INTEGRATED STRATEGIC NEEDS ASSESSMENT:

HYPERTENSION

SUMMARY

INTRODUCTION

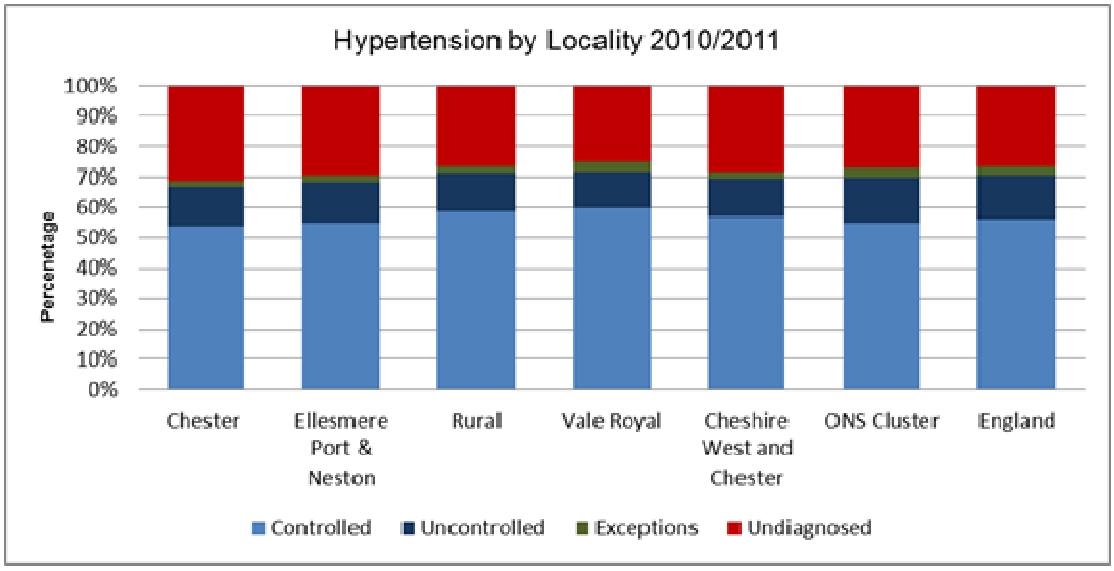
Raised blood pressure is a significant public health issue. In Cheshire West and Chester, general practices have identified that there are 51,170 (14.4% of total population) patients with hypertension on their practice lists as at the end of March 2010/11. 82% of these patients are considered to have their blood pressure under control.

KEY ISSUES & GAPS

We estimate that just over 20,100 (nearly 6%) of all adults in Cheshire West and Chester have undiagnosed hypertension. This is a higher proportion than than expected nationally. The level of undiagnosed hypertension is significant in all areas but presently the gap is greatest in Ellesmere Port & Neston and least in Vale Royal. The gap varied from 2.9% to 8.4% between all general practices.

About 28% of adults in western Cheshire CCG have not had their blood pressure checked in the last 5 years. Men are less likely to have a blood pressure reading.

Around 18% (9,100) patients diagnosed with hypertension are not controlled. This is better than nationally. The level of control was greatest in Vale Royal and least in Chester and Ellesmere Port & Neston. The level of control varied from 71% to 91% between all general practices.



The potential impact of either treating people, who do not have a diagnosis of CHD/stroke, but have undiagnosed 'hypertension' or further treating those who have uncontrolled hypertension can be seen below.

Unmet Need	Intervention	Impact	Timescale
At least 20,000 people with undiagnosed hypertension and 9,100 with uncontrolled hypertension	Additional treatment for hypertensives with no previous CVD event – 1,200 more patients	Around 2 deaths prevented	Within 1 year of detection/treatment

RECOMMENDATIONS

- Ensure general practices check all their adult patient's blood pressure every 5 years and actively case find. Men, who are least likely to have their BP recorded should be targeted. Older people, without a record of BP measurement , should also be targeted given their higher background CVD risk. Once patients are diagnosed with hypertension, their absolute risk of CVD should be assessed and treatment offered in line with guidance.
- Implement the national NHS Health Checks programme aimed at people aged 40 to 74 years who are not on a disease register. Encourage innovative ways to engage with hard to reach groups and incentivise uptake amongst these groups.

INTEGRATED STRATEGIC NEEDS ASSESSMENT

HYPERTENSION

MAIN REPORT

INTRODUCTION

Raised blood pressure is a significant public health issue.

Blood pressure is a measure of the force that circulating blood exerts on the walls of the main arteries. The pressure wave transmitted along the arteries with each heart beat is easily felt as the pulse. The highest (systolic) pressure (SBP) is created by the heart contracting and the lowest (diastolic) pressure (DBP) is measured as the heart fills. Raised blood pressure is always almost symptom-free. However, it produces a variety of structural changes in the arteries that supply blood to the brain, heart, kidneys and elsewhere.

The World Health Organisation estimate that raised blood pressure causes around 11% of our burden of ill-health. This is because a large number of people have raised blood pressure and it is a significant risk factor for stroke, coronary heart disease and other illnesses for example kidney disease. Lowering blood pressure is important in both primary and secondary prevention of cardiovascular disease. A blood pressure reduction of 10mm Hg in systolic or 5 mm Hg diastolic can reduce coronary heart disease events by 20% and stroke by 32% within one year.

Blood pressure is normally distributed in the population and there is no natural cut-off point above which 'hypertension' definitively exists and below which it does not. The risk associated with increasing blood pressure is continuous, with each 2 mmHg rise in systolic blood pressure associated with a 7% increased risk of mortality from ischaemic heart disease and a 10% increased risk of mortality from stroke.

This chapter focuses on the detection and treatment of hypertension. Intelligence around risk factors for hypertension (Healthy weight, inactivity, diet alcohol) can be found in other risk factor chapters on the JSNA. Treatment outcomes for those on specific disease registers can be found in the adult section of the JSNA.

WHO'S AT RISK & WHY

Risk factors for hypertension include:

- Age
- Overweight
- Excess alcohol intake (> 3 units a day)
- Excessive salt intake
- Lack of exercise

LEVEL OF NEED IN THE POPULATION

In Cheshire West and Chester, general practices have identified that there are 51,170 (14.4% of total population) patients with hypertension on their practice lists as at the end of March 2010/11. In 2010/11, hypertension prevalence was similar to the Office for National Statistics cluster average, 14.2%, and 1% higher than nationally (13.5%). Since 2006/07 the number of patients identified with hypertension has increased by 4,576 (9%) (Table)

Table Prevalence of diagnosed hypertension 2006/07 to 2010/11

Locality	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
Chester	12,540	12,830	13,100	13,360	13,540
Ellesmere Port & Neston	11,600	11,820	12,110	12,340	12,490
Rural	8,900	9,220	9,480	9,730	9,990
Vale Royal	13,550	13,890	14,570	14,980	15,160
Cheshire West & Chester	46,590	47,760	49,250	50,400	51,170

Locality	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
Chester	12.2%	12.5%	12.7%	13%	13.1%
Ellesmere Port & Neston	13.3%	13.5%	13.8%	14.2%	14.3%
Rural	14.5%	14.7%	15.1%	15.6%	16%
Vale Royal	13.7%	13.9%	14.6%	14.6%	14.9%
Cheshire West & Chester	13.3%	13.6%	14%	14.2%	14.4%
ONS Cluster	13.2%	13.5%	13.8%	14%	14.2%
England	12.5%	12.8%	13.1%	13.4%	13.5%

Source : Health and Social Care Information Centre, 2011

Within Western Cheshire CCG, crude prevalence of hypertension in 2011 ranged from less than 4% in the under 55s to 57% in the over 75s. The age profile of a practice's population is a big determinant of it's hypertension prevalence. Once we have controlled for differences in age profiles between populations, age-standardised prevalence of hypertension was significantly higher in the nationally most deprived 40% of areas (14% higher).

Age Specific Hypertension Prevalence Western Cheshire CCG 2011

Age Bands	Quintile1&2 (most deprived)	Quintiles3-5 (least deprived)	Western Cheshire
Under 55	3%	3%	3%
55-64	27%	23%	24%
65-74	43%	39%	40%
75 and over	58%	56%	57%

Source : Primary Care Database (Graphnet), July 2011

Age Standardised Hypertension Prevalence Western Cheshire CCG 2011
Directly standardised rate per 1,000 (DSR)

Area	DSR	Lower 95% CI	Upper 95% CI	Observed (number of people with hypertension)
Q1&2(most deprived)	110.1	107.8	112.3	8,670
Q3-5 (least deprived)	96.0	94.9	97.1	25,970
Western Cheshire	99.3	98.3	100.3	34,660

Source : Primary Care Database (Graphnet), July 2011

CURRENT SERVICES IN RELATION TO NEED

Undiagnosed hypertension

There are a significant number of people with undiagnosed raised blood pressure.

The Association of Public Health Observatories have developed a mathematical model to predict the prevalence of raised blood pressure for national and local populations.

Using this model, we estimate that there are 91,400 (25.8% of all patients) (or sometimes referred to as a third of all adults over 16 years) with raised blood pressure in Cheshire West and Chester. This suggests that there are potentially 40,230 patients who have raised blood pressure but are not on a hypertension register.

Hypertension, however, is defined as a persistently raised blood pressure rather than blood pressure that is raised on a one-off reading. The Department of Health in their Economic Modelling for the Vascular Checks programme reports that expert opinion consider that nearly half of those with a one-off recording of raised blood pressure will eventually go onto a hypertension register. It is estimated that around 80% of these are being treated with drugs. If we apply this assumption to the predicted number of patients with a one-off recording of blood pressure, we estimate that just over 20,100 more patients should be on a hypertension register and would benefit from either drug therapy or lowering their blood pressure through more healthy lifestyles.

This would mean therefore that estimated prevalence of hypertension to be around 71,285 (20%) of all patients. This means that a nearly 6% of all patients potentially have undiagnosed hypertension. The gap is greater than that expected nationally and within CWAC the gap is least in Vale Royal (4.9%) and greatest in the Ellesmere Port & Neston Locality (6.1%).

Table Gap between actual and predicted prevalence by locality 2010/11

Locality	Actual number on Register	Predicted number	Actual Prevalence	'Adjusted' Predicted Prevalence	Potential % undiagnosed
Chester	13,540	19,660	13.1%	19.0%	5.9%
Ellesmere Port & Neston	12,490	17,730	14.3%	20.4%	6.1%
Rural	9,980	13,630	16.0%	21.8%	5.8%
Vale Royal	15,160	20,260	14.9%	19.8%	4.9%
Cheshire West and Chester	51,170	71,290	14.4%	20.1%	5.7%
ONS Cluster	560,480	771,070	14.2%	19.6%	5.4%
England	7,460,490	10,109780	13.5%	18.4%	4.9%

Source : Predictive counts – Association of Public Health Observatories Disease Registers - Health and Social Care Information Centre, 2011

We have applied the same methodology to adjust the predicted prevalence of hypertension for each general practice. The 'adjusted' predicted percentage of undiagnosed hypertension varied from 13.5% to 25.5% of all patients by general practice. This means that the proportion of people with undiagnosed hypertension in each practice varied between 2.9% and 8.4% (see figure)

Blood pressure recording in general practice

The British Hypertension Society recommend are that all adults should have their blood pressure measured at least every 5 years.

In Western Cheshire, in 2010/2011, 72% of adults have had their blood pressure recorded in the last 5 years. Older people are more likely to have had their blood pressure recorded (86% over 60 years) compared with younger (75% 45-60 years). Men are less likely than women to have had their blood pressure recorded (62% to 81% respectively).

Blood pressure recording by age and sex Western Cheshire CCG

Age Band	Females	Males	Persons
Aged 45-59	81%	69%	75%
Aged 60 and over	87%	84%	86%
All Adults	81%	62%	72%

Source : Primary Care Database (Graphnet), July 2011

Treatment outcomes for patients on a hypertension register

The hypertension domain in the Quality and Outcomes Framework includes the measurement of one treatment outcome, the percentage of people whose latest blood pressure reading was 150/90 or lower measured in the previous nine months. In 2010/2011, 82% of people on a hypertension register in Cheshire West and Chester had a blood pressure reading equal or lower than 150/90. This had risen from 80% in 2008/2009. Within Cheshire West and Chester, Vale Royal had the highest percentage controlled (84%) compared to 80% in the Chester and Ellesmere Port & Neston localities. There was a variation among general practices of 20% in outcome for this indicator (71% to 91%).

Table Controlled blood pressure by Locality (% of patients on a hypertension register)

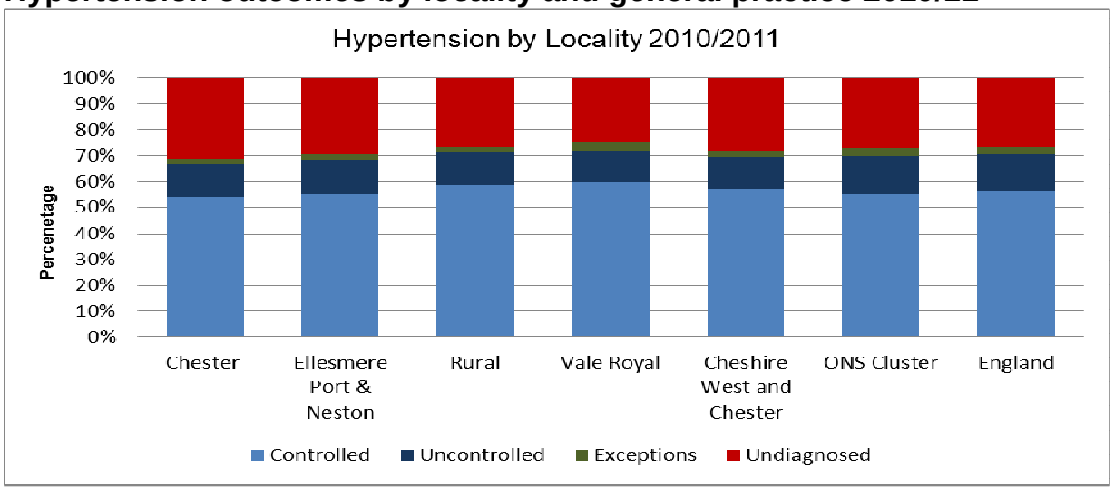
Locality	2008/2009	2009/2010	2010/2011
Chester	78.4%	79.6%	80.4%
Ellesmere Port & Neston	80.2%	80.3%	80.4%
Rural	80.6%	80.7%	82.0%
Vale Royal	81.9%	83.5%	83.6%
Cheshire West & Chester	80.3%	81.2%	81.6%

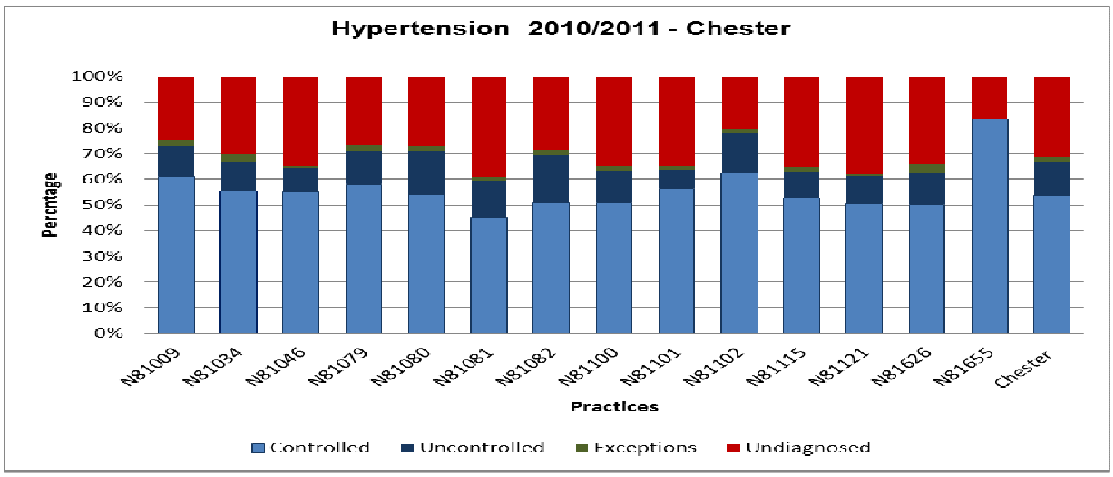
Source: Health and Social Care Information Centre, 2011

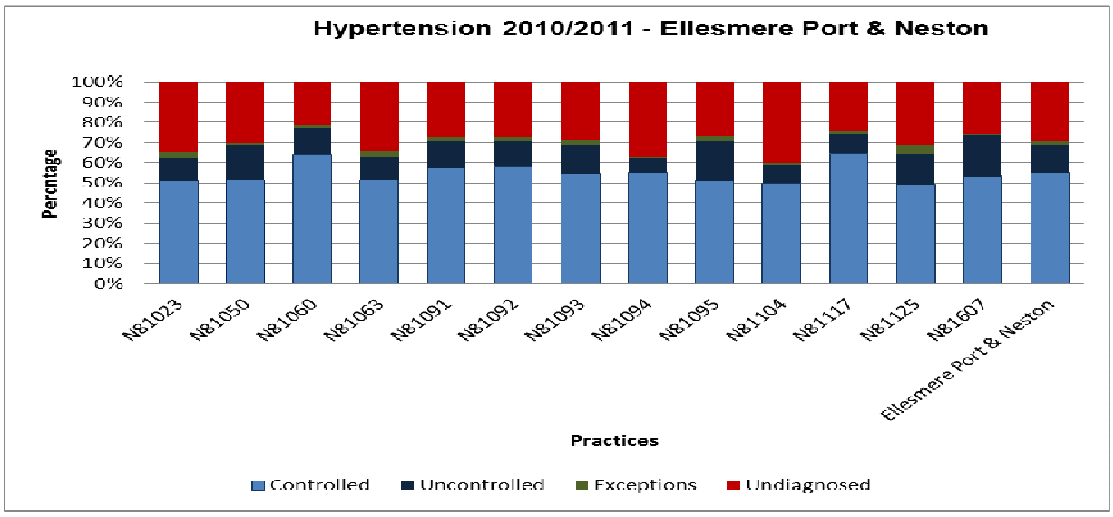
For intelligence on treatment outcomes for specific diseases please refer to adults section of JSNA

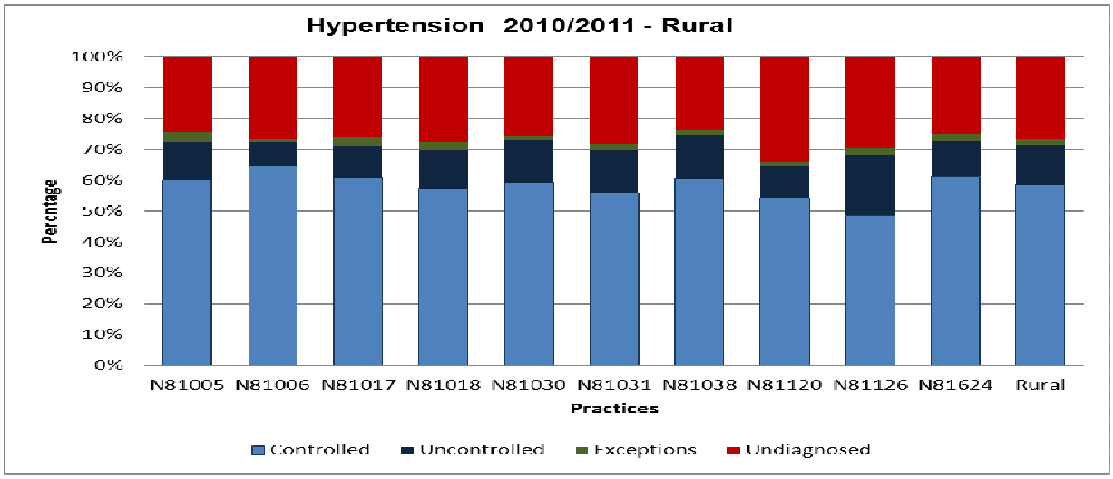
The figures below illustrate the level of unmet need in terms of undiagnosed hypertension and uncontrolled hypertension by general practice within each locality. The size of the numbers with undiagnosed hypertension is greater than the numbers on a register but who are not controlled.

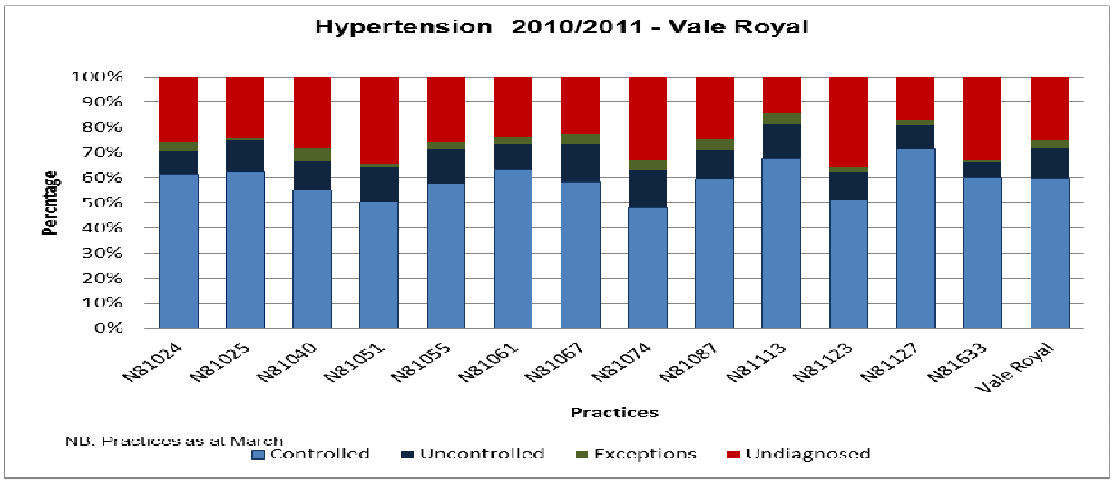
Hypertension outcomes by locality and general practice 2010/11











Source for the above graphs :
Predicted Prevalence : Association of Public Health Observatories, 2011
Disease Registers : Health and Social Care Information Centre, 2011

PROJECTED SERVICE USE AND OUTCOMES IN 3-5 YEARS AND 5-10 YEARS

The number of people with hypertension will increase as the population ages and becomes more overweight but also as the detection rate increases.

EVIDENCE OF WHAT WORKS

NICE published guideline CG127 Hypertension: Clinical Management of primary hypertension (CG127 insert link) in 2011

The guidance covers measuring blood pressure, diagnosing hypertension, assessing CVD risk and target organ damage, lifestyle interventions and initiating and monitoring drug treatment. The guidelines use the following definitions:

- Stage 1 hypertension Clinic blood pressure is 140/90 mmHg or higher and subsequent ambulatory blood pressure monitoring (ABPM) daytime average or home blood pressure monitoring (HBPM) average blood pressure is 135/85 mmHg or higher.
- Stage 2 hypertension Clinic blood pressure is 160/100 mmHg or higher and subsequent ABPM daytime average or HBPM average blood pressure is 150/95 mmHg or higher.
- Severe hypertension Clinic systolic blood pressure is 180 mmHg or higher or clinic diastolic blood pressure is 110 mmHg or higher.

UNMET NEEDS AND SERVICE GAPS

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Source: Health Inequalities National Support Team

RECOMMENDATIONS FOR DECISION MAKERS & COMMISSIONERS

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KEY REFERENCES

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