KQuIP/UKRR Regional Day Yorkshire & Humber

6th July 2017 - 10.10-11.30

What do the data tell us - primary, secondary and tertiary care

Scott Anderson, Public Health England

Youseff Beaini, Bradford & Districts CCG

Fergus Caskey, UK Renal Registry

Richard Baker, NHS England







Using primary care data sources to improve kidney care



Public Health What I'll cover

Raw data sources

Tools

- NHS Rightcare
- PHE's National Cardiovascular Intelligence Network (NCVIN)

How to identify possible areas for improvement



There are a number of raw data sources relevant to primary kidney care

QOF (Quality Outcome Framework)

Survey data, often used to produce modelled estimates eg HSE (Health Survey for England)

Programme budgeting



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That data is used to inform data packs, profiles and interactive tools

NHS Rightcare:

Commissioning for Value packs

NCVIN (National Cardiovascular Intelligence Network), part of PHE (Public Health England):

Profiles

- Kidney disease
- Diabetes
- High Blood Pressure

Interactive tool - Fingertips

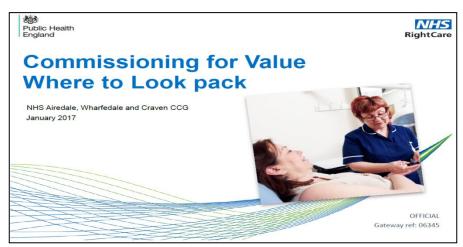


NHS Rightcare aims to improve population-based healthcare

Programme focusses on improving value and on reducing unwarranted variation

Where to Look packs highlight the top priorities and best opportunities

- by CCG
- by pathway



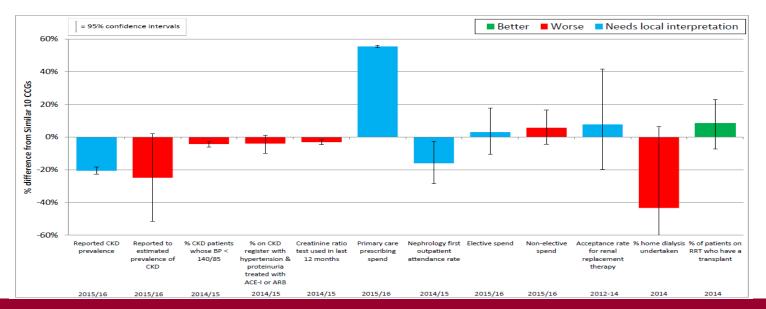


The Renal pathway benchmarks against 10 similar CCGs on key measures of primary care Programme focusses on improving value and on reducing un-warranted

variation

Renal pathway

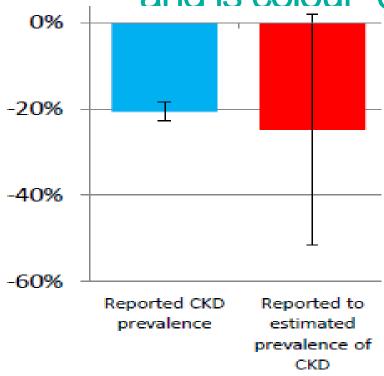






Each indicator has a confidence interval

and is colour-coded



Here, for *Reported CKD prevalence* ie diagnosed, the CCG is 20% lower than the average of its similar 10 CCGs. This could be either good (it's keeping CKD down) or bad (it's not diagnosing it). This difference is statistically significant.

For Reported to estimated prevalence of CKD, the CCG is 25% worse than the average. However, this difference is not statistically



Packs are also available for each STP (Sustainability & Transformation Partnership) showing all constituent CCGs

Renal pathway



	2015/16	2015/16	2014/15	2014/15	2014/15	2015/16	2014/15	2015/16	2015/16	2012-14	2014	2014
	Reported CKD prevalence	Reported to estimated prevalence of CKD	% CKD patients whose BP < 140/85	% on CKD register with hypertension & proteinuria treated with ACE-I or ARB	Creatinine ratio test used in last 12 months	Primary care prescribing spend	Nephrology first outpatient attendance rate	Elective spend	Non-elective spend	Acceptance rate for renal replacement therapy	% home dialysis undertaken	% of patients on RRT who have a transplant
(to Best 5)		8,150 Ppl.	2,582 Pats.	173 Pats.	1,826 Pats.				£1822K		29 Pats.	33 Pats.
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Further relevant indicators are available from the Diabetes and Heart Disease pathways

Renal

Diabetes

	2015/16	2015/16	2014/15	2014/15	2014/15	
	Reported CKD prevalence	Reported to estimated prevalence of CKD	% CKD patients whose BP < 140/85	% on CKD register with hypertension & proteinuria treated with ACE-I or ARB	Creatinine ratio test used in last 12 months	
STP opportunity (to Best 5)		8,150 Ppl.	2,582 Pats.	173 Pats.	1,826 Pats.	
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Harrogate and Rural District		$\overline{}$		$\overline{}$		

2015/16	2015/16	2015/16	2015/16	
Diabetes prevalence, 17+	% diabetes patients cholesterol < 5 mmol/l	% diabetes patients HbA1c is <59 mmol/mol	% diabetes patients whose BP < 140/80	
	3,444 Pats.	4,214 Pats.	5,446 Pats.	
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Heart	
Disease	

	_
2015/16	2015/16
Hypertension prevalence, 18+	Reported to estimated prevalence of hypertension
	21,840 Ppl.
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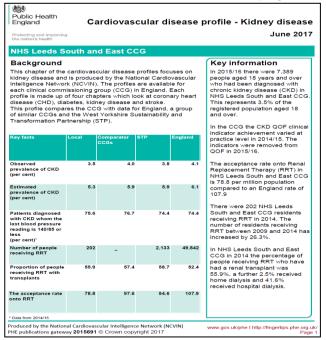
Public Health There is clear variation across CCGs Heart

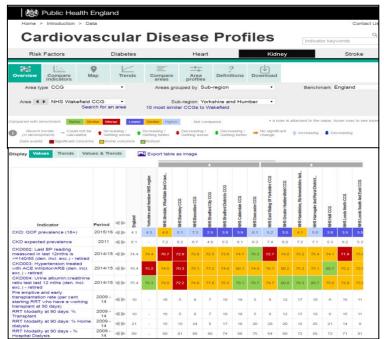
Renal Disease **Diabetes** 2015/16 2014/15 2014/15 2014/15 2015/16 2015/16 2015/16 2015/16 2015/16 2015/16 2015/16 % on CKD Reported to % CKD patients register with Creatinine ratio Reported CKD estimated Reported to whose BP < % diabetes patients diabetes patients Hypertension hypertension & test used in last Diabetes % diabetes patients estimated prevalence prevalence of 140/85 cholesterol < 5 HbA1c is <59 prevalence, proteinuria treated 12 months CKD whose BP < 140/80 prevalence of prevalence, 17+ 18+ with ACE-I or ARB mmol/l mmol/mol hypertension STP opportunity 8,150 Ppl. 2.582 Pats. 173 Pats. 1.826 Pats. 3,444 Pats. 4,214 Pats. 5,446 Pats. 21.840 Ppl. (to Best 5) Wharfedale and Craven Bradford City **Bradford Districts** Calderdale Greater Huddersfield Leeds North eeds South and Leeds West North Kirklees Wakefield Harrogate and

Rural District



NCVIN profiles for Kidney disease are available as hard-copy or on-line as an interactive tool

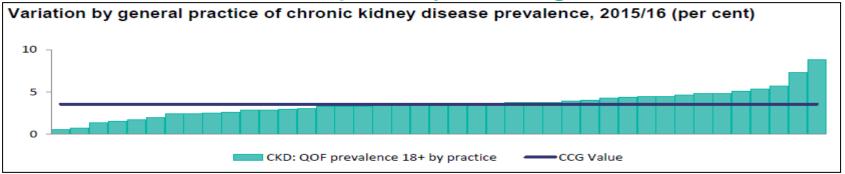


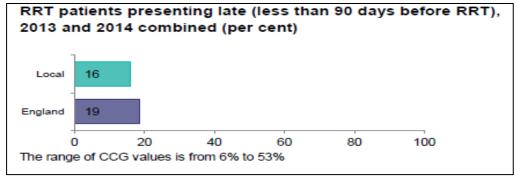


Source: Cardiovascular Disease Profiles https://fingertips.phe.org.uk/profile/cardiovascular



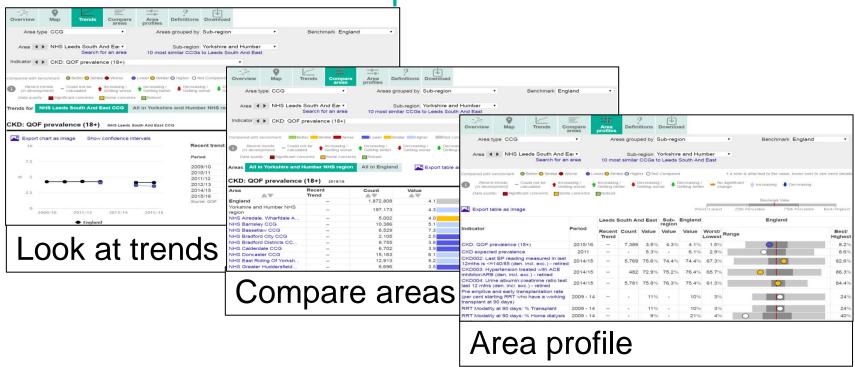
The hard-copy profiles contain further info relevant to primary care eg for Leeds S&E





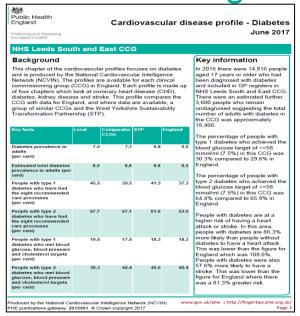


The interactive tool allows flexible views of the data and the option to download

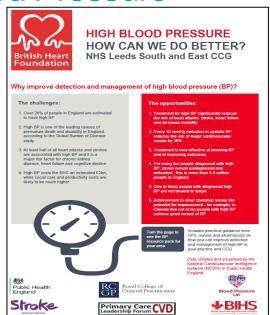




Similar CCG profiles are available for Diabetes and for High Blood Pressure





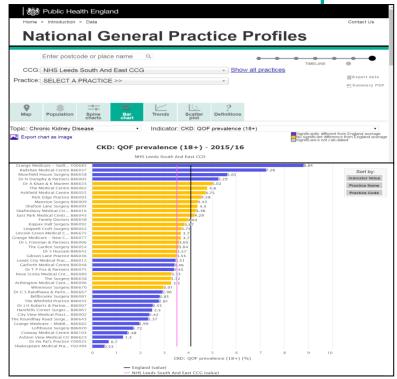


Source: British Heart Foundation, High Blood Pressure – how can we do better

https://www.bhf.org.uk/healthcare-professionals/bp-how-can-we-do-better



Further online profiles provide data for named individual practices



Source: National General Practice Profiles https://fingertips.phe.org.uk/profile/general-practice



Public Health What I'll cover

Raw data sources

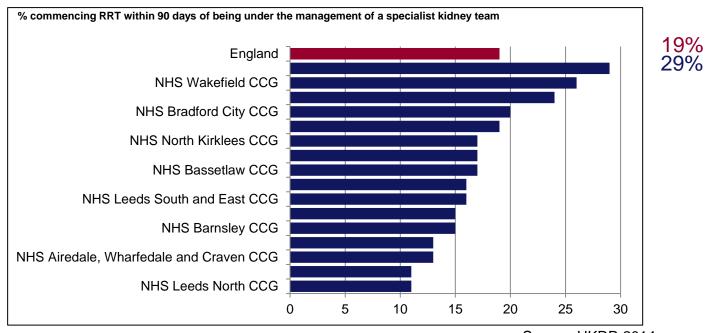
Tools

- NHS Rightcare
- PHE's National Cardiovascular Intelligence Network (NCVIN)

How to identify possible areas for improvement



Step 1: identify potential CCG for improvement



Source: UKRR 2014

Note: 7 other CCGs in Y&H data suppressed due to low numbers

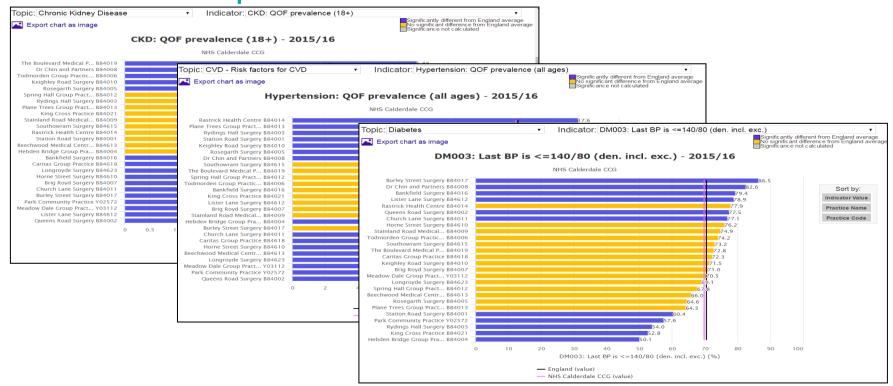
Step 2: examine related indicators - for Calderdale CCG,

Public Health England there are issues with identification & treatment of hypertension Heart

Renai							Diahataa				Disease		
	2015/16	2015/16	2014/15	2014/15	2014/15	Diabet	Diabetes						
		Reported to		% on CKD		2015/16	2015/16	2015/16	2015/16	2015/16	2015/16		
	Reported CKD prevalence	estimated prevalence of CKD	% CKD patients whose BP < 140/85	register with hypertension & proteinuria treated with ACE-I or ARB	Creatinine ratio test used in last 12 months	Diabetes prevalence, 17+	% diabetes patients cholesterol < 5 mmol/l	% diabetes patients HbA1c is <59 mmol/mol	% diabetes patients whose BP < 140/80	Hypertension prevalence, 18+	Reported to estimated prevalence of hypertension		
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Step 3: identify individual practices with potential to improve





Using primary care data sources to improve kidney care



BRADFORD'S HEALTHY HEARTS



Live longer, better





Dr Youssef Beaini

CVD Lead for Bradford and Airedale/Wharfedale/Craven CCGs
CVD Lead for Yorkshire and Humber Clinical Network
GP at The Ridge Medical Practice, Bradford
GPSI Cardiology
Tutor PwSI Diploma course, University of Bradford
Board Member, Primary Care Cardiovascular Society





CVD landscape in Bradford



- Still one of the leading causes of death in the UK and in the CCG – 350k population, 40 practices
- Bradford Districts CCG has the 7th worst CVD mortality rate under 75 in England
- Over 28% of all deaths under 75
- 14.3% of people have hypertension
- Over 21k have cholesterol above 4mmol/l
- CKD = CVD



BRADFORD'S HEALTHY HEARTSBold and clear ambition

- By 2020, we will reduce cardiovascular events by 10% which will result in 150 fewer strokes and 340 fewer heart attacks
- We will no longer be the 7th worst CCG in the country!





Clinical leadership - strategy



- Strategic governing body, council of representatives, clinical board
- NHS Right Care the story, workshop, clinical assembly
- Stakeholder involvement: primary and secondary care, pharmacists, voluntary sector, local authority
- Public engagement and patient involvement throughout
- Communications and engagement ++

Summary: wide-ranging engagement with a broad range of health care stakeholders including the hospital consultants, so GPs and consultants working together



Programme overview



Statin switches – completed. Final evaluation in next two months

Hypertension – launched 2016 with first intervention

Stroke prevention in atrial fibrillation – ongoing

Clinical assembly

CVD risk

QRISK2>20% (end December 2015)
QRISK2 10-20% (5 months)
Prevention (smoking cessation and salt reduction)

Quality premium 14/15
Hypertension register validation
(meds not on HTN register)

Review patients with high blood pressure readings

Quality premium 15/16
QRISK2 10-20% until March
2016

Alcohol & hypertension until March 2016

Chest pain

Heart failure

Atrial fibrillation



www.bradfordshealthyhearts.co.uk

Clinical leadership – delivering outcomes

- Credible (local clinicians, strong links to secondary care), clinical knowledge and personable
- Secondary care engagement: unified message across primary and secondary care, population approach, permissions
- Programme guidelines
- Regular educational and progress meetings, practice engagement at solution finding
- Developing clinical leadership across the system in primary and secondary care; lead clinician in practice (GP, practice nurse, pharmacist)





Clinical leadership – delivering outcomes

- Working with regional clinical network
- Data sharing, IT interventions (searches -streamlined into "work to do" rather than overload with searches; alerts in strategic places with easy access information to explain risk to patients, pop-ups), monthly dashboard, comparative performance
- Consistency and focus eg few measures run repeatedly and then stopped
- Incentives collaborative money, QoF
- Primary care support at CCG level, prizes, awards





Key success factors



- Its 'our' problem CCG/practices/patients
- Primary care led solutions and owned by practices
- "Achievable benchmarks of care" [reducing unwarranted variation]
- Secondary care understanding the population
- Work at scale
- Workload-light for busy clinicians
- Proactive patient approach
- Flexibility
- Passion, enthusiasm and momentum!!



Our key questions



What's the target outcome?

How can we be smart about this?

Do we need to amend local clinical guidelines to achieve this?





So what have we done?



Cholesterol





Atrial fibrillation

Hypertension





BRADFORD'S HEALTHY HEARTS



Lipids / Statins





Extra workload – the challenge of large scale QI

 Just for statin work, if done in traditional way with face to face appointments, would need:

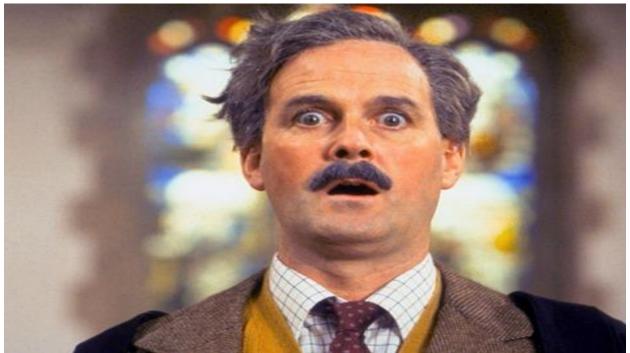
An additional 26,000-39,000 appointments!

- Overall Qrisk work: In one medium sized city in UK, estimated >40,000 with Qrisk 10-20%! (est 4.5 million patients in England)
- So NICE guidance might result in two to three visits per patient in first year = extra 80,000 120,000 appointments





26,000 extra appointments? Or even 80,000??





Examples of simplified approach - statins

- Same multi-faceted approach across the board
- Agreed protocol with secondary care, simplified, aimed at reduced primary care workload and "fire and forget" approach:
 - primary prevention: atorvastatin 40mg
 - secondary prevention: atorvastatin 80mg
- Work at scale with letters sent to patients rather than face-to-face consults. Supported by website, YouTube channel, wide ranging comms package, patient education sessions, patient participation groups.



Send letters without seeing patients?







Statin switches (1)



- Over 6000 on simvastatin with total cholesterol above 4 mmol/l or LDL >2 mmol/l were switched to atorvastatin 40/80mg: achieved 0.56 mmol/l reduction in LDL (and TC 0.5mmol/l) over 3 months (p<0.001).
 Some patients had cholesterol improve from 8 to 3!
- Approximately 5,000 for primary prevention and approx
 1,000 for secondary prevention



Statin switches (2)



- Innovative work at scale letters sent out, supported by website, comms, large patient education programme.
- Used complex GP computer searches but simple output
 - one list of patients, sent letters to these and bulk
 switch repeat template, takes 1-2 minutes.

STATIN switch:

NHS Bradford Districts Clinical Commissioning Group

outcomes achieved







QRISK2



- New NICE guidance on QRISK2 10-20%
- In Bradford 4% coded with QRISK2 10-20% (14,000)
- Another estimated 30-40,000 not yet coded/assessed
- 4,600 (32%) of patients with coded QRISK2 10-20% were on statin
- Potential problems with a full implementation due to lack of resources
- QRISK2 (10-20 and >20%): overall, 7000 patients took up offer of statin. Preliminary figures show around 70-80% uptake but follow-up figures being compiled currently to assess longer term adherence



Total cholesterol range for QRISK2

Early results: (for QRISK 10-20% and >20%)

- n=2163
- Mean total cholesterol reduction was 0.39 mmol/l reduction in that population
- P<0.001 for change





BRADFORD'S HEALTHY HEARTS



Stroke prevention in AF





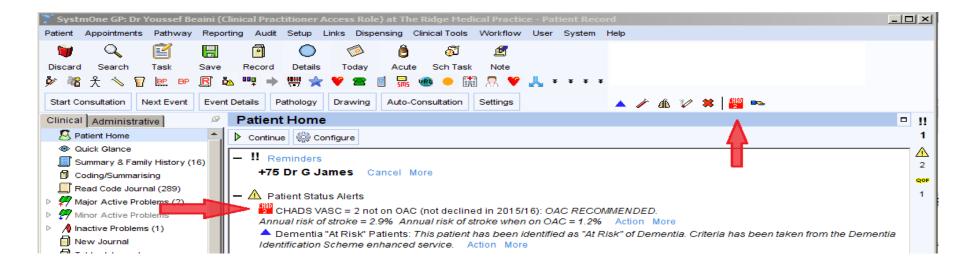
Examples of simplified approach: AF

- Education and mentoring programme based on NICE guidance. Nominated clinical champion in every practice in CCG. Regular meetings and public benchmarking against targets. Competitions.
- Complex searches in SystmOne but simple output: just one list of "work to do" for patients not on OAC
- Alerts on home screen and icon alerts in record with CHADSVASc score, stroke risk and also stroke reduction that would be gained by OAC (see screenshot). NNTs.
- Template (see screenshot)
- Use of pharmacists
- Use of industry-supported but <u>independent</u> education and review programmes such as
 APODI for those practices who wanted it (strict clinical governance framework)



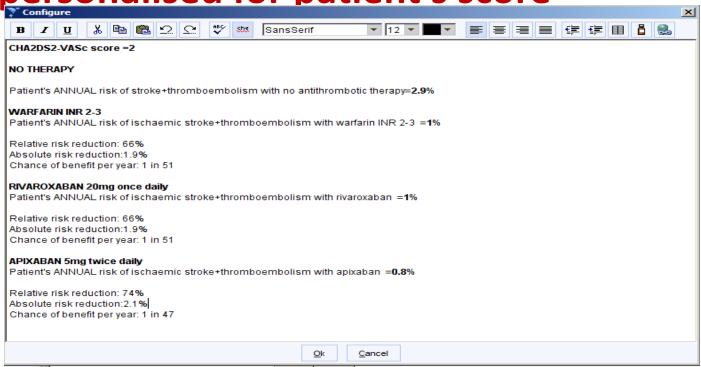
CHADSVASc screenshot







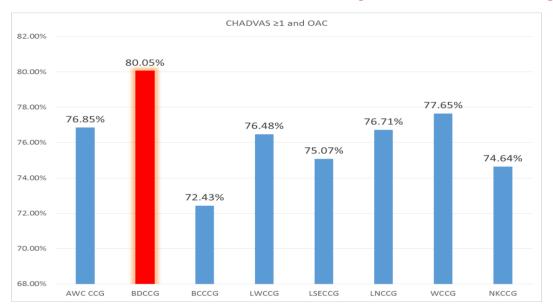
Summary of OAC treatment options personalised for patient's score







AF across West Yorkshire (Feb 2016)



BD CCG: The highest achievement across West Yorkshire (which is 300-400 GP practices, total pop 1.5 million people). **May 2016**: even higher at **82% anticoagulated** and still rising.



Population impact



Mean CHADVASc = 4, NNT to prevent one stroke = 11

Potentially programme could prevent 82 strokes (per 1.5-1.7 years depending on study)

Using NICE's assumption, cost of stroke = £11,000

This could potentially save £900,000

Also frees up 2,200 "bed days" per year in hospital



BRADFORD'S HEALTHY HEARTS



Hypertension





Undiagnosed hypertension



- Estimated 37,000 with undiagnosed hypertension in the CCG.
- Started collaboration with the CDC in USA and developed two initiatives

Patients With Undiagnosed Hypertension Hiding in Plain Sight

Hilary K. Wall, MPH1; Judy A. Hannan, RN, MPH1; Janet S. Wright, MD1

JAMA 2014

- Developed a system to:
 - Flag any patients with undiagnosed hypertension "hiding in plain sight"
 - ❖ Identify people on anti-hypertensive medication and not on a hypertension register – about 1% increase in prevalence achieved with just a few clicks of GP software. Completed over around 1-2 months



Aim of hypertension workstream

 Aim to achieve blood pressure control <140/90 for a minimum 76% of hypertensive patients in the next 2 years

Baseline: 62% of patients to target

 Designed simplified treatment pathway based on European Soc Cardiology principles and world-class results from Canada and USA million hearts program



Simplified treatment protocol (with exceptions)

1. Amlodipine



2. Indapamide



3. Losartan



4. Spironolactone





Results of hypertension workstream

• Baseline achievement 62%; in order to get to 76%, just over 5,000 patients need to get their blood pressure under 140/90

 Already improved by nearly <u>5,000 patients</u> over the <u>first year</u>! (vs planned 2 year program!) Now at just under 76% of patients to target <140/90



Combined outcomes



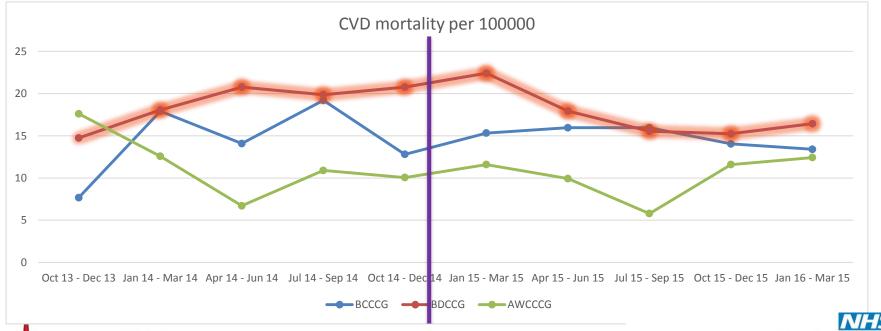
To date for Bradford's Healthy Hearts:

- Switched 6000 statins
- QRISK >20%: 4000 started on statins
- QRISK 10-20%: 3000 started on statins
- AF: >1000 started on OAC
- Hypertension: over 2,500 newly diagnosed, nearly 1% increase in prevalence. Nearly 5,000 with BP newly to target

Over 24 months, more than 21,500 people had an intervention that improved their health.



CVD mortality rate under 75 per 100,000 population pre-BHH versus post-BHH First 15months





Percentage change in CVD mortality under 75 (absolute numbers)

Airedale, Wharfedale & Craven CCG

Increased 3%

Bradford City CCG

• Reduced 6.5%

Bradford Districts CCG

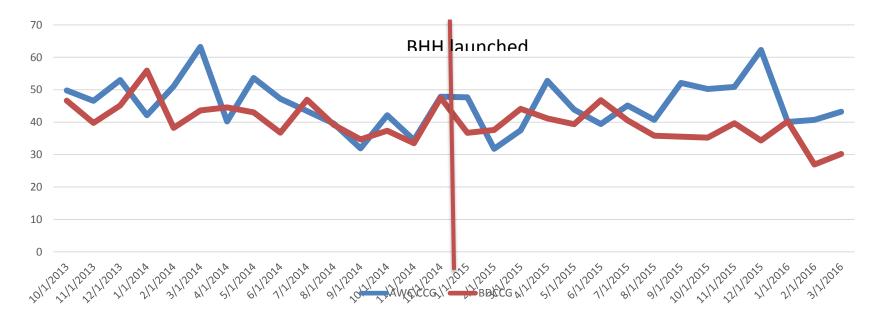
• Reduced 6.6%







Under 75 non-elective admissions for CVD (MI and stroke)







Non-elective admissions before BHH intervention vs "control group", AWC CCG

Airedale, Wharfedale & Craven CCG

 Mean CVD non-elective per month per 100,000 population = 46.4/m/100,000

Bradford Districts CCG

 Mean CVD non-elective per month per 100,000 population = 42.8/m/100,000

P = 0.1 for difference between groups

No statistical difference between groups





Bradford Districts



Non-elective admissions <u>after</u> BHH intervention vs "control" group

Airedale, Wharfedale & Craven CCG

 Mean CVD non-elective per month per 100,000 population = 45.7/m/100,000

Bradford Districts CCG

 Mean CVD non-elective per month per 100,000 population = 37.6/m/100,000

P=0.003 for difference between groups

8.1 fewer admissions per month per 100,000





Bradford Districts Clinical Commissioning Group

Non-elective admissions: change over time*



Airedale, Wharfedale & Craven CCG

 CVD non-elective admissions change over time = -1% (-8 fewer CVD events)

Bradford City CCG

 CVD non-elective admissions change over time = +6% (32 additional CVD events)

Bradford Districts CCG

- CVD non-elective admissions change over time = -10% (-211 fewer CVD events)
- 137 fewer MIs and 74 fewer strokes





www.bradfordshealthy hearts.co.uk

Conservative cost savings based on real outcome figures



Cost of stroke = £11,000

74*11000= £814,000

Cost of MI = £5,500

137*5500= £753,500

Gross savings £1,567,500

Net savings approximately £1,200,000 over first 15 months



Quote from BMJ



Winner, BMJ awards 2016:

"Inspirational leadership at scale, taking forward ambitious targets to tackle long standing public health challenges, and the engagement with the public whilst balancing demands on the clinical workforce was impressive."



Summary



- Population-based mind-set and approach
- Engagement at all levels, across all organisations
- Multiple approaches to the population but not 'please see your GP/PN to discuss further'
- Flog IT to produce what you want
- Be ambitious and brave!

