PUBLIC HEALTH intelligence

Cambridgeshire County Council

Data supplement: Chronic Kidney Disease in Cambridgeshire **July 2015**

Introduction

This is one in a series of Data Supplements providing intelligence to inform future health and social care planning for the resident population of Cambridgeshire produced in support of *Cambridgeshire JSNA: Long Term Conditions Across the Lifecourse (2015*).

Background

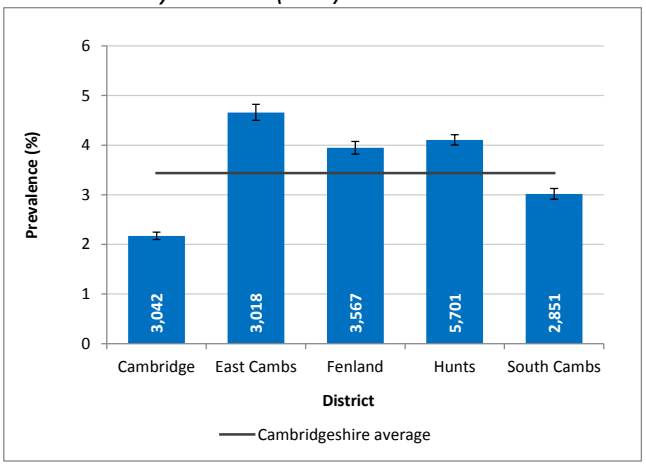
There is a wide spectrum of kidney disease, which can be rapid onset (acute) or longer term (chronic). Chronic Kidney Disease (CKD) is closely related to cardiovascular disease (CVD) and the two pathologies often co-exist.[1] CKD describes abnormal kidney function and/or structure. It is divided into five stages according to severity. Stages 3 to 5 are classified as moderate to severe CKD and stage 5 may require renal replacement therapy (RRT). It is common, frequently unrecognised and often exists together with other cardiometabolic conditions.[2]

What is the prevalence and who is at risk?

The estimated prevalence of CKD stages 3 to 5 varies by age and gender (based on patients with CKD amongst those tested for kidney function in the Health Survey for England, 2011). In the 16 to 24 age group the prevalence is less than 1%; this increases to more than 29% in males and 35% in females for the 75 and over age group. The prevalence of CKD is higher in women compared to men in most population based studies. The overall prevalence of CKD stages 3 to 5 in people aged 16 and over was 7% in women and 6% in men.[3]

There are known coding issues with CKD prevalence noted in QOF for 2013/14. Within the national dataset, a coding issue led to under-reporting of this condition at the extraction stage. This will not be corrected in QOF until the 2014-15 data are extracted. These data are provided for reference only and we would recommend against using these figures in any other publication without this disclaimer or basing any decisions on these figures.

Chronic Kidney Disease (CKD)



Number on the register stated at the base of each bar
Error bars represent 95% confidence intervals
Source: Quality & Outcomes Framework (QOF) 2013/14

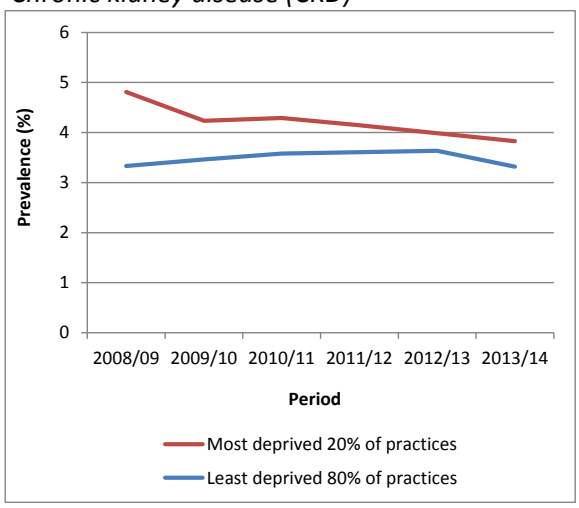
Based on 2013/14 QOF data, around 18,200 people are recorded on disease registers for CKD in practices across Cambridgeshire.

The prevalence of CKD is lower in the county as a whole compared with the England average (3.4% vs 4.0%). However, in East Cambridgeshire, prevalence is higher than the county and national averages. In Fenland and Hunts prevalence is higher than the county average. In South Cambridgeshire and Cambridge City, prevalence is lower than the county and national averages.

It is important to note, however, that these prevalence data are not age-standardised and so areas with a higher proportion of older people will be expected to have a higher prevalence of CKD.

National sources state that there is a higher incidence and prevalence of CKD in more deprived populations in developed countries.[4] However, in the local QOF data presented below, a reverse pattern is observed. CKD is known to be under-diagnosed and modelled estimates for CKD suggest prevalence to be 5.9% in the CCG.[5] It is possible that there is more under-diagnosis in the most deprived areas. There is no suggestion from national sources that there is a true fall in prevalence of CKD.

Chronic kidney disease (CKD)



The prevalence of recorded CKD has remained stable in the least deprived 80% of practices in the county but has fallen in the most deprived 20%. Data shown to 2012/13 due to the QOF coding issue referred to in the previous section.

The prevalence of CKD remains 15% higher in the most deprived 20% of practices in Cambridgeshire compared with elsewhere but the gap has reduced

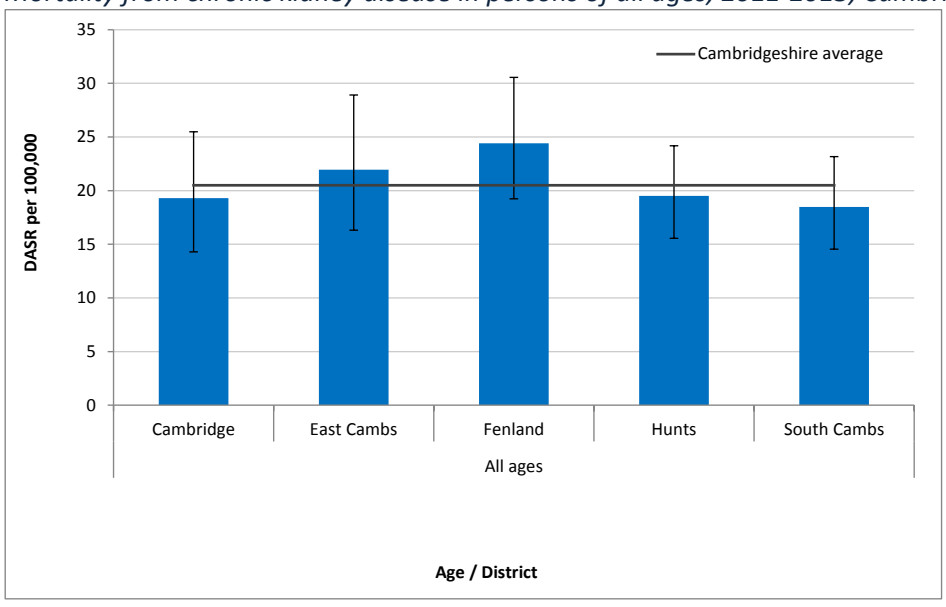
Source: Quality & Outcomes Framework (QOF) 2013/14

How many deaths are related to chronic kidney disease?

Routine mortality statistics of death related to chronic kidney disease are an under-estimate of the total number of deaths as it is not routinely recorded as the underlying cause of death, rather as a contributing factor. People with CKD are roughly 20 times more likely to die of CVD than to progress to end stage renal disease (ESRD).[6]

Between 2011 and 2013 there were 340 deaths (an average of around 110 deaths annually) in Cambridgeshire where either the underlying (primary) cause or a contributory cause of death was CKD (ICD10: N18). 16% of deaths occur in people aged under 75 and 47% of CKD deaths are in women. Comparable figures for England are not currently available. Mortality rates are similar to the county average across all districts.

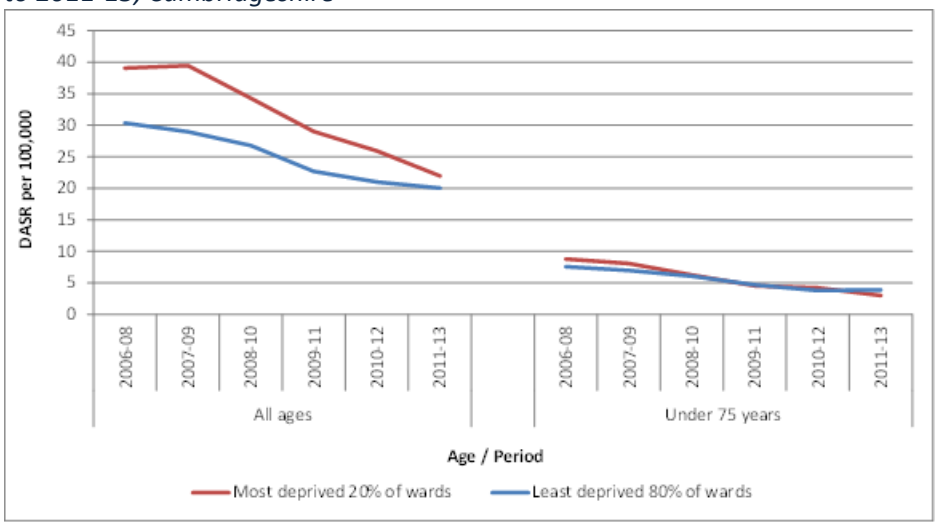
Mortality from chronic kidney disease in persons of all ages, 2011-2013, Cambridgeshire



Error bars represent 95% confidence intervals. DASR - directly age-standardised rate.
CKD defined by ICD10: N18.

Rates of CKD mortality have fallen in people of all ages and people aged under 75 in both the most deprived 20% of wards and the least deprived 80%. In people of all ages, rates are higher in the most deprived 20% compared with the least deprived 80% though the gap has reduced. There is no difference in mortality rates in people aged under 75.

Mortality from chronic kidney disease in persons of all ages and aged under 75 by deprivation, 2006-08 to 2011-13, Cambridgeshire



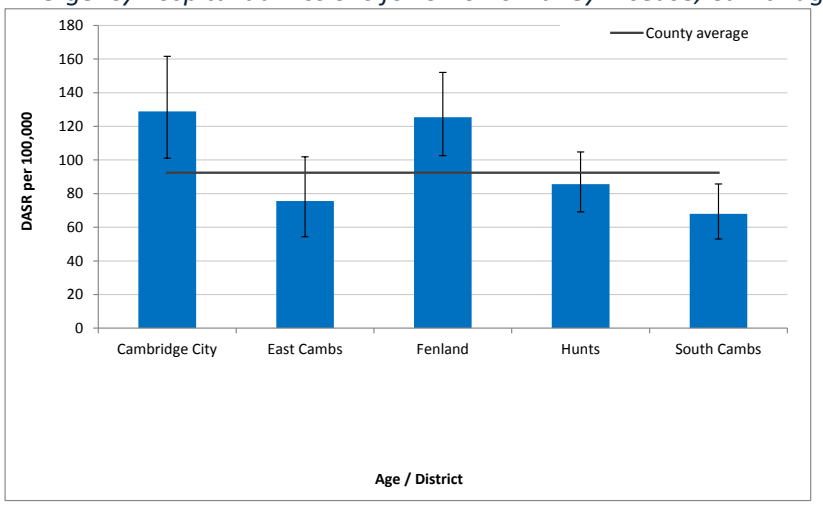
Sources: Health and Social Care Information Centre Primary Care Mortality Database and Office for National Statistics mid-year population estimates. CKD defined by ICD10: N18.

Hospital admissions and episodes of care

People resident in Cambridgeshire (based on LSOA), 2013/14, aged 30 and above

In 2013/14, there were nearly 400 emergency admissions where CKD was recorded as the primary or subsidiary diagnosis. These admissions resulted in 3,000 emergency bed days and a total cost of £1.1m. In Fenland and Cambridge City, the age-standardised emergency admission rate for CKD is significantly higher than the county average. Rates in South Cambridgeshire are significantly lower than the county average. There may be differences in coding of CKD between hospital trusts.

Emergency hospital admissions for Chronic Kidney Disease, Cambridgeshire, 2013-14, all ages (30+)



Admissions to All Hospital Trusts. Error bars represent 95% confidence intervals. DASR - directly age-standardised rate. CKD defined by primary or subsidiary diagnosis of ICD10: N18. Sources: Inpatient Commissioning Dataset. FHS Registration System (Exeter) registered population.

- Coding in hospital episode data at discharge records the primary diagnosis (the underlying reason for the admission), a subsidiary diagnosis and up to 12 other contributory causes/diagnoses. Coding is known to be variable between hospital trusts.

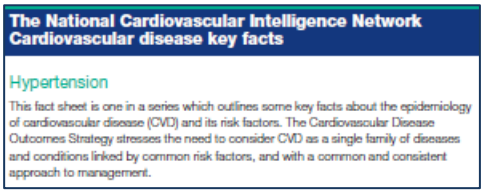
- In 2013/14, a diagnosis of chronic kidney disease (ICD10: N18) was recorded in any diagnostic code in over 3,200 emergency admissions which resulted in over 30,300 emergency bed days and a total cost of £9.3m.

- 75% of these emergency admissions were in people aged 75 and over and 53% were in men.

- In emergency admissions where chronic kidney disease was recorded as a diagnosis, 18% had a primary diagnosis of cardiovascular disease (CVD), primarily coronary heart disease, other forms of heart disease and stroke.

Further Resources

Key facts PHE – CVD Series

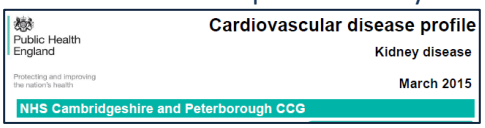

The National Cardiovascular Intelligence Network
Cardiovascular disease key facts

Hypertension

This fact sheet is one in a series which outlines some key facts about the epidemiology of cardiovascular disease (CVD) and its risk factors. The Cardiovascular Disease Outcomes Strategy stresses the need to consider CVD as a single family of diseases and conditions linked by common risk factors, and with a common and consistent approach to management.

http:// www.yhpho.org.uk/default.aspx?RID=185796
Key Facts series produced by Public Health England (PHE) with headline epidemiological and comparator data. Each factsheet summarises information about a cardiovascular disease (CVD) risk factor or disease area.

PHE – Cardiovascular profile: Kidney disease


Public Health England

Protecting and improving the nation's health

Cardiovascular disease profile

Kidney disease

March 2015

NHS Cambridgeshire and Peterborough CCG

http://www.yhpho.org.uk/ncvincvd/default.aspx
The profile compares the CCG with data for England, a group of similar CCGs and the strategic clinical network (SCN). Information on risk factors, care process and treatment indicators are included.

Acknowledgement of source material

This supplement uses information from Public Health England (PHE), the Health and Social Care Information Centre (HSCIC) and other publications shown above. More detailed information is available from each of the Key Resources described above.

Where to find the data

Cambridgeshire JSNA
Cambridgeshire Insight and Atlases

http://www.cambridgeshireinsight.org.uk/jsna
www.cambridgeshireinsight.org.uk/

References

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[1] NICE. Clinical Guideline 73: chronic kidney disease: early identification and management of chronic kidney disease in adults in primary and secondary care, 2008. Available at: http://www.nice.org.uk/Guidance/CG73
[2] NICE. Quality standard 5: chronic kidney disease, 2011. Available at: http://guidance.nice.org.uk/QS5
[3] Roth M, Roderick P, Mindell J. Health Survey for England 10: respiratory health: chapter 8: kidney disease and renal function, 2011, Available at: http://www.hscic.gov.uk/catalogue/PUB03023 Page 23
[4] Public Health England. Chronic Kidney Disease. Fact sheet No 9. See Further Resources.
[5] Public Health England. Cardiovascular profile: kidney disease. See Further Resources.