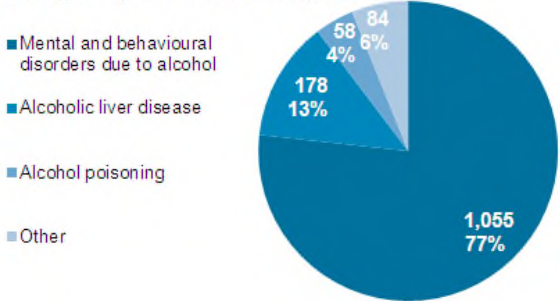
Alcohol-specific hospital admissions by method and cause of admission

Admission method and main causes for alcohol-specific admissions, Camden's registered population, 2011/12

Elective admissions by cause



Emergency admissions by cause



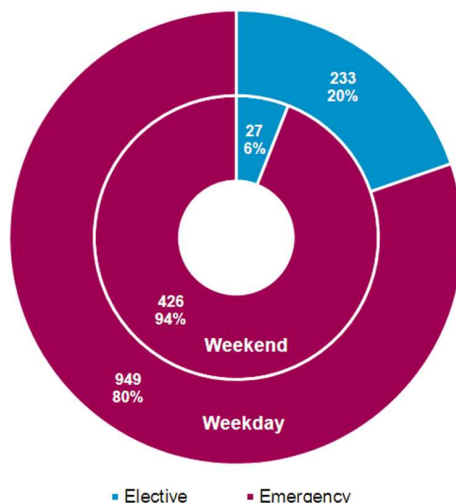
- The main causes of emergency admissions for alcohol-specific conditions in 2011/12 were:
 - mental and behavioural disorders due to the use of alcohol (77%, n=1055)
 - alcoholic liver disease (13%, n=178)
 - alcohol poisoning (4%, n=58).
- The main causes of elective admissions for alcohol-specific conditions in 2011/12 were:
 - mental and behavioural disorders due to the use of alcohol (56%, n=145)
 - alcoholic liver disease (41%, n=107).

Note: This analysis relates to the number of alcohol specific admissions (some people will have more than one alcohol-specific admission within the year).
Source: SUS 2011/12



Alcohol-specific admissions by weekend/weekday and method of admission

Breakdown of weekend/weekday alcohol-specific admissions, by method of admission, Camden's responsible population, 2011/2012



Note: This analysis relates to the number of alcohol-specific admissions (some people will have more than one admission within the year); Source: SUS, 2012

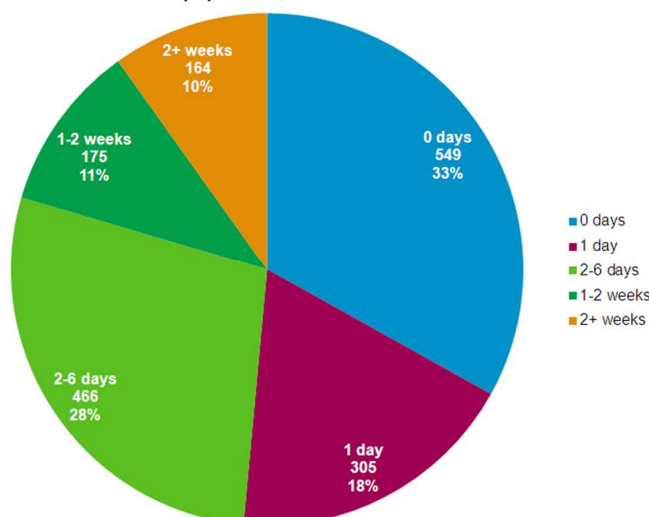
- Only 6%, n=27 of alcohol-specific admissions taking place at the weekend are elective (compared to 20%, n=233 on weekdays).

58



Alcohol-specific admissions by length of stay

Breakdown of alcohol-specific admissions, by length of stay, Camden's responsible population, 2011/2012



Note: Analysis relates to alcohol-specific admissions (some people will have more than one admission within the year); Source: SUS, 2012

- 33% of alcohol-specific admissions in Camden in 2011/2012 did not require an overnight stay (n=549).

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95% confidence intervals

Percentages and rates are reported with 95% CI. These give the range of values which quantify the imprecision in the estimate of the percentage or rate. They are used to quantify the imprecision that results from random variation in the estimation of the value because events (e.g. admissions) are influenced by the random occurrences that are inherent in life. They do not include imprecision resulting from systematic error (i.e. bias). By comparing the 95% CIs around estimates or a target, we can say whether statistically, there are differences or not in the estimates we are observing.

Indirectly standardised rates

The indirectly standardised ratio is the observed number of events, relative to the number of events that would be expected, if standard age-specific rates were applied to the particular observed population's age structure. To convert this ratio to a rate which adjusts for the national admissions rate, the indirectly standardised ratio is multiplied by the national crude rate.

This enables you to compare your population rate with a standard rate e.g. the national rate, taking into account differences in population age structures.

Directly Standardised rates (DSR)

Gives an indication of the number of events that would occur in a population, if the population had the same age-specific *rates* of the local area. This overcomes the problems of a crude *rate* masking differences in particular age groups. The standard population most commonly used is the European Standard population, however other populations can be used.

ABOUT PUBLIC HEALTH INTELLIGENCE

Public health intelligence is a specialist area of public health. Trained analysts use a variety of statistical and epidemiological methods to collate, analyse and interpret data to provide an evidence-base and inform decision-making at all levels.

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