

CVD Coding in Primary Care

Wednesday 24th July 2024
13:00 – 14:00



Agenda: NWL Innovations: BP case-finding

Agenda Item	Speaker	Time
Welcome & Housekeeping	Cat Caldwell , Imperial College Health Partners	5 mins
CVD Coding in Primary Care - Context	Dr Kuldhir Johal , NWL ICS Clinical Lead for Cardiovascular and Renal Disease (Interim)	5 mins
UCLP Searches	Joanne Peh - Hounslow	8 mins
Hypertension case finding – community pharmacy	Dr Mohsin Choudry and Luke Whitelaw - Ealing	8 mins
Cardiovascular Renal Metabolic	Dr Perviz Asaria - Harrow	8 mins
Business as Usual – Searches and Templates	Dr Kuldhir Johal	10 mins
Q&A	Moderated by ICHP	10 mins
Feedback and Close	Cat Caldwell , Innovation Manager, Imperial College Health Partners	5 mins

Housekeeping:



- Please remain on mute and with camera off unless speaking
- Questions? Enter into the chat, or, during our Q&A section at 13:45 use 'raise hand' function
- Please note we will be recording this meeting

Updates from previous meeting – CKD guidelines launched and Expressions of interest invited for MyHealth London

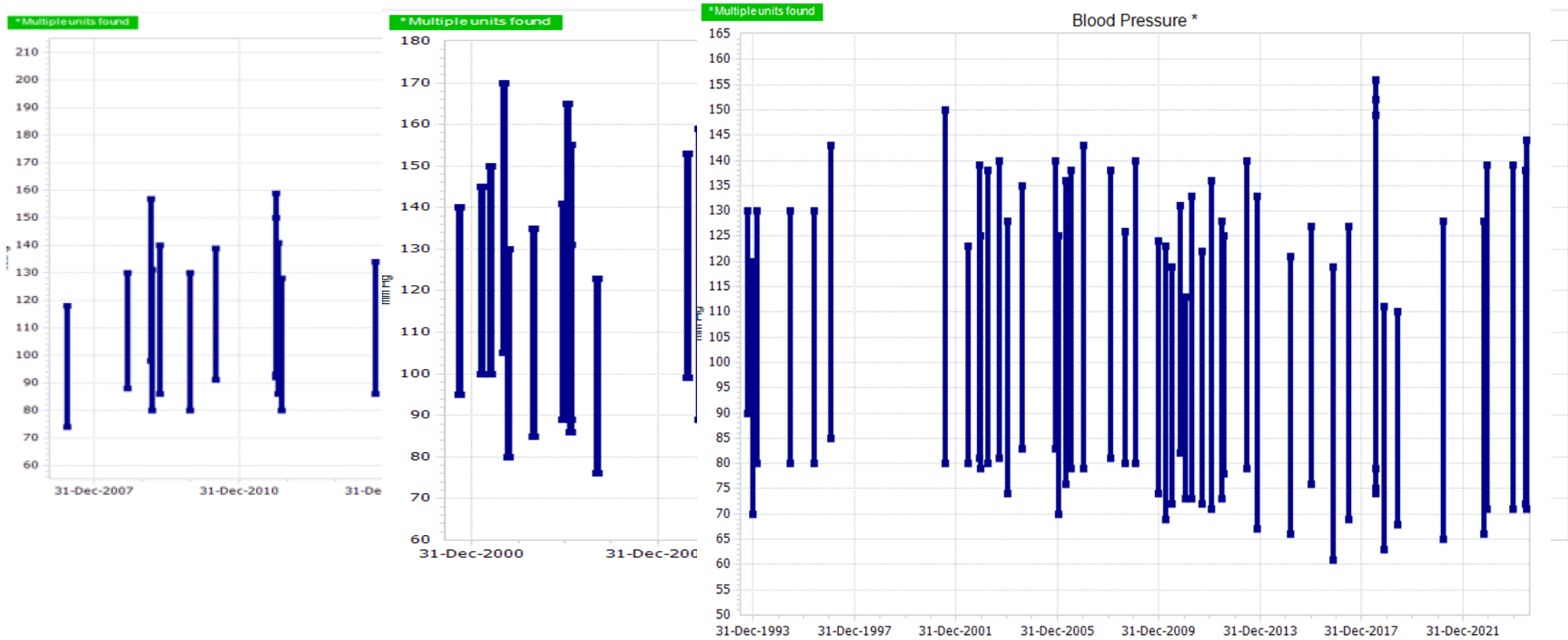


The new digital platform has officially launched and is already supporting people living with or at risk of CVD with self management.

- **Over 80,000** page views so far and the potential to reach up to **170,000** **NWL patients**.
- Aims to replicate for CVD what Know Diabetes delivers for diabetes (20% reduction in primary care consultations & improved patient outcomes).
- Gives patients access to curated info, structured education and tools for implementing lifestyle changes, including **culturally-tailored** meal plans and exercise support.

Currently **40 practices** on board across NWL and we're now inviting more practices to sign up to give patients access to their personalised health dashboard. Fill in in this [EOI form here](#), or contact i.reddington1@nhs.net – you will then be invited to sign up to the DCC (Data Controller Console).

Look at BP trend over time and also eg DM



Hypertension Dashboard

For more detailed analysis click on the bottom right corner of each quadrant

Population

Total Patients	2,848,638
Number of Hypertensive Patients	317,113
Hypertension Prevalence %	11.1%

Number of Hypertensive Patients that also have:

Diabetes	103,780
Ischaemic Heart Disease	36,064
Heart Failure	13,181
Coded CKD	44,562
Atrial Fibrillation	20,610
Peripheral Arterial Disease	7,361
Stroke	520
TIA	1,939

Map  Population Overview dashboard:  Population Co-Morbidities, Complications & Risks dashboard: 

Clinical

Hypertensive Patients with BP Check in last 12m	263,505
Hypertensive Patients with BP below 150/90	277,942
Number of Hypertensive Admissions to Secondary Care	2,095

HTN Patients on Multiple Anti-Hypertensive Drug Classes in the last 12 months

No HTN Drugs prescribed	148,770
1 HTN Drug Class prescribed	14,875
2 HTN Drug Classes prescribed	138,058
3 HTN Drug Classes prescribed	10,754
4 HTN Drug Classes prescribed	3,962
> 4 HTN Drug Classes prescribed	694

Clinical Overview dashboard:  Clinical Medication Prescribed dashboard: 

46.7% of patients are on no medication – ensure they are being given the lifestyle advice and optimise the blood pressure

Target 120/80 or less

Whilst prevalence on WSIC indicates 11.1% for all ages when adjusted for over 18s – it is now 13.4%

Lifestyle

Interventions within the last 12 months

Sum of Alcohol Intervention within the last N months	16,044
Dietary Intervention within the last N months	118,923
Physical Activity Intervention within the last N months	114,377
Secondary Hypertension Intervention within the last N months	42,697
Smoking Intervention within the last N months	92,710
Weight Loss Intervention within the last N months	11,782

Lifestyle 



Population Overview

Population hypertension figures across Health Boroughs and Practices

Click to navigate to the Population Patient list.
Interact with the dashboard first to view a filtered patient list.



Use the filters below or click on a chart to update the others accordingly Data Refresh Date: 16/07/2024 18:05:18 Latest Data Date: 11/07/2024 [i]

Health Borough All	Primary Care Network All	Practice All	Age Band Multiple values	Deprivation All	Ethnicity All	Patient Segment Des.. All	Provider Any or no main provider
Homeless All	Housebound All	ABPM or Home BP Monitoring? All types					

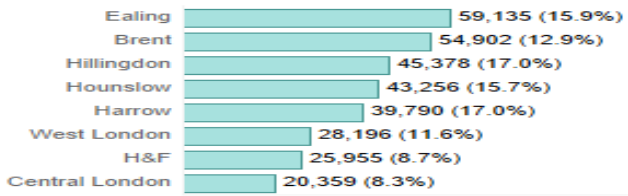
Total Patients
2,357,024

Number of Hypertensive Patients
316,971

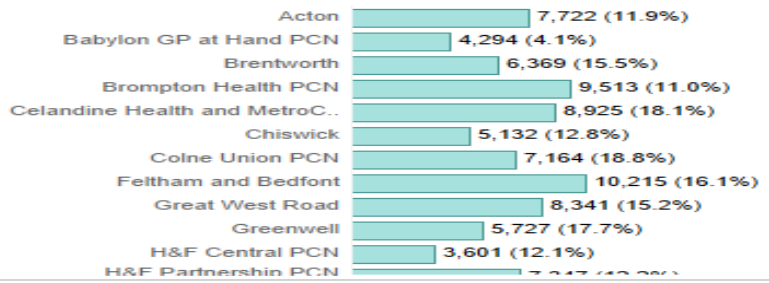
Hypertension Prevalence %
13.4%

Number of Hypertension Patients by Geographies (prevalence %)

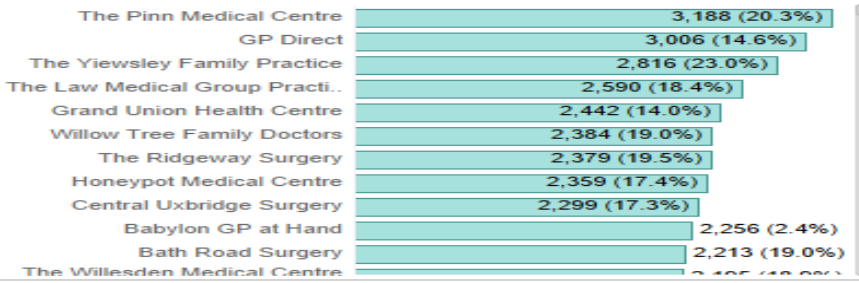
By Health Borough



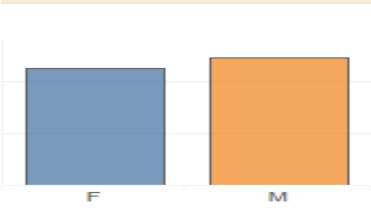
By Primary Care Network



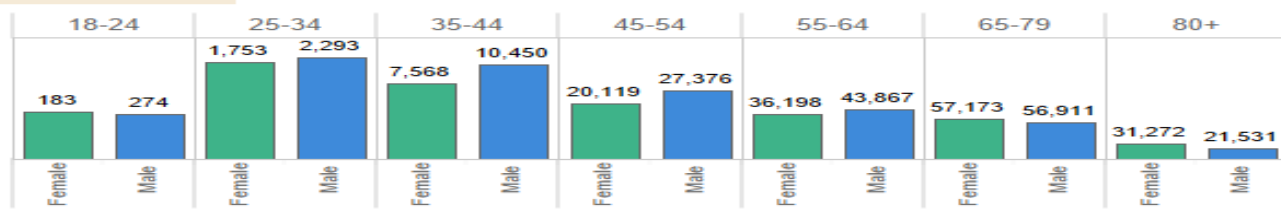
By GP Practice



Number of Patients by Age and Gender

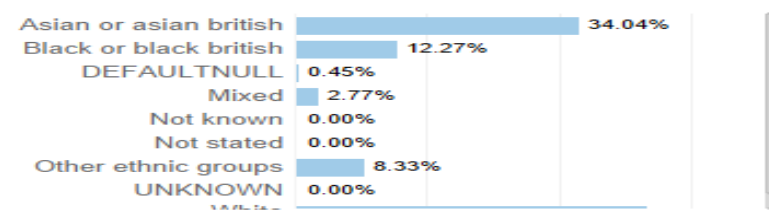


Split by Gender?
Yes

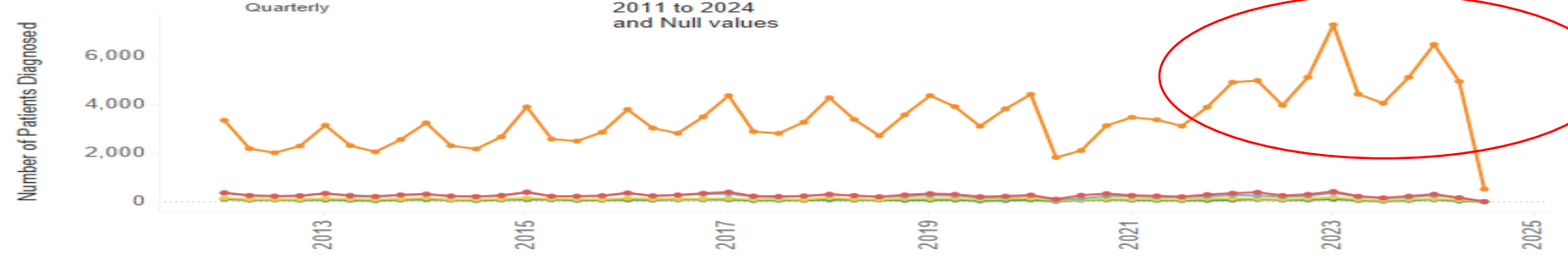


Gender
Multiple values

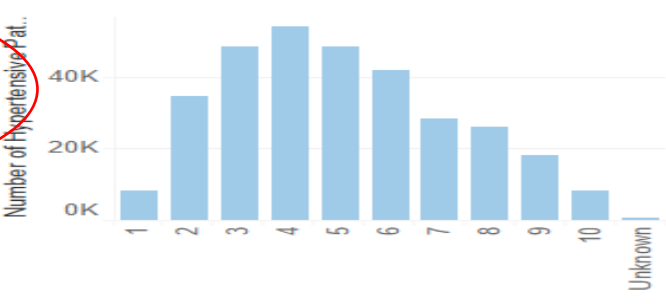
Ethnicity
Summary Ethnicity



Hypertension diagnoses over time (compared to co-morbidities with **Coronary Heart Disease, CKD, Stroke/TIA and Heart Failure**)



Deprivation



UCLP Proactive Framework: Hypertension

HOUNSLOW

Joanne Peh

CVD Champion and Head of Hounslow PCN Pharmacy
Services

Objectives of the UCLP framework series are:

1. Identify patients whose care needs optimising
2. Optimise care in clinical priority order, starting with those at highest risk
3. Standardise delivery of holistic proactive care by primary care teams including ARRS roles
4. Support GPs to safely manage workflow and release capacity
 - a. Stratify and prioritise
 - b. Task shift to the wider team

Hypertension: stratification and management

ARRS[§] roles/
other appropriately
trained staff

Gather information e.g. Up to date bloods, BP, weight, smoking status, run QRISK* score

Self management e.g. Education (blood pressure, CVD risk), self care (e.g. BP measurement), sign post self care resources

Behaviour change e.g. Brief interventions and signposting e.g. smoking, weight, diet, exercise, alcohol

Stratification &
Prioritisation

Priority One
BP >180/120mmHg***

Priority Two
2a. BP >160/100mmHg***

2b. BP >140/90mmHg*** if
BAME AND CV risk factors
or co-morbidities**

2c. No BP reading in last 18
months

Priority Three
3a. BP >140/90mmHg***
if BAME OR CV risk factors
or comorbidities**

3b. BP >140/90mmHg***
or >150/90mmHg*** if ≥
80 years

Priority Four
4a. BP <140/90mmHg***
under age 80 years

4b. BP <150/90mmHg***
aged ≥ 80 years

Prescribing Clinician

Optimise anti-hypertensive therapy and CVD risk reduction

1. Review: blood results, risk scores & symptoms
2. Check adherence and adverse effects
3. Review complications and co-morbidities
4. Initiate or optimise blood pressure medication
5. CVD risk – optimise lipid management and other risk factors

UCLP HTN - Hounslow

- Workforce – PCN Pharmacists and Pharmacy Technicians
 - Upskilling on BP reviews
- BP@Home
- 23/24 Hounslow PCN Outcomes adopted the UCLP Proactive Care Frameworks risk stratification criteria:
 - Reduce the number of patients in Priority 1-3 to less than 10-20% of the hypertension register patients by 31st March 2024

Hounslow 23/24 CVD Strategy

- PCN senior pharmacists leads for BP
- BP Priorities:
 - UCLP framework for BP priorities 1&2
 - Undiagnosed SBP $>160\text{mmHg}$
 - UCLP framework for BP - Hounslow indicator
 - BP QoF

Hounslow 23/24 BP Results

PCN	UCLP Hounslow PCN Indicator (P1-3 10-20%)		NWL BP target (all ages)		NWL BP B&BB target (all ages)
	Apr23	Mar24	Sept23	Mar24	
Brentworth	37.7%	25.6%			2/6 (1 unknown)
Chiswick	29.8%	22.2%			3/8
Feltham&Bedfont	34.2%	25.4%			0/13
GreatWestRd	37.3%	24.8%			3/8
HounslowHealth	33.4%	22.8%			3/10

SBP>160mmHg

Diagnosed&Undiagnosed – unchanged

Core20PLUS5
Ealing Hypertension Project
Dr Mohsin Choudry
Luke Whitelaw

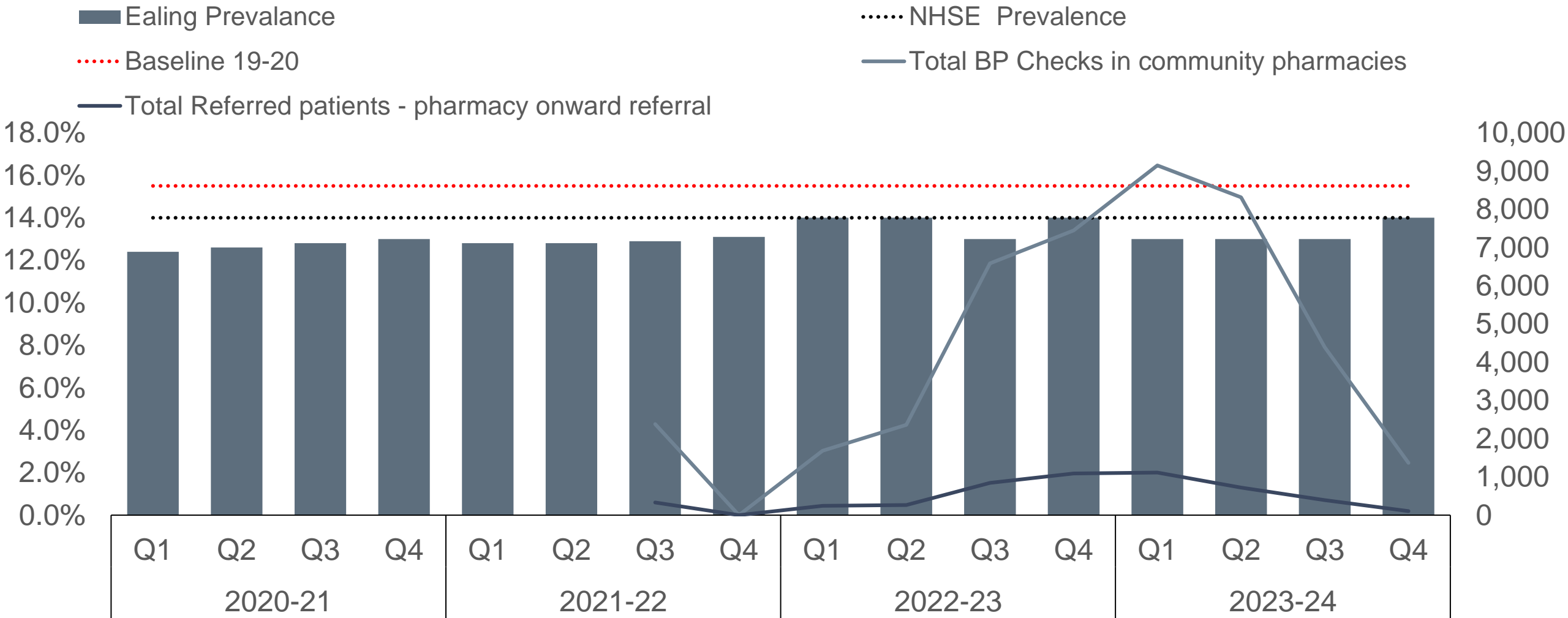
July 2024

Hypertension Prevalence & Community Pharmacy BP Check Scheme



Measure	2020-21				2021-22				2022-23				2023-24			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Prevalance	12.4%	12.6%	12.8%	13%	12.8%	12.8%	12.9%	13.1%	14%	14%	13%	14%	13%	13%	13%	14%
Total BP Checks							2382		1685	2361	6585	7447	9148	8314	4390	1366
Total Referred patients							331		244	267	842	1088	1114	721	395	104

Hypertension Prevalence & Pharmacy BP Checks – Ealing



Artificial Intelligence: Hypertension Detection

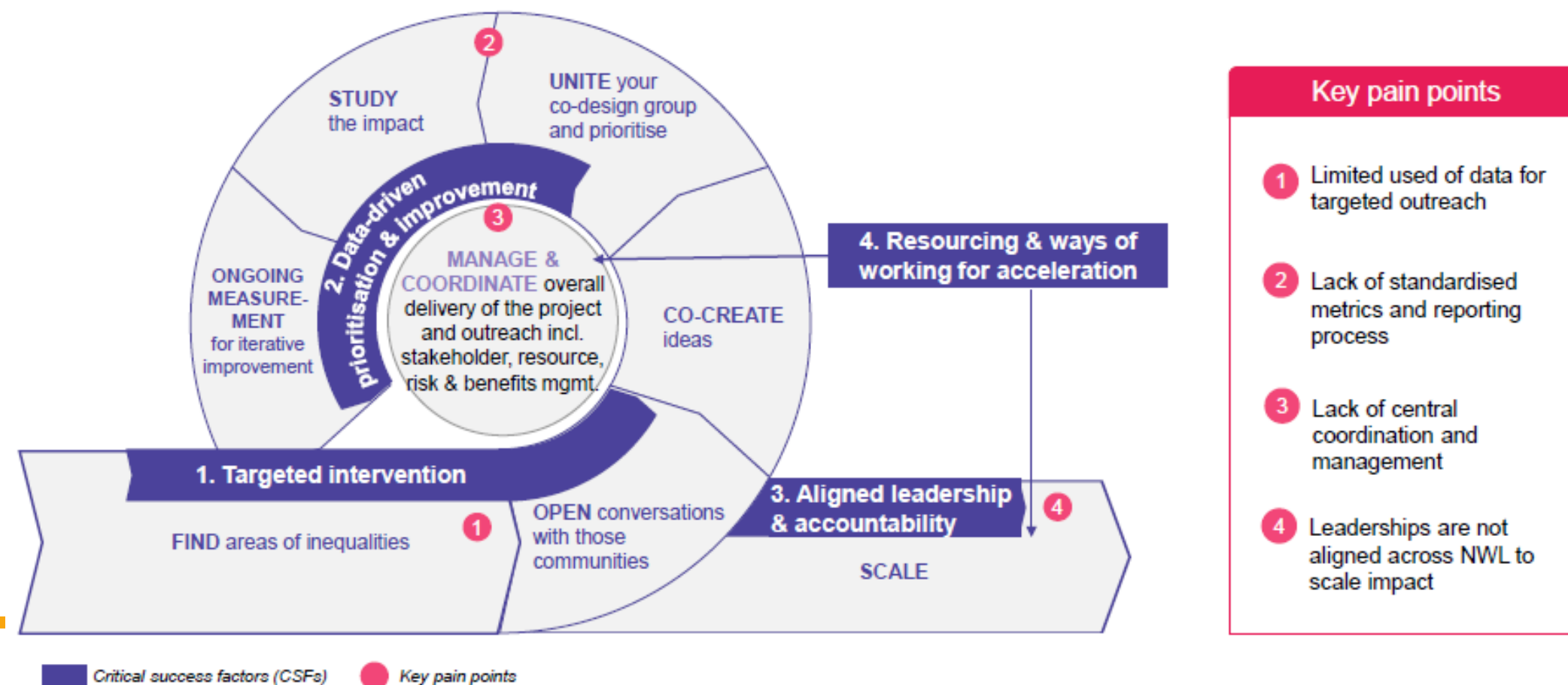


Background and Methodology

- This analysis focusses on detection and helps to identify the gap (missing people with hypertension) based on estimates of undiagnosed prevalence.
- Using an Artificial Intelligence algorithm that set a high probability (60%) for those who are more at risk of developing hypertension. This method is statistically powerful, up-to-date and based on detailed demographics and geographical level (GP practices).
- Building on initial work in Harrow, this analysis aims to better understand North West London's residents at risk of undetected hypertension by key demographics (sex, age, ethnicity) and small geographical level (PCNs and GP practices).
- This will help inform focussed preventative interventions or commissioning plans to reduce inequalities and potentially prevent cardio vascular diseases.

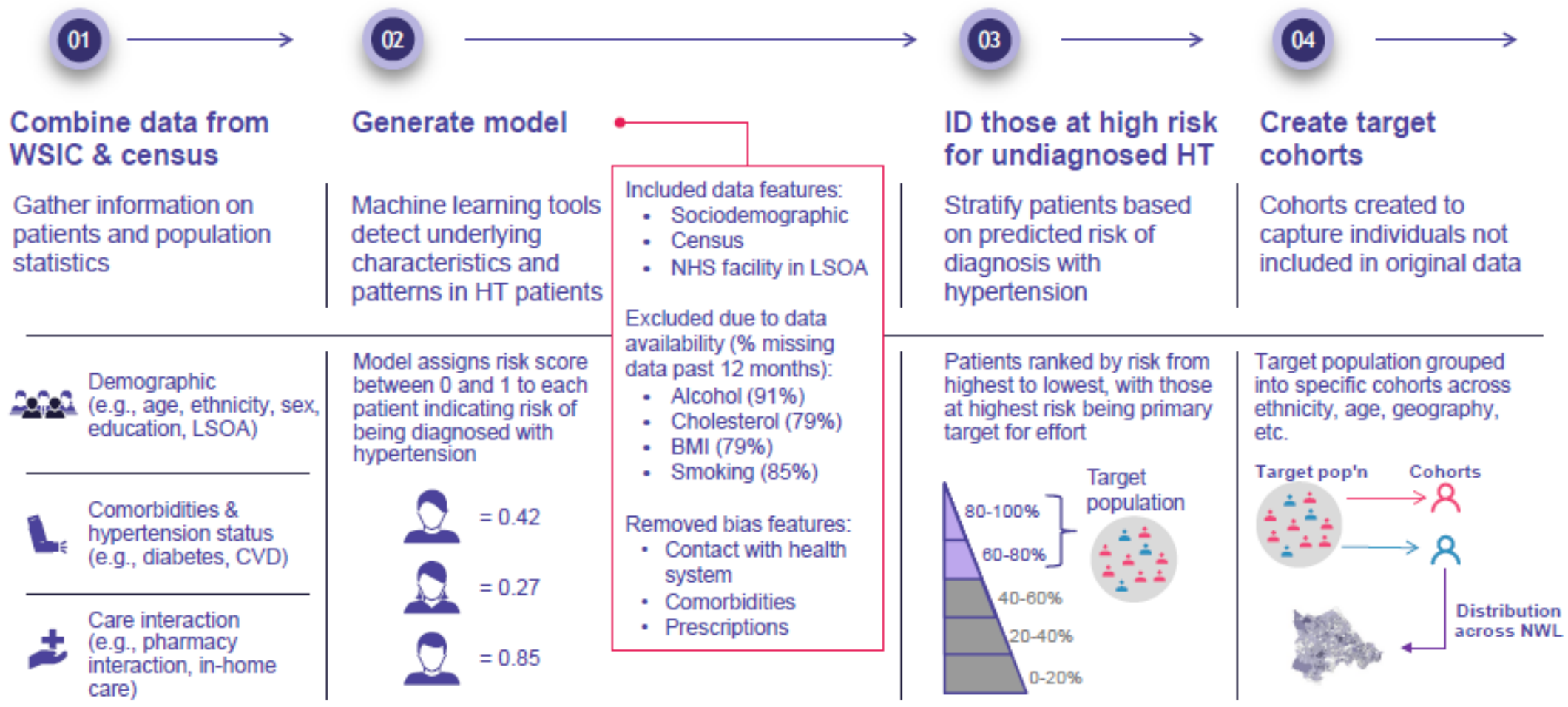
AI Methodology

Our methodology built on FOCUS-ON with an addition of 'Manage & Coordinate' and identified 4 critical success factors to address pain points in current model

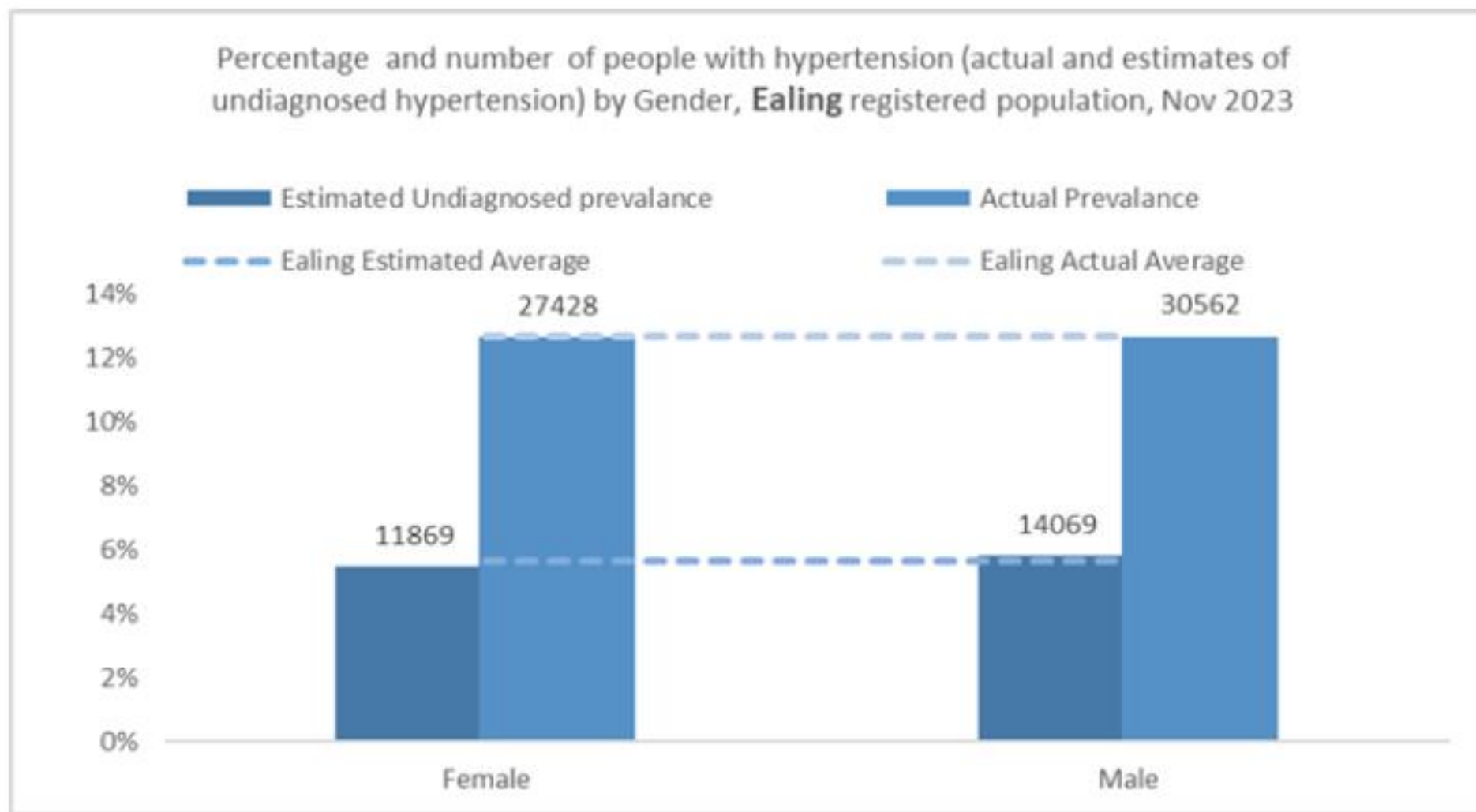


AI/Machine Learning Methodology

ML model was built to identify those at high risk of undiagnosed hypertension with a focus on eliminating data bias to address health inequality

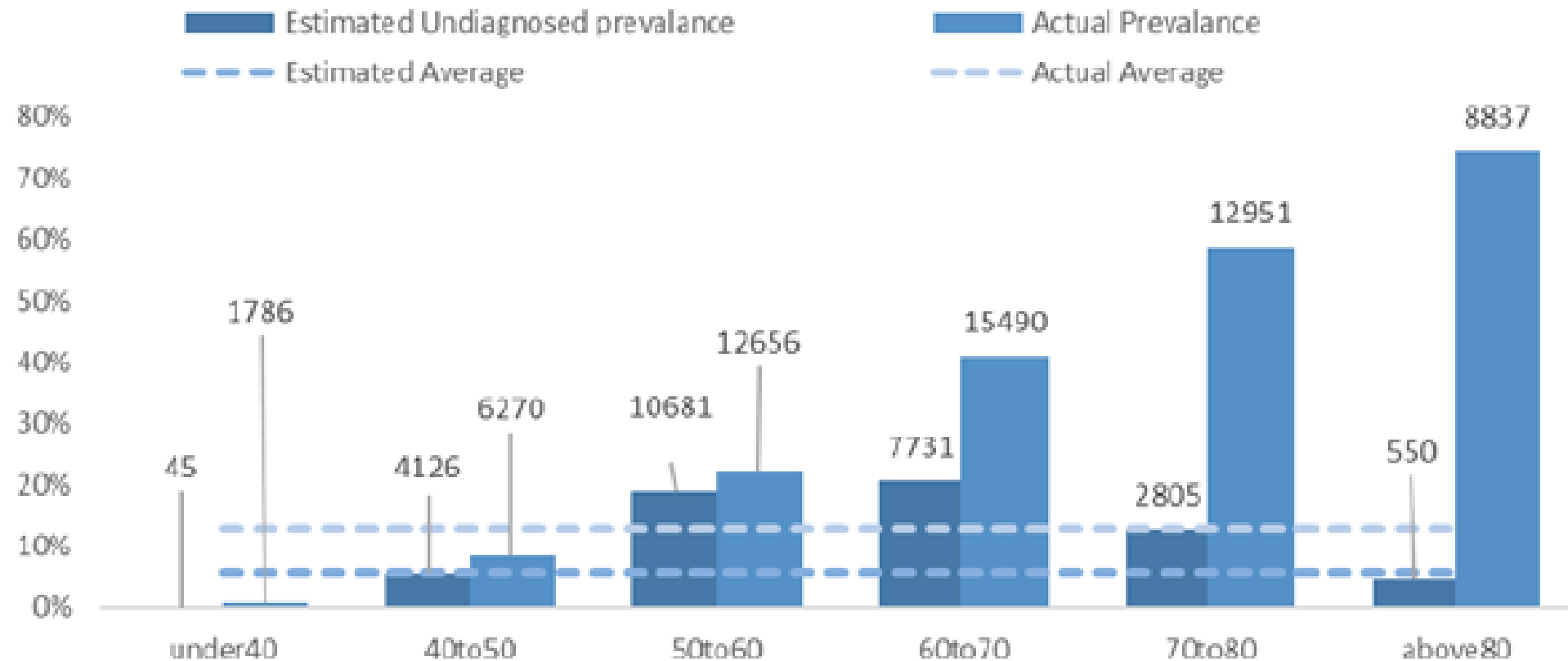


Hypertension – Ealing - Gender

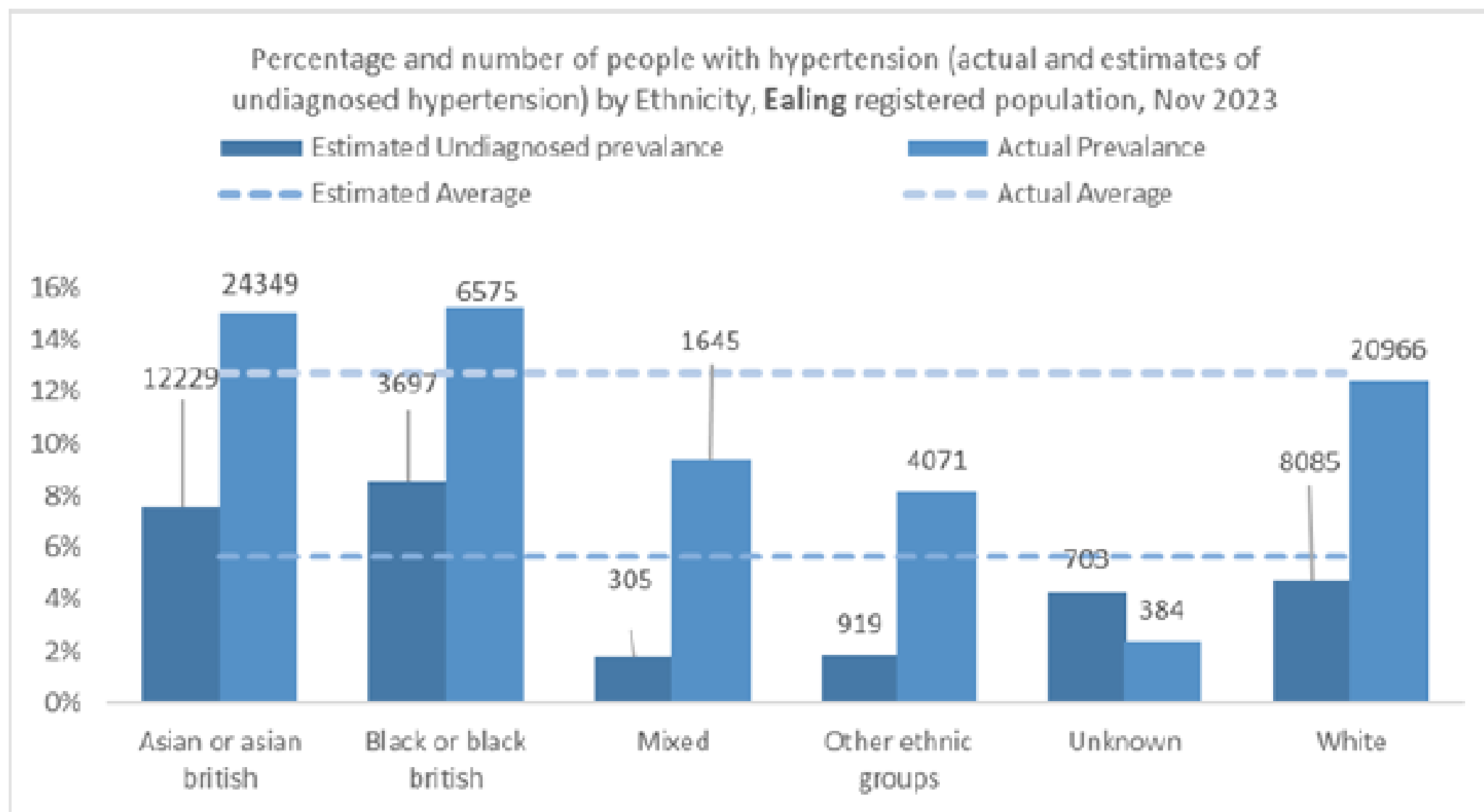


Hypertension – Ealing - Age

Percentage and number of people with hypertension (actual and estimates of undiagnosed hypertension) by Age Group, **Ealing** registered population, Nov 2023

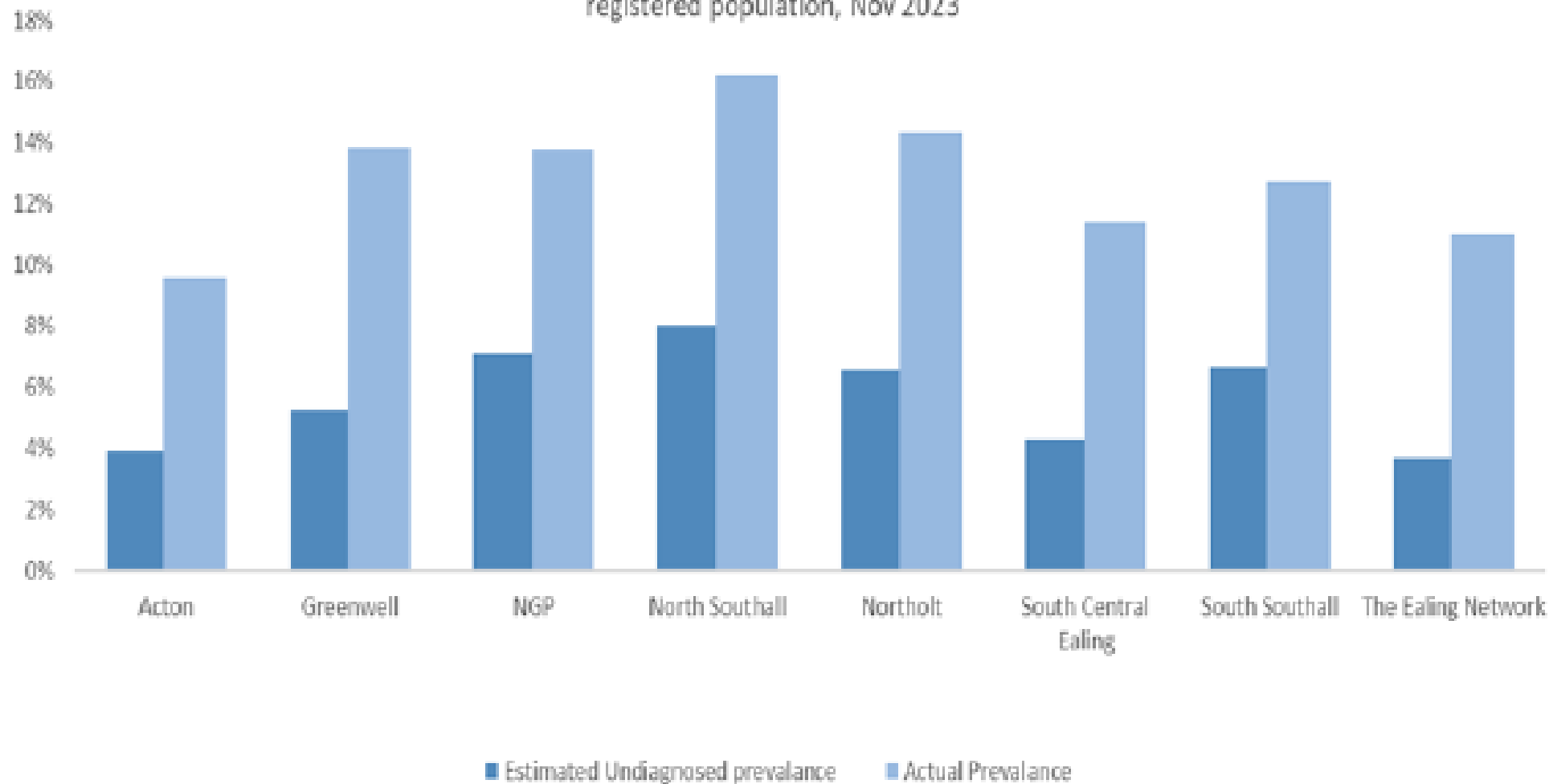


Hypertension – Ealing - Ethnicity



Hypertension – Ealing - PCN

Percentage of people with hypertension (actual and estimates of undiagnosed hypertension) by PCN, Ealing registered population, Nov 2023



31st July - 29 September
2023

Scheduled	875	
Total Attended	765	
DNAs	110	14%
Ethnicities:		
		% of attendees
Black/Black British	64	8%
Asian/Asian British	78	10%
White	538	70%
Mixed/Other/Did not disclose	85	11%
age		
		% of attendees
>60	402	53%
50-59	295	39%
45-49	68	9%



Testing		% of attendees
Urinalysis	27	4%
psa	664	87%
hba1c	345	45%
Primary care referrals:		% of attendees
Hypertension	183	24%
Smoking	36	5%
Diabetes	38	5%
Secondary care referrals:		% of attendees
Rapid access prostate	67	9% (of PSA tests)
Rapid access haematuria NV/hv	5	1%
Oncogenetics		

Then ManVan saw 765 Men aged over 45 and 24% (183 men) had suspected hypertension and were referred to GP for further testing and diagnosis.

Next Steps - SystemOne Searches

Search One testing:

- Patients age >18 years and over
- On First line Hypertension treatment medication: ACE inhibitors, Angiotensin Receptor blockers or Calcium channel blockers
- Prescribed in the last 3 months. This is on all issues which can be acute or repeat.
- Without a read code for Hypertension (38341003), Heart failure (84114007), Ischaemic heart disease (414545008)

Results

Practice name	Number of patients returned in search OR number of patients selected to verify	Potential undiagnosed hypertensive in the results	Percentage of undiagnosed hypertensives
Practice A*	32	17	53%
Practice B	45	30	67%
Practice C	65	30	46%
Practice D	63	Difficult to tell but more than 50% might be hypertensive	

SystemOne Searches

Search two testing

- We are exploring a NWL wide search created on patients with a GP recorded high BP reading and no hypertension read code to see if following up these patients will result in a hypertension diagnosis

Cardio-renal-metabolic disease

Dr Perviz Asaria

Consultant Cardiologist

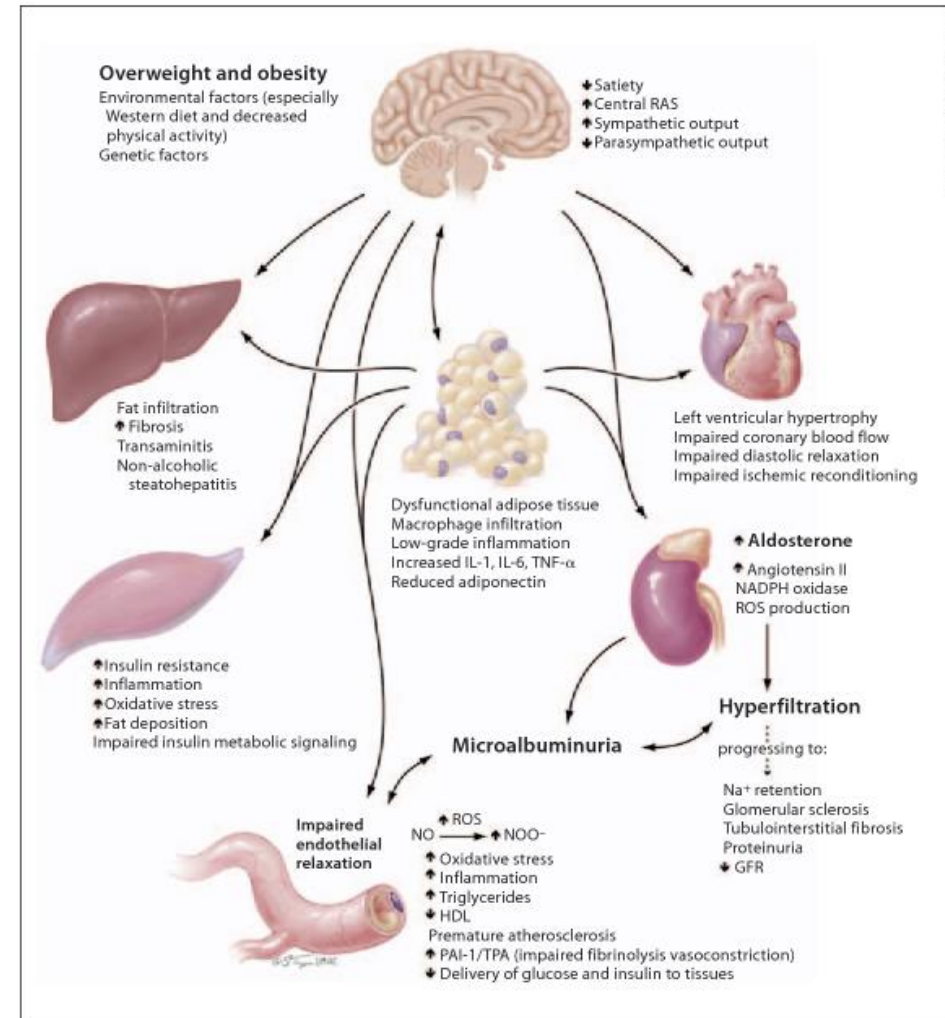
Harrow CVD Champion and CRM Hub Clinical Lead



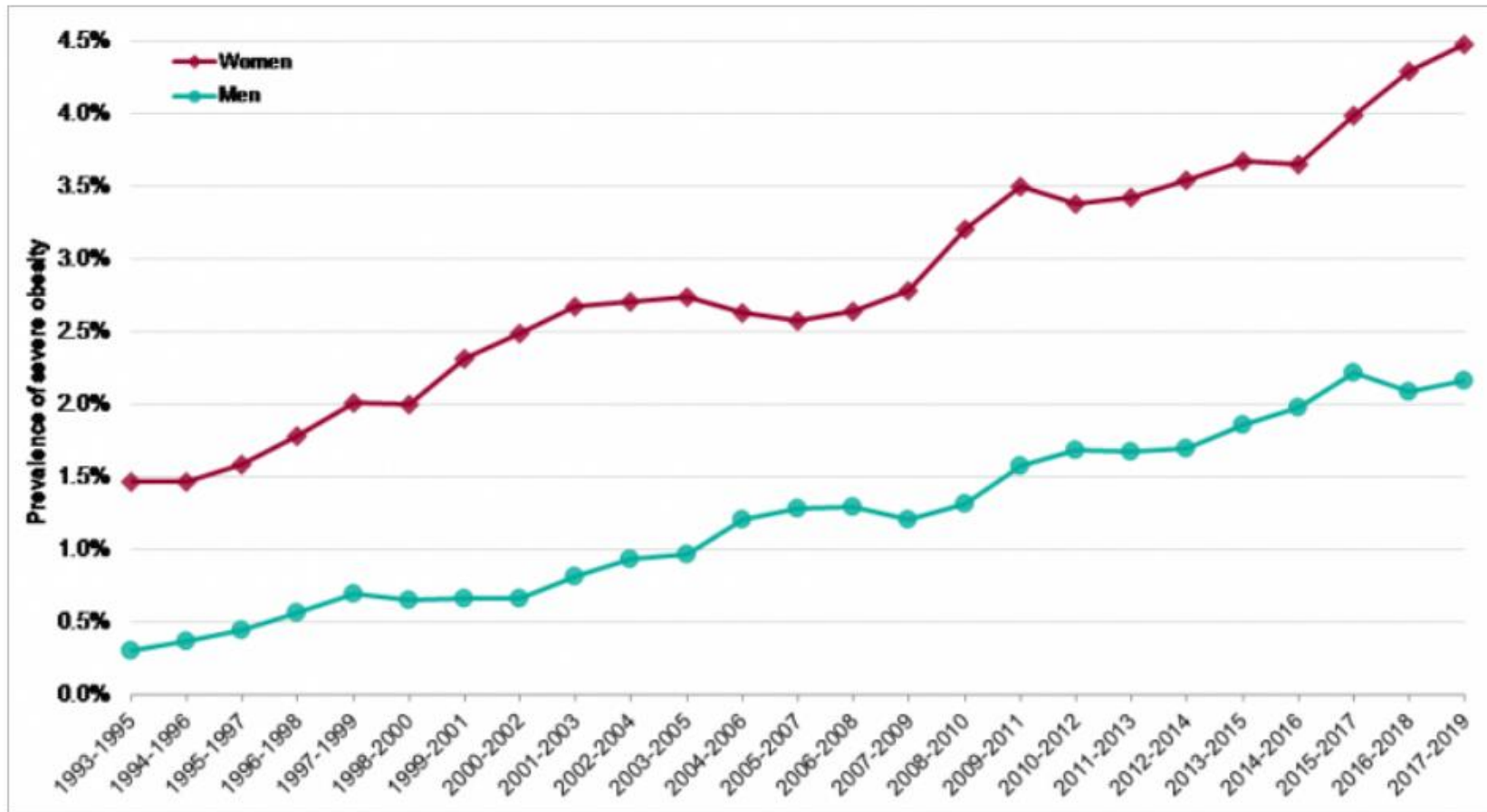
Cardio-renal-metabolic disease

- Common set of conditions bound by:
- Metabolically active (inflammatory) visceral adiposity
- The disease often improves with > 10% loss of body fat
- The disease often respond to drugs which mimic or promote this (SGLT2i and GLP-1RA)
- CKD both an intrinsic CRM condition
- But also aggravated by the presence of other

CRM diseases



Weight trajectories



Evidence for effective intervention in CRM

Bariatric surgery

GLP1-RA

SELECT Trial in CVD without DM
Flow trial

Structured lifestyle intervention

Look AHEAD TRIAL in DM
NDPP, Path to remission

**> 10%
reduction in
body weight**

↓ Liver fat

↓ Blood glucose/ DM

↓ BP

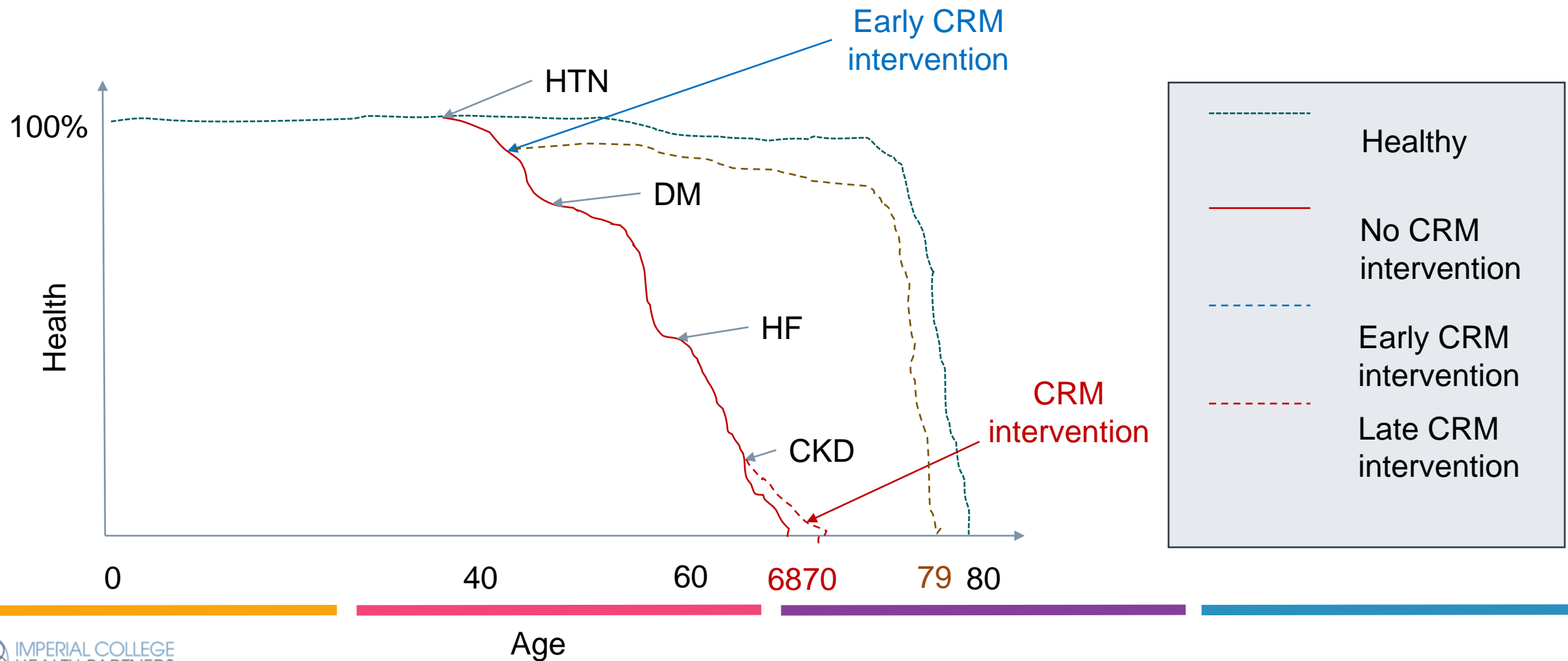
↓ LDL and TG ↑ HDL

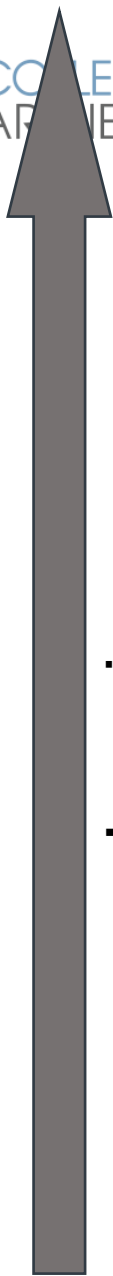
↓ CRP

↓ Deterioration of renal function

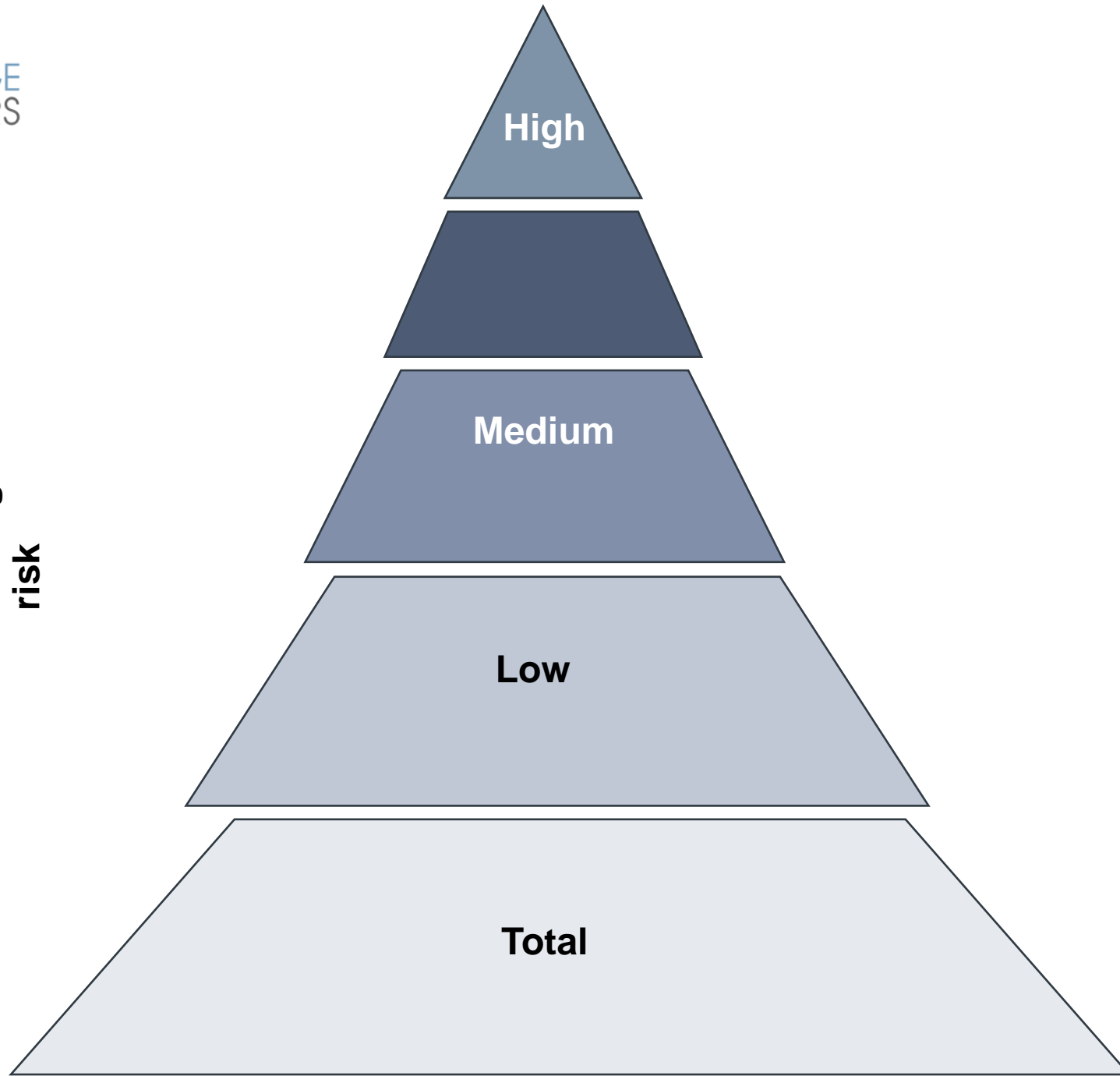
↓ CVD endpoints by 20%

When to intervene?





**Increasing
risk**



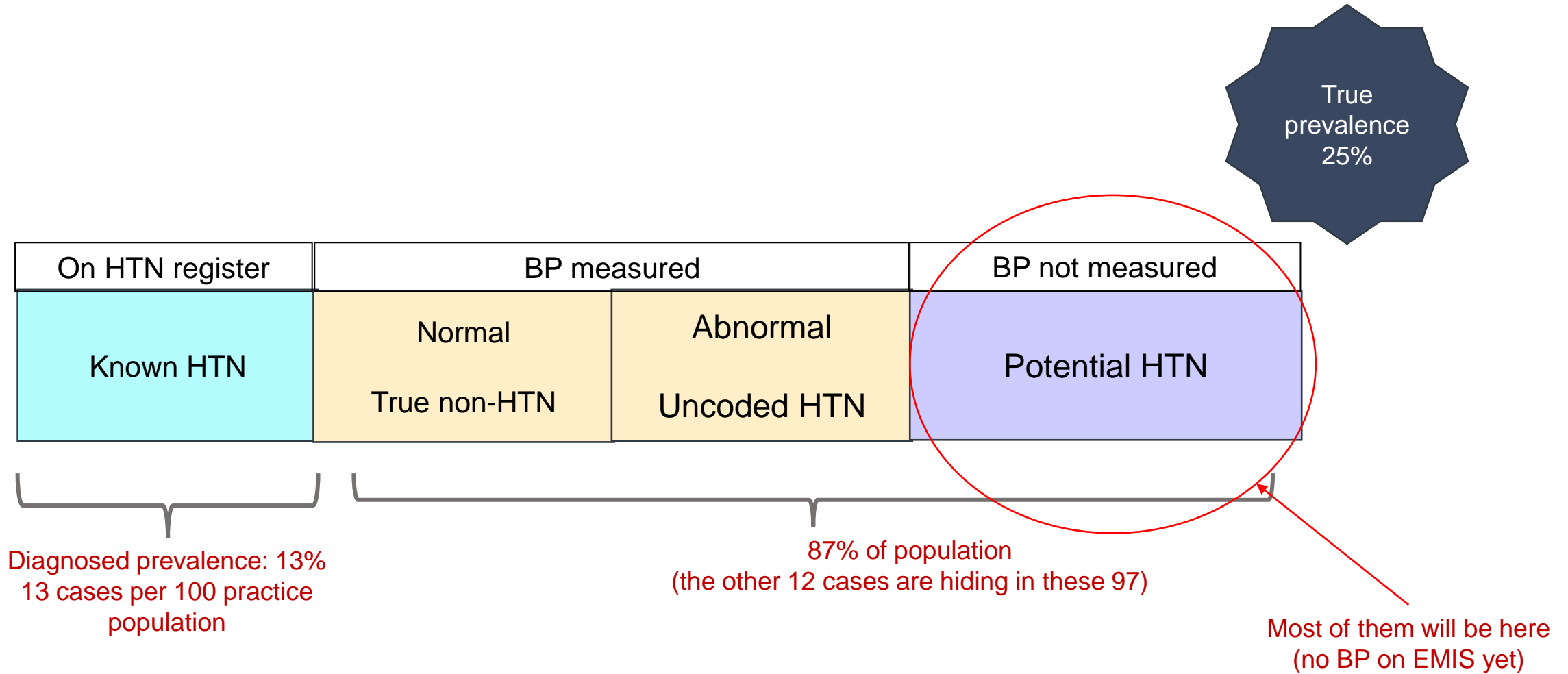
High

Medium

Low

Total

What is on EMIS already?



OHID rates

	Harrow QOF	London QOF	England QOF	Expected prevalence (Health survey)	Prevalence GAP for Harrow
CKD	3.4%	2.7%	4.2%	10%	7%
HTN	13.3%	10.9%	14.4%	25-30%	10-17%
DM	10.2%	6.9%	7.5%	14%	4%
NDH					
CVD	2.7%		3.0%		
BMI > 30	16.7%	20.9%	26.2%	23-26%	
Overweight (BMI >25)	52.8%	57.2%	64%	64%	


















CVD Coding in Primary Care

Dr Kuldhir Johal

**NWL ICS Clinical Lead for Cardiovascular and Renal Disease
(Interim)**



Case identification on just BP reading alone and making it BAU – business as usual (NWL ICB Folder)

Name	Population Count	%	Last Run	Search Type	Scheduled	Code System
 Hypertension - any BP reading systolic >120	4188	59%	17-Jul-2024	Patient		SNOMED CT
 BP systolic >120 and on QOF register	1061	25%	17-Jul-2024	Patient		N/A
 Hypertension BP >120 Systolic and hypertension monitoring coded	469	11%	17-Jul-2024	Patient		SNOMED CT
 BAU **Hypertension BP >120/80, hypertension monitoring and ...	440	94%	17-Jul-2024	Patient		N/A
 Hypertension BP Systolic >120 and not on BP Systolic >140 Search list	1847	44%	17-Jul-2024	Patient		N/A
 Hypertension - any BP reading systolic >120 (2)	4188	59%	17-Jul-2024	Patient		SNOMED CT
 Hypertension BP >120 Systolic and hypertension monitoring coded	469	11%	17-Jul-2024	Patient		SNOMED CT
 BAU **Hypertension BP >120/80, hypertension monitoring and ...	29	6%	17-Jul-2024	Patient		N/A
 ... and on BP medication	8	28%	17-Jul-2024	Patient		N/A
 Hypertension - any BP reading systolic >140	2341	33%	17-Jul-2024	Patient		SNOMED CT
 BP Systolic >140 on more than 3 occasions	1520	65%	17-Jul-2024	Patient		SNOMED CT
 **BAU... and on QOF register - Excluded list needs to be consid...	961	63%	17-Jul-2024	Patient		N/A
 BP Systolic > 140 and has a hypertension monitoring code	120	5%	17-Jul-2024	Patient		SNOMED CT
 BAU **BP Systolic >140, monitoring check done code and QOF ...	119	99%	17-Jul-2024	Patient		N/A
 BP Systolic > 140 and on QOF Hypertension register	1036	44%	17-Jul-2024	Patient		N/A
 Systolic BP > 140 on more than 3 occasions	924	89%	17-Jul-2024	Patient		SNOMED CT
 Hypertension - any BP >140 and not on >160 search list	1247	53%	17-Jul-2024	Patient		N/A

> 140/90

Name	Population Count	%	Last Run	Search Type	Scheduled	Code System
BP Systolic >140 on more than 3 occasions	1520	65%	17-Jul-2024	Patient		SNOMED CT
**BAU... and on QOF register - Excluded list needs to be consid...	961	63%	17-Jul-2024	Patient		N/A
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Hypertension - any BP >140 and not on >160 search list	1247	53%	17-Jul-2024	Patient		N/A
Hypertension - any BP reading systolic >140 on more than 3 occasions	1334	57%	17-Jul-2024	Patient		SNOMED CT
Hypertension - any BP reading systolic >150 to 159	1386	20%	17-Jul-2024	Patient		SNOMED CT
BP systolic >150 to 159 and has a hypertension monitoring check d...	96	7%	17-Jul-2024	Patient		SNOMED CT
BAU **BP systolic >150 to 159 hypertension monitoring code an...	95	99%	17-Jul-2024	Patient		N/A
BP Systolic >150 to 159 and on QOF register	891	64%	17-Jul-2024	Patient		N/A
Hypertension - any BP Systolic >150 to 159 on 3 or more occasions	471	34%	17-Jul-2024	Patient		SNOMED CT
BP Systolic >150 to 159 on 3 or more occasions and hypertensio...	39	8%	17-Jul-2024	Patient		SNOMED CT
**BAU BP Systolic >3 on 3 or more occasions, hypertension ...	39	100%	17-Jul-2024	Patient		N/A
Hypertension - any BP Systolic >150 to 159 on 3 or more occas...	400	85%	17-Jul-2024	Patient		N/A
** BAU As above and on QOF register	400	100%	17-Jul-2024	Patient		N/A

Getting started look at over BP >160/90

Name	Population Count	%	Last Run	Search Type	Scheduled	Code System
Hypertension - any BP reading systolic >150 to 159	1386	20%	17-Jul-2024	Patient		SNOMED CT
BP systolic >150 to 159 and has a hypertension monitoring check d...	96	7%	17-Jul-2024	Patient		SNOMED CT
BAU **BP systolic >150 to 159 hypertension monitoring code an...	95	99%	17-Jul-2024	Patient		N/A
BP Systolic >150 to 159 and on QOF register	891	64%	17-Jul-2024	Patient		N/A
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Hypertension - any BP Systolic >150 to 159 on 3 or more occas...	400	85%	17-Jul-2024	Patient		N/A
** BAU As above and on QOF register	400	100%	17-Jul-2024	Patient		N/A
Hypertension - any BP reading systolic >160	1894	15%	17-Jul-2024	Patient		SNOMED CT
BP systolic >160 and has a hypertension monitoring check done code	83	8%	17-Jul-2024	Patient		SNOMED CT
BAU **BP systolic >160, hypertension monitoring code and on Q...	83	100%	17-Jul-2024	Patient		N/A
BP Systolic >160 and on QOF register	833	76%	17-Jul-2024	Patient		N/A
Hypertension - any BP Systolic >160 on 3 or more occasions	496	45%	17-Jul-2024	Patient		SNOMED CT
BP Systolic >160 on 3 or more occasions and hypertension monit...	42	8%	17-Jul-2024	Patient		SNOMED CT
**BAU BP Systolic >3 on 3 or more occasions, hypertension ...	42	100%	17-Jul-2024	Patient		N/A
Hypertension - any BP Systolic >160 on 3 or more occasions and ...	416	84%	17-Jul-2024	Patient		N/A
** BAU As above and on QOF register	416	100%	17-Jul-2024	Patient		N/A
Patients with no BP reading	2251	32%	17-Jul-2024	Patient		SNOMED CT
... and aged 40 to 59	124	6%	17-Jul-2024	Patient		N/A
... and aged over 60	19	1%	17-Jul-2024	Patient		N/A

- Pages <<
- Diag Diagnosis
- Life Lifestyle
- Inv Investigations
- Mec **Medicines Optimisation ES**
- Res Resources
- Inf Information

Medicines Optimisation Enhanced Service - Optimising Antihypertensive Management

Adult patients aged 40-80 with a latest clinic blood pressure $\geq 140/90$ and on a single antihypertensive agent

Search Location:

Brent

NW London Enterprise S&R > Medicines Team Brent Searches (Brent viewable) > Medicines Enhanced Service 24/25 > TGT2.4 Optimising Antihypertensive Management

Harrow

NW London Enterprise S&R > Harrow Reports > Medicines Management v1 > Medicines Enhanced Service 24/25 > TGT2.4 Optimising Antihypertensive Management

n2

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Hillingdon

Hillingdon Enterprise S&R > NW London ICB > Medicines Management v1 > Medicines Enhanced Service 24/25 > TGT2.4 Optimising Antihypertensive Management

*Understands importance of blood pressure monitoring and control

Text

No previous entry

AND select one of the following:

*Current treatment status

No previous entry

Text

[NICE: NG136 Visual summary. Hypertension in adults: diagnosis and treatment](#)

[NICE: NG136 Patient decision aid on how do I control my blood pressure? Lifestyle options and choice of medicines](#)

Use as a motivation tool – heart age – print it off – age 62 but heart age 77

NWL ICS Hypertension Management ES 2024/25

Page **Investigations**

Diagnose

Lifestyle

Investigations

Medicine Optimisation ES

Resources

Information

Investigations

ECG

Refer for ECG recording (QOF) 22-3-2025

ECG not done (Declined)

← QRisk2 CVD Risk 28.2

[QRISK Calculator \(qrisk.org\)](#)

QRISK3 CVD 10 year risk score

QRISK2 calculated heart age

Urine

Glucose

Protein

Blood

Urine albumin:creatinine ratio

ClinRisk Risk of CVD in the next 10 years = 28.2%

For a 62y old Male in the UK, the average risk is 10.9%

Data used to calculate the QRisk2 Score

Heart age : 77

Ethnicity : British

Smoking status : Non Smoker

Diabetes category : Type2

Systolic blood pressure : 139 mm Hg

Cholesterol / HDL ratio : 4.7

BMI : 36.1 kg/m²

Postcode : UB10 8EQ

Hypertensive on Rx? : **yes**

Atrial fibrillation? : no

Chronic kidney disease? : no

Family history of CVD? : no

Rheumatoid arthritis? : no

Risk of heart attack or stroke

CE QRISK2 engine v. 2017.0 | Reference values version 2017.0 [qrisk.org](#) Print

Summary

- Make every contact count, enter codes from patients/community pharmacies – since 28th June – being sent to local practices (GP Connect/email)
- Normal BP is less than 120/80
- Identify and optimise the care – target is 120/80 or less
- Use “heart age” – qrisk – also action >20% and >10% and in CKD
- Look at trend over time, other co-morbidities eg diabetes/pre-diabetes
- Ensure all patients are given lifestyle advice
- At present nearly 47% of “hypertensives” are on no medication in NWL

Q&A



To get involved in ICHP's CVD education series



Give us feedback on what topics you think we should cover in this format by answering our survey.

For further information and/or to get involved with the ICHP CVD education series please contact:

chanelle.corena@imperialcollegehealthpartners.com or
catherine.caldwell@imperialcollegehealthpartners.com

CVD Coding in Primary Care



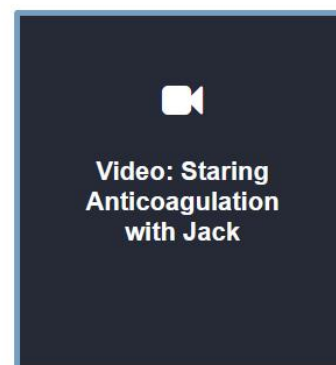
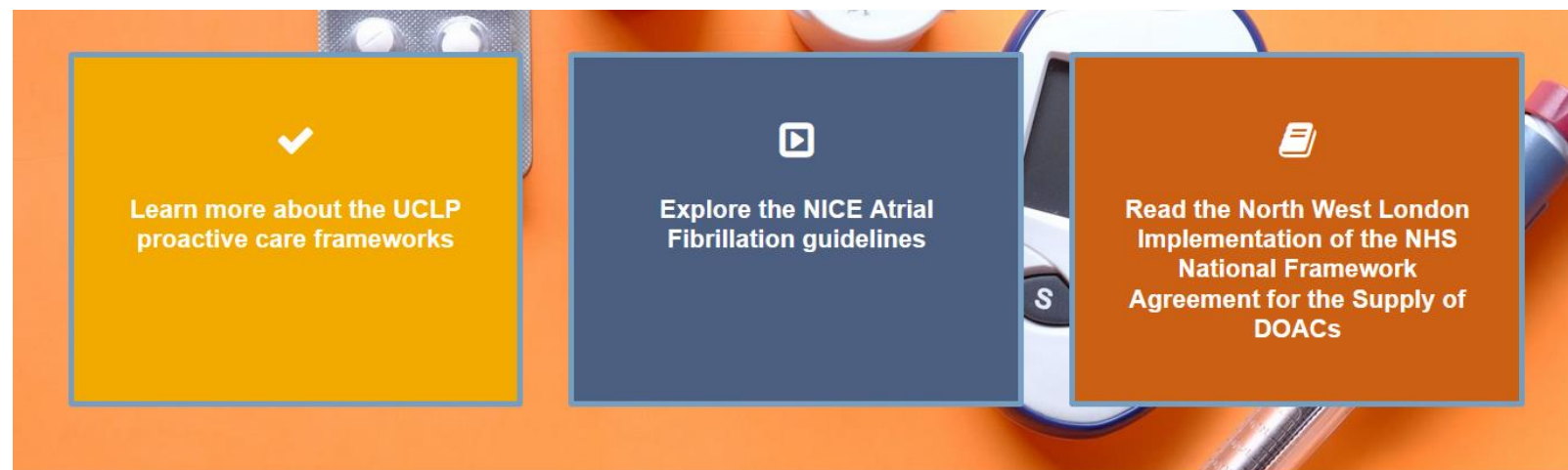
Resources

Please [click here](#) or visit

imperialcollegehealthpartners.com/resource/cardiovascular_disease/

where we have collated clinical and patient resources for staff to access across NWL

We have also linked the ICB Cardiology webpage, where future resources will be updated.



... Next Time – September 2024

- WSIC
- CVDPprevent – [CVDPREVENT](#) data available to March 2024

- Lipid Management
- Severe Hypertension
- Atrial Fibrillation