PRIORITISATION FRAMEWORK FOR PETERBOROUGH HEALTH AND WELLBEING PROGRAMME BOARD

Cardiovascular Disease (CVD)

The framework below is intended to provide an objective and consistent approach to assessing possible topics (based on care groups, population groups or clinical areas, etc.) for inclusion as priorities within the Peterborough Health and Wellbeing Strategy. Detailed answers to each section are not required at this stage and some proposals may need further scoping before a final decision on inclusion in the strategy.

This scorecard is based on others which have been used/worked well elsewhere, with adjustments to reflect local situation.

Why should CVD be a priority area for Peterborough Health and Wellbeing Board?

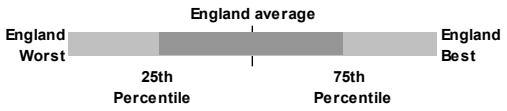
The chart below demonstrates that indicators relating to CVD are 'worst of the worst' amongst our Public Health Outcomes Framework indicators. (NB Male suicide is our poorest indicator: this is already being addressed as a priority through the Peterborough and Cambridgeshire Suicide Prevention Strategy and the local implementation group).

Peterborough Updated PHOF analysis - review of "poorly performing" indicators

The chart below shows how P'Boro compares with the rest of England. P'Boro's result for each indicator is shown as a circle. The average rate for England is shown by the black line at the centre of the chart. The range of results for all local areas in England is shown as a grey bar. A red circle means that P'Boro is significantly worse than England for that indicator; however, a green circle may still indicate an important public health problem.

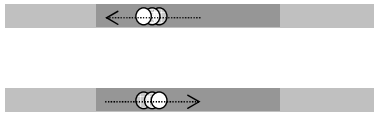
- Significantly worse/higher need than England average
- Not significantly different from England average
- Significantly better/lower need than England average
- No significance can be calculated

East average

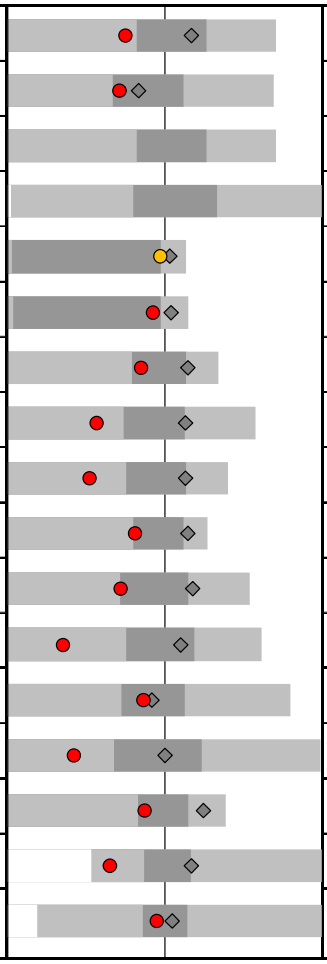


The 1 and 3 year trend columns show the change in P'Boro's position on the spine.

- Deteriorating relative to other local authorities in England
- Remaining similar to other local authorities in England
- Improving relative to other local authorities in England



Healthy life	All cause mortality	13 Life expectancy at birth (males) in years	77.9	80.1	79.2	–	◄	2010-2012
		14 Life expectancy at birth (females) in years	82.5	83.0	83.7	◄	◄	2010-2012
		15 Gap in life expectancy (males) in years	-1.3	0.9	-	–	◄	2010-2012
		16 Gap in life expectancy (males) in years	-0.5	-0.7	-	◄	◄	2010-2012
		17 Healthy life expectancy at birth (males) in years	61.6	64.8	63.2	no data	no data	2009-2011
		18 Healthy life expectancy at birth (males) in years	60.3	66.2	64.2	no data	no data	2009-2011
	Amenable to healthcare	19 Mortality rate from causes considered preventable	210.9	165.7	187.8	–	◄	2010-2012
		20 Under 75 mortality rate from cardiovascular diseases considered preventable	71.5	48.1	53.5	◄	–	2010-2012
	Cardiovascular disease	21 Under 75 mortality rate from cardiovascular diseases	111.8	72.6	81.1	◄	◄	2010-2012
	Respiratory disease	22 Under 75 mortality rate from respiratory disease	42.5	26.6	33.5	–	◄	2010-2012
	Communicable disease	23 Mortality from communicable diseases	74.2	58.9	64.8	◄	◄	2010-2012
	Suicide	24 Suicide rate	12.4	7.9	8.5	◄	–	2010-2012
Long term conditions	Diabetes	25 Recorded diabetes	6.2%	6.0%	5.8%	no data	no data	2012/13
		26 Access to non-cancer screening programmes - diabetic retinopathy	72.7%	80.9%	80.9%	◄	no data	2011-2012
Healthy Lifestyle	Cancer	27 Cancer screening coverage - cervical cancer (%)	0.7	0.8	0.7	◄	◄	2013
	Drugs	28 Successful completion of drug treatment - opiate users (%)	4.9%	9.8%	8.2%	◄	◄	2012
Health services	NHS health checks	29 Offered an NHS health check (% of eligible people aged 40-74)	46.6%	51.4%	49.1%	◄	no data	2012/2013



SCALE OF THE PROBLEM IN PETERBOROUGH

Question 1: How many people does the problem affect in Peterborough

How this question will be scored

More points will be given where large numbers of people are affected. Examples: numbers of infant deaths are low in the area. Sedentary behaviour is far more common.

Cardio-vascular disease (CVD) includes all the diseases of the heart and circulation.

The four main types of CVD are coronary heart disease (CHD), stroke, peripheral arterial disease and aortic disease.

CVD is the second largest cause of death in England causing around 130,190 deaths in 2011 **(29% of all deaths).** Around 46% of all deaths from CVD are from coronary heart disease (CHD) and almost a fifth from stroke (18%). CHD is the most common single cause of death in England (13% of all deaths in 2011).

Deaths due to cardiovascular disease account for **27.0% of all deaths under 75 in Peterborough** (23.8% in Cambridgeshire). CHD accounts for the largest proportion of CVD deaths.

GPs record information on whether their patients have CHD or have a stroke.

Currently, **5166 people** are recorded as having CHD in Peterborough (2.8% of the population). The expected number (from national prevalence data) is 10,332 people (5.6% of the population). The recorded prevalence of CHD is 50.4% of the expected number. This compares to 58.2% for England and 59.1% for East of England. This means that Peterborough is underperforming compared to England and East of England with regards to identifying people who suffer from CHD. This may mean that not everyone with CHD is being offered appropriate support and interventions.

Around 2583 people have been recorded as having had a stroke in Peterborough (1.4% of the population). The expected number (from national figures) is around **4428 people** (2.4%). The observed prevalence for stroke in Peterborough is 57.5% of the estimated prevalence. This compares to 68.4% for England and 68.2% for East England. Under recording may mean that people are not getting access to appropriate support and interventions.
About 12.3% of the population (**22,694 people**) have been diagnosed with hypertension. However, the estimated prevalence of hypertension is 29.3% (**54058 people**). The observed prevalence for hypertension in Peterborough is 41.9% of the estimated prevalence, meaning many people live with the condition in the community without it being diagnosed and treated. This compares to 46.0% for England and 45.6% for East of England. Again, this means that people may not be getting access to the appropriate support and interventions.

IMPACT OF THE PROBLEM ON INDIVIDUALS
Question 2: What is the impact of having this problem/condition on individuals, their families and carers? How this question will be scored More points will be given where the impact on those affected and their carers/families is severe. This would include physical and mental health and wellbeing (eg as measured by quality of life etc). Although infant mortality would be ranked low in question 1, it would score highly here.

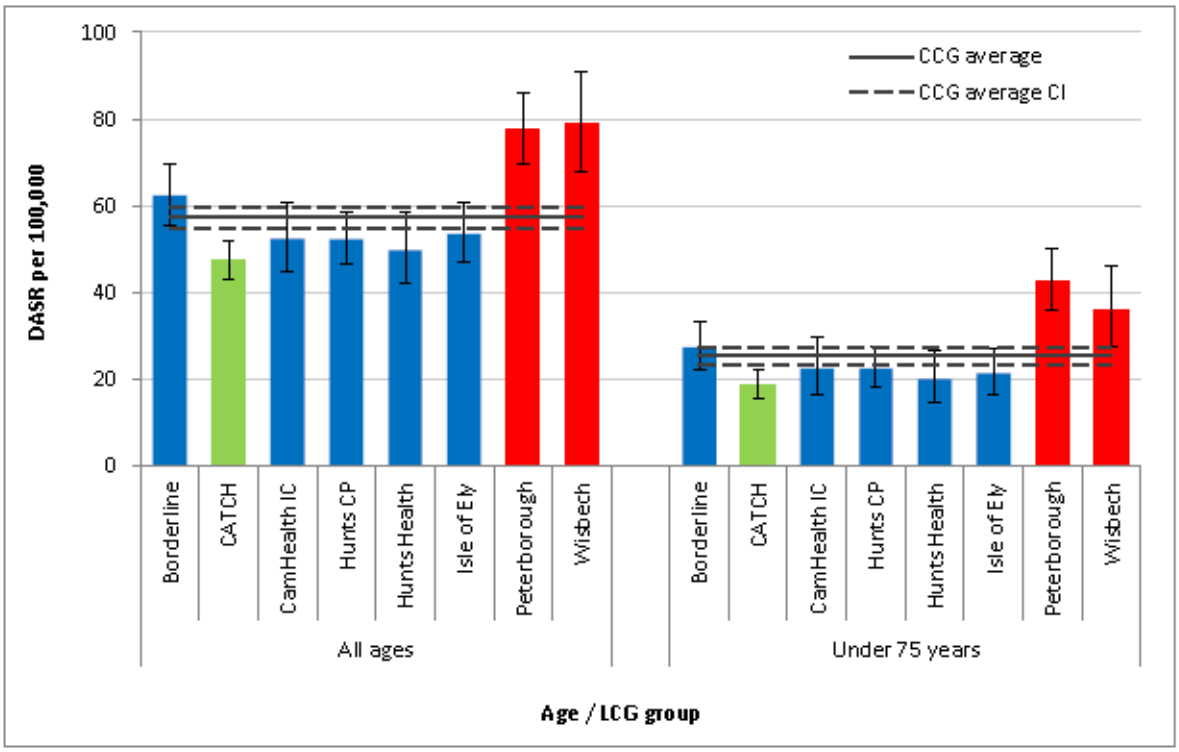
Cardiovascular disease (CVD) was responsible for nearly 30% of all deaths in 2011 – and is **the largest cause of disability.**

Cardiovascular diseases can have a serious impact on quality of life and cause considerable disability. Stroke survivors may lose their speech, and have impaired mobility, those with peripheral arterial disease may lose a limb. The breathlessness and exhaustion of severe heart failure may preclude even minimal activities of daily living and all of these may prevent people returning to employment. And those with chronic kidney disease (CKD) can progress to the need for life long dialysis when opportunities to address CVD risk are missed.

PERFORMANCE
Question 3: Is there evidence to suggest that Peterborough performs less well than they could on this topic? How this question will be scored More points will be awarded where there is good evidence that Peterborough

performs badly, ie where this is confirmed by one or more indicators (PHOF and/or CCG Outcomes Indicator Set, and/or where poor performance on indicators has been sustained over a number of years).

The graph below shows clearly that Peterborough has worse all age mortality rates from CHD than other LCGs within Cambridgeshire and Peterborough CCG (with the exception of Wisbech) and has the worst under-75 mortality rate in the CCG. Borderline LCG has rates close to the average for the CCG.



With regards to **interventions in primary care, indicators from the QOF show that Peterborough is underperforming in a number of areas**. A detailed analysis per GP practice was undertaken for Cambridgeshire and Peterborough in 2014 as part of the CHD Programme Board. This work showed that there is a significant variation in performance among GP practices.

Quality and Outcomes Framework indicators relevant to CHD and stroke

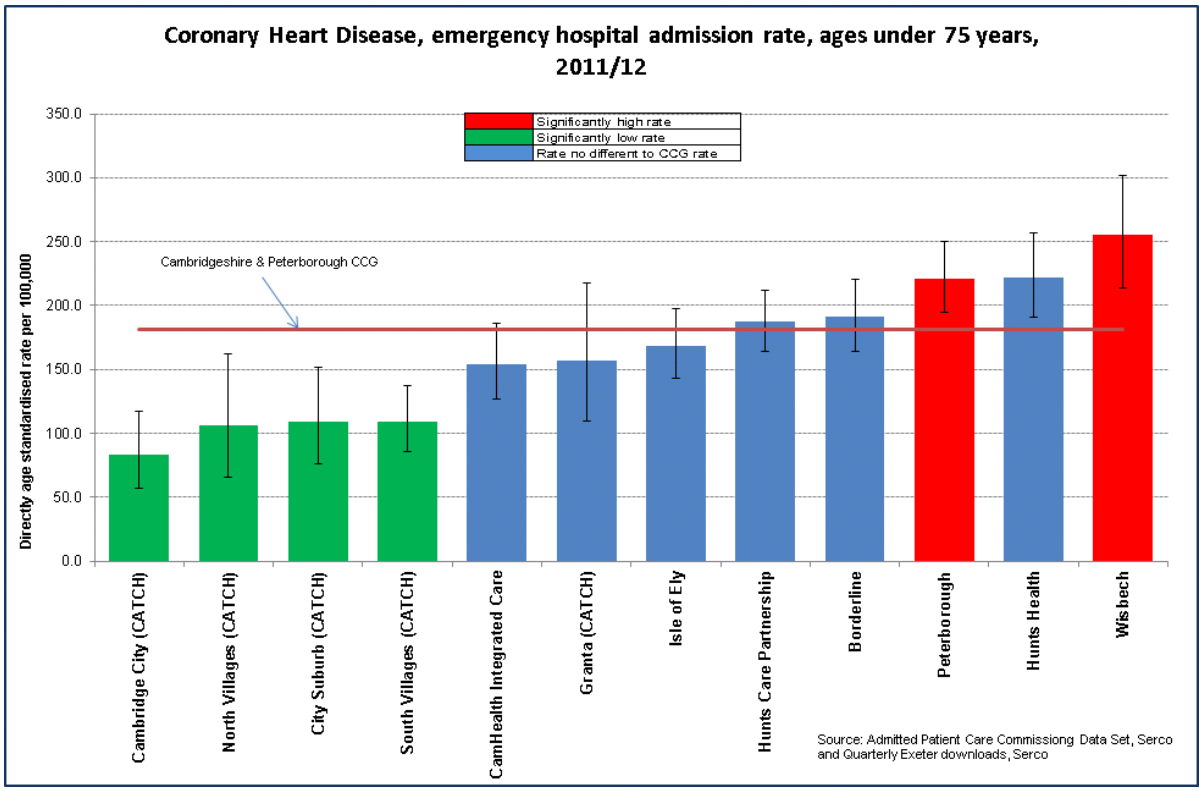
Significantly lower than England | **The same as England** | **Significantly higher than England**

	Peterborough	East of England	England		Peterborough	East of England	England
Coronary heart disease				**Stroke**			
% newly diagnosed angina patients referred for exercise testing or assessment	90.8	98.0	98.2	% stroke patients whose blood pressure was 150/90 or less	88.1	88.6	88.6
% CHD patients in whom last blood pressure reading was 150/90 or less	89.1	90.2	90.1	% stroke patients with record of cholesterol in last 15 months	89.5	90.2	91.4
% CHD patients in whom last cholesterol measurement was 5mmol/l or less	78.0	79.1	80.4	% stroke patients whose cholesterol was 5mmol/l or less	75.1	75.2	77.2
% CHD patients taking aspirin, an alternative anti-platelet therapy or an anti-coagulant in last 15 months	92.1	92.5	93.3	% stroke patients immunised preceding Sept-March	88.6	89.8	90.0
% CHD patients currently treated with beta blocker	72.6	73.6	74.2	% non-haemorrhagic/with history of TIA stroke patients taking anti-platelet agent/anti-coagulant	92.6	93.0	93.6
% patients with history of myocardial infarction currently treated with ACE inhibitor or angiotensin II antagonist	92.9	91.6	91.1	% new patients with a stroke referred for further investigation	87.6	89.1	89.6
% CHD patients immunised against influenza in Sept-March 05	91.7	92.3	92.5	**Hypertension**			
				% hypertension patients with record of blood pressure in last 9 months	90.6	90.7	91.0
Atrial fibrillation							
% atrial fibrillation patients currently treated with anti-coagulation drug therapy or an anti-platelet therapy	93.1	93.4	93.7	% hypertension patients (with record in last 9 months) in whom last blood pressure was 150/90 or less	78.2	79.6	79.7
Heart failure				**Primary prevention**			
% heart failure patients diagnosed after 1st April 2006 with diagnosis confirmed by an echocardiogram or specialist assessment	95.4	94.8	95.7	% hypertension patients aged 30 to 74 who have had a cardiovascular risk assessment at the outset of diagnosis	77.4	78.4	80.0
% patients with a current diagnosis of heart failure due to LVD currently treated with an ACE inhibitor or angiotensin receptor blocker	88.8	88.9	89.3	% hypertension patients who are given lifestyle advice in the for physical activity, smoking cessation, alcohol consumption and diet	79.6	80.9	81.5

Source: Quality and Outcomes Framework 2011/12

Peterborough has higher rates of emergency admissions for CHD compared to England average and East of England. In 2011/12 the emergency admission rate for CHD, all

persons, in Peterborough was 263.9 per 100,000 (522 admissions). This is significantly higher than England (198.3 per 100,000) and East of England (180.9 per 100,000).



In 2011/12 the emergency admission rate for stroke, all persons, in Peterborough was 105.7 per 100,000 (237 admissions). This is significantly higher than England (89.5 per 100,000) and East of England (82.4 per 100,000). Male stroke emergency admission rates are higher than female stroke emergency admission rates.

DEPRIVATION

Question 4: Is the condition/problem more common amongst those living in areas of deprivation or disadvantage?

How this question will be scored

More points will be awarded where there is demonstrably greater impact on those from deprived areas or backgrounds. Examples are diseases associated with smoking, since the prevalence of smoking is much greater in deprived groups. Although incidence of many diseases is related to deprivation, some have an inverse relationship with deprivation, such as breast cancer.

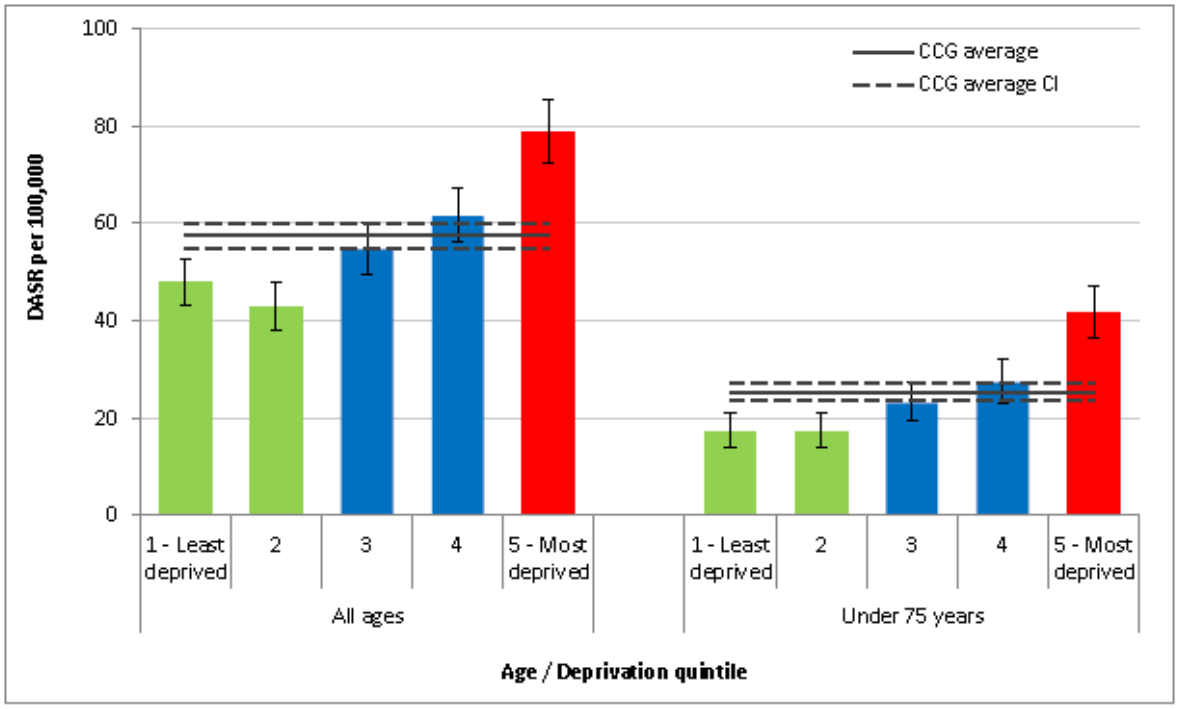
CVD prevalence and mortality are strongly correlated with deprivation. This is partly due to higher prevalence of risk factors for CVD among populations with lower socio-economic status (e.g. higher prevalence of smoking, obesity, unhealthy diet, binge drinking etc.), limited access to preventive and healthcare services among deprived populations (e.g. treatment for hypertension, statins etc.), and a small residual independent effect of poverty that is not accounted for by other known risk factors for CVD. Peterborough has higher

levels of deprivation compared to England and Cambridgeshire, and not surprisingly is experiencing higher burden of CVD. Comparison with the national deprivation structure (IMD 2010) shows that the populations of Cambridgeshire and Peterborough are very different, with Cambridgeshire having 39% of its population in the least deprived quintile and 2.5% in the most, with the trends are reversed in Peterborough where 7.9% are within the least and 34.3% in the most deprived national quintiles.[1]

In both all ages and under 75s, age-standardised rates of CHD mortality are statistically significantly higher than the CCG average in the most deprived 20% of practices in the CCG but lower in the least deprived 40% of practices.

CHD mortality by deprivation quintile of practice, directly age-standardised rates, NHS Cambridgeshire and Peterborough CCG, 2011-13

Deprivation quintile of practice* within the CCG	Age group							
	All ages				Under 75 years			
	Number of deaths	DASR per 100,000	95% CI		Number of deaths	DASR per 100,000	95% CI	
			Lower	Upper			Lower	Upper
1 - Least deprived 20% of practices	418	47.8	43.1	52.8	95	17.1	13.8	21.0
2	339	42.8	38.2	47.9	91	17.2	13.9	21.2
3	452	54.7	49.5	60.2	131	23.1	19.3	27.4
4	533	61.4	56.0	67.2	150	27.3	23.1	32.1
5 - Most deprived 20% of practices	638	78.8	72.5	85.5	230	41.5	36.3	47.2
Total CCG	2,380	57.4	55.0	59.9	697	25.4	23.5	27.3

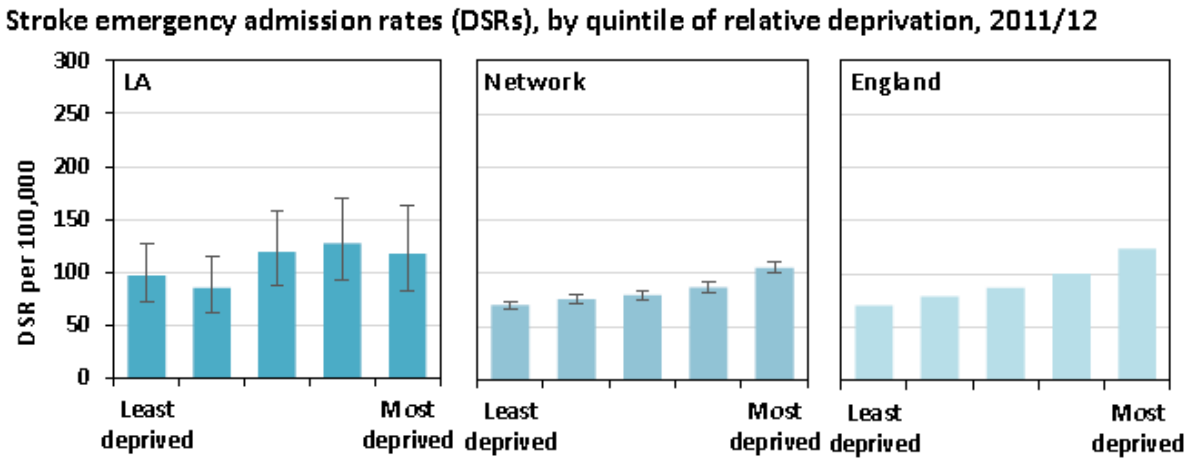


Statistically significantly higher than the CCG average
Not statistically different to the CCG average
Statistically significantly lower than the CCG average

The emergency admission rate for stroke in 2011/12 for persons who live in the most deprived areas of Peterborough was 117.4 (DSR per 100,000). This is 1.2 times greater than

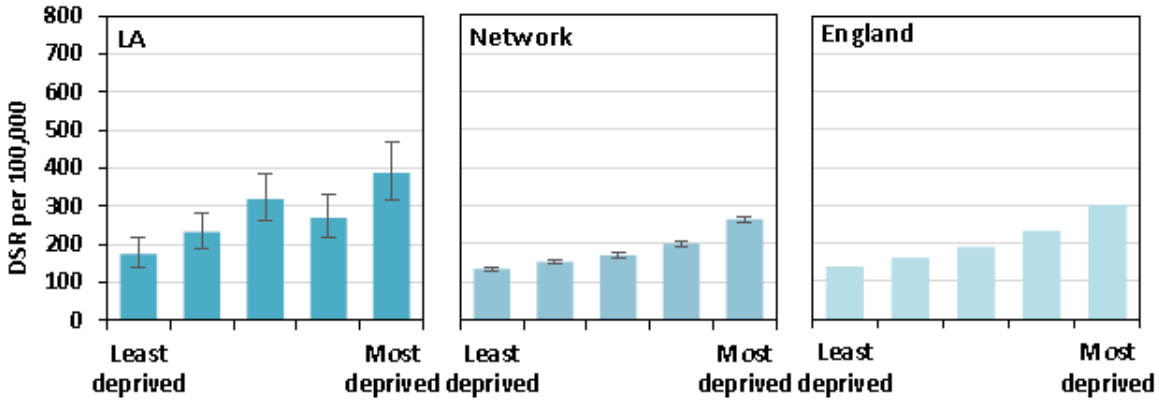
[1]IMD 2010 Department of Communities and Local Government (DCLG)

the emergency admission rates for persons who live in the least deprived areas of Peterborough (96.5).



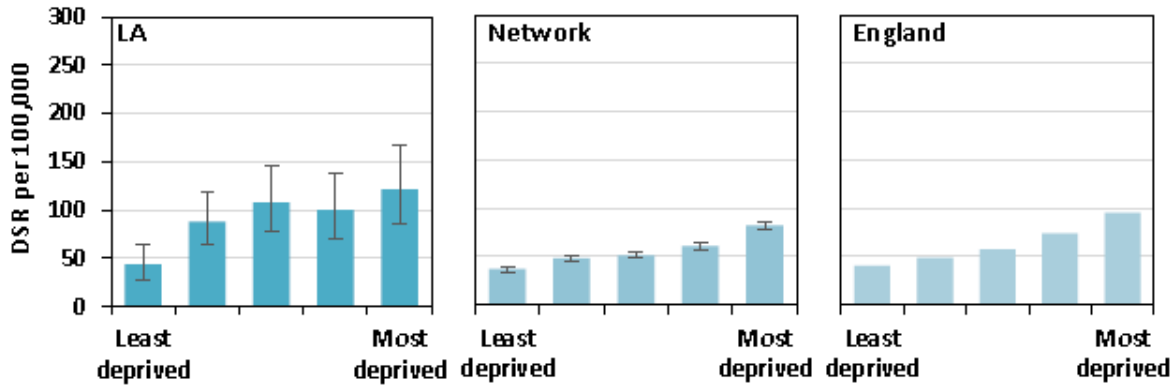
The emergency admissions for CHD in 2011/12 for persons living in the most deprived areas of Peterborough was 387.6 (DSR per 100,000). This is 2.2 times greater than emergency admission rates for persons living in the least deprived areas of Peterborough (174.7).

CHD emergency admission rates (DSRs) for all ages by quintile of relative deprivation, 2011/12



The emergency admissions for heart failure in 2011/12 for persons who live in the most deprived areas of Peterborough was 121.4 (DSR per 100,000). This was 2.8 times higher than the emergency admission rates for persons who live in the least deprived areas of Peterborough (43.2).

Heart failure emergency admission rates (DSRs) for all ages, by quintile of relative deprivation, 2011/12



EQUALITIES
Question 5: Would addressing the problem/condition contribute to advancing equality or eliminating discrimination in groups with the following protected characteristics: age, disability, race/ethnicity, religion or belief, sex/gender, sexual orientation, marriage and civil partnership, pregnancy and maternity How this question will be scored More points will be awarded to topics which have demonstrable potential to advance equality or eliminate discrimination in several protected groups. Examples would include issues that are particularly prevalent in specific protected groups, such as diabetes or heart disease in some ethnic minority groups, or areas where services are believed to be less accessible to one or more protected group.

Race/Ethnicity: The proportion of the population in Peterborough which is from black and minority ethnic groups is estimated to be 17.5%. South Asian men are more likely to develop CHD at younger age, and have higher rates of myocardial infarction. Black people have the highest stroke mortality rates.

Sex: Male CVD mortality rates in Peterborough are significantly higher than female CVD mortality rates (233.4 and 149.7 respectively), DSR per 100,000.
Age: Age is a strong predictor of morbidity and mortality from CVD, with disease burden increasing with age.

Addressing inequalities in CHD and stroke prevention and care would advance equality in these groups.

EVIDENCE
Question 6: What evidence is there that the scale or impact of the problem can be effectively

reduced?

How this question will be scored

More points will be awarded where there is good evidence for interventions that reduce the scale or impact of the problem. Types of evidence could be from outcome based studies (clinical trials etc) or delivery models (examples of good practice).

There is a strong body of evidence that the majority of CVD is caused by risk factors that can be controlled, treated or modified, such as high blood pressure, cholesterol, overweight/obesity, tobacco use, lack of physical activity and diabetes.

Modifiable risk factors for CVD

- Hypertension (high blood pressure)
- Tobacco use
- Raised blood glucose (diabetes)
- Physical inactivity
- Unhealthy diet
- Blood cholesterol/lipids
- Overweight and obesity

The risk factors for CVD are more prevalent in Peterborough than in England and Cambridgeshire (Table 1). This indicates that there is a potential for reducing the prevalence of major risk factors and reducing the gap in CVD mortality between Peterborough and Cambridgeshire, and reducing inequalities among areas within Peterborough.

Table 1. Prevalence of risk factors for CVD in Peterborough compared to Cambridgeshire and England

Risk factor	Peterborough	Cambridgeshire	England average
1. Deprivation (%)	**34.6**	2.4	19.8
2. % Obese Children (Year 6)	**19.6**	16.0	19.0
3. Estimated % obese (16+)	**24.9**	20.9	24.1
4. Estimated % smokers (16+)	**26.3**	20.8	20.7
5. Smoking related deaths/100,000 (DSR)	**225**	172	211
6. Binge drinking %	16.4	19.7	20.0
7. Healthy eating adults %	**28.0**	32.4	28.7
8. Physically active adults % (16+)	**9.7**	12.8	11.2
9. People diagnosed with diabetes % of GP reg.	**5.9**	5.1	5.8
10. Estimated prevalence of hypertension %	**23.2**	22.9	24.9

1. % people in this area living in 20% most deprived areas in England, 2010

5. Directly age standardised rate per 100,000 population aged 35 and over, 2008-2010
7. % adults, modelled estimate using Health Survey for England 2006-2008
8. % aged 16 and over, Oct 2009-Oct 2011
9. % people on GP registers with a recorded diagnosis of diabetes 2011/12 (QOF prevalence)

There is a strong evidence base on the effectiveness and cost-effectiveness of interventions directed at 1) reduction and control of risk factors for CVD; and 2) therapeutic interventions in primary and secondary care, and secondary prevention.

The National Institute for Health and Care Excellence (NICE) has published a total of 339 guidance documents relevant to CVD. These include public health guidance covering effective interventions for reduction of CVD risk factors; clinical guidelines covering best practice and pathways for conditions including hypertension, angina, heart failure, peripheral arterial disease, diabetes, obesity etc.; and technology appraisal guidance covering specific clinical interventions for established CVD.

NICE has published materials to support the implementation of their guidelines/guidance. These include quality standards and commissioning guides (for example, an integrated commissioning guide for the prevention of cardiovascular disease, CMG45).

A whole systems approach to the implementation of existing NICE guidance across Peterborough (including guidance on decommissioning) should have a major impact on CVD outcomes and could also result in cost savings.

VALUE FOR MONEY

Question 8: What is the current annual spend on this area in Peterborough? Could this proposal lead to potential savings? Could this proposal improve cost effectiveness ('getting more for less')? Could it improve quality/outcomes? Could this proposal have an impact on spend in other areas (e.g. will our actions increase/decrease spend in other public or other services)?

How this question will be scored

More points will be awarded for topics which are known areas of high spend, with clear potential for savings (eg where potential for savings has been identified from benchmarking work such as the Value for Money packs).
More points will be awarded for topics where improvement in quality/outcomes is likely.

Investment in health programmes (rather than services) and overall outcome indicators can be compared by CCG, SHA, and against English averages using the YHPHO Spend and Outcomes tool. Expenditure is based on programme budgeting category with CHD included within the 'Circulation' programme and representing the 2nd highest area of spend within both PCTs per head of population (£135 in 2010/11 in Cambridgeshire and £142 in Peterborough compared to £143 across the East of England and £133 in England).

When compared against other PCTs in England, Cambridgeshire and Peterborough PCTs had very different outcomes for programme budgeting categories in 2010/11. CHD mortality under 75 years falls within the 'circulation' programme, and sits within the 'high spend, better outcomes' quadrant for Cambridgeshire and 'high spend, worse outcome' quadrant for Peterborough. Comparison of Peterborough values with 2009/10 data suggests that CHD

mortality outcomes in those aged under 75 have declined, despite a higher spend per head of the population in 2010/11.

NHS Health Checks aim to identify those at increased risk of developing several serious and preventable conditions, including coronary heart disease. Previously undiagnosed adults aged between 40 and 74 are invited for a consultation and advice session once every 5 years.

The NHS Health Check ready reckoner tool calculates the likely impact of the programme on local authority populations, including an estimate of how many individuals will complete weight loss programmes, increase physical activity, be prescribed statins or hypertensive medications, maintain glucose regulation or be diagnosed with diabetes or cease to smoke. On a yearly basis, the total cost of the programme per year is estimated as £205,398 in Peterborough respectively, with a lifetime gain of 825 Quality Adjusted Life Years (QALYs) in Peterborough at a cost of £1903 per QALY.

The NICE commissioning support materials (referenced at question 6, above) include tools to model costs and savings associated with moving to evidence-based best practice.

EXAMPLE SCORECARD:

PROPOSAL TOPIC: CVD

QUESTION	POSSIBLE SCORE	ACTUAL SCORE
1. SCALE	0 TO 5	
2. IMPACT	0 TO 5	
3. PERFORMANCE	0 TO 5	
4. DEPRIVATION	0 TO 5	
5. EQUALITIES	0 TO 5	
6. EVIDENCE	0 TO 5	
7. VALUE FOR MONEY	0 TO 5	
TOTAL SCORE	0 TO 40	