



Welcome to the NHS Cardiology Strategy Conference



30th April 2026
etc.venues, Prospero House, London, SE1
8GA

CARDIOVISION 2026

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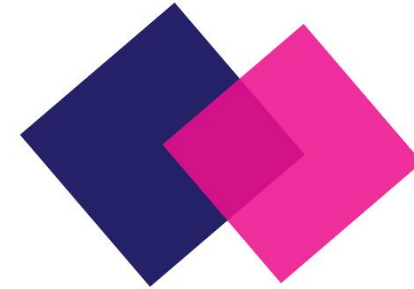
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- **What it is** – A secure, year-round platform bringing NHS professionals together across six specialist communities.
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- **Your benefits** – Exclusive access to interviews, insights, best practice, and real-time discussion threads with colleagues nationwide.
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Chair Opening Address



Mr Chris Sleight MSc BSc FIBMS
Chief Executive Officer of Sleight Insights
Formerly Chief Officer of the Greater Manchester
Diagnostic Networks



Keynote Presentation



Dr Yassir Javaid

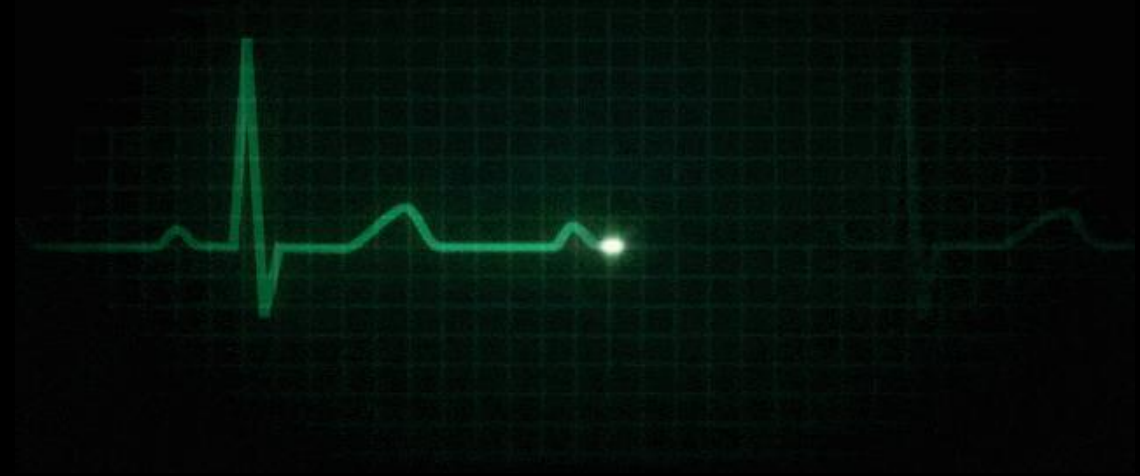
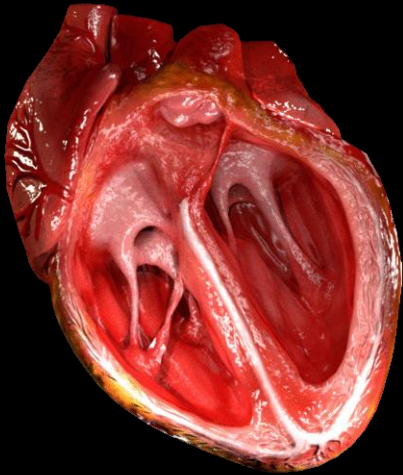
GP

Danes Camp Surgery, Northampton

PALPITATIONS



Cardiac transformation:
A case example of a how a palpitation pathway could run in Primary Care



Dr Yassir Javaid

MBBChir (University of Cambridge)
MA (Hons); FRCP (London); FRCGP (London)
GPwSI Cardiology

Assessment of Palpitations



- History
- Examination
- 12 lead ECG



Admit to
Hospital

Outpatient
Cardiology
Referral

Manage in
Primary
Care

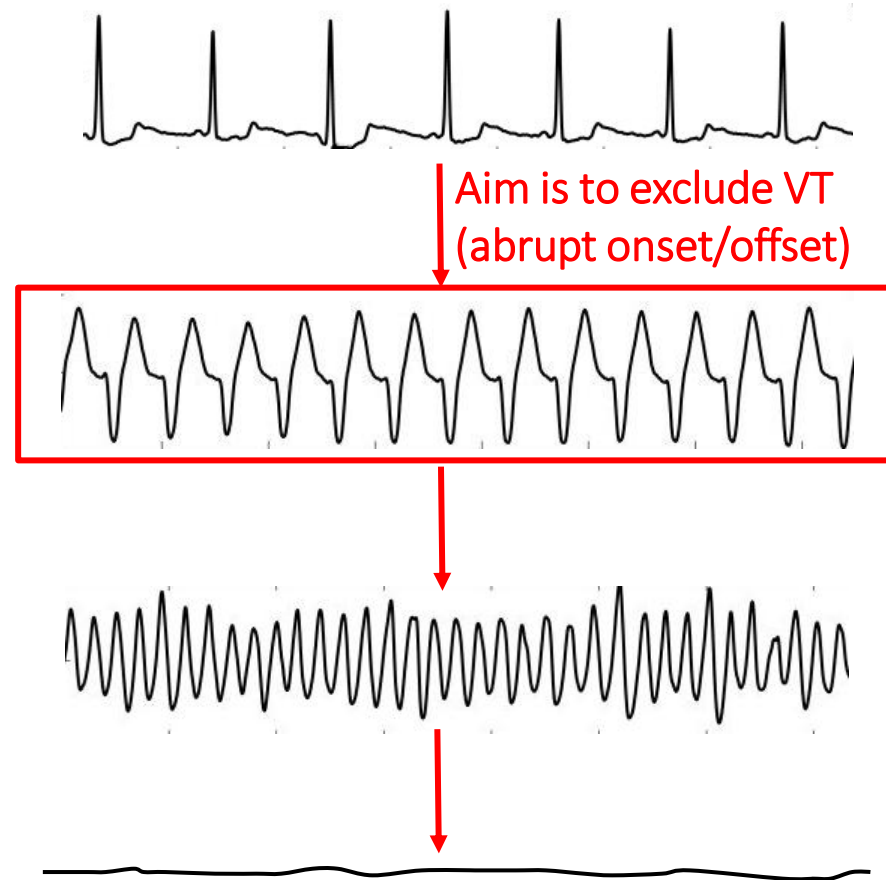
Commonest Causes of Palpitations

- Psychosomatic 31%
- Atrial Fibrillation 16%
- SVT 10%
- Medication / Illicit substances 6%
- Systemic Disease 4%
- Structural Heart Disease 3%
- Ventricular Tachycardia 2%

Palpitations: High-Risk Factors in the History

Summary of High-Risk Factors in the History

- **Pre-existing structural heart disease:**
 - Heart Failure (EF < 35%)
 - **Previous MI**
 - Valve disease
 - Cardiomyopathy eg DCM/HCM
 - Congenital
- **Syncope or Presyncope**
 - indicating a palpitation causing haemodynamic compromise
 - ie possible ventricular arrhythmia
- **Exertional palpitations**
- **FHx SCD < 40 years**



Examination and investigation

- If symptomatic (rare) assess haemodynamic status
- Physical examination (usually normal)
 - Heart rate, rhythm & BP
 - Signs of HF
 - **Abnormal heart sounds and murmurs** point towards underlying structural heart disease
 - Features of sepsis, thyrotoxicosis or anaemia
- Blood tests
 - **FBC**
 - **TFTs**
 - **U&E**

12 Lead ECG is the most important investigation in Primary Care

- ? Arrhythmia present
 - » Atrial Fibrillation
- ? Signs of structural heart disease
 - » High Degree AV block
(2nd degree Type 2 or 3rd Degree)
 - » Previous MI
 - » LVH with strain
 - » LBBB
 - » Repolarisation abnormalities:
Abnormal T wave inversion / ST changes
- ? Clues suggestive of arrhythmic origin
 - » Pre-excitation (Delta wave and short PR)
 - » Elevated QTc interval and T wave morphology

All significant ECG abnormalities
require further investigation

- A normal resting ECG does not exclude significant arrhythmia but makes a life threatening arrhythmia highly unlikely
- **A normal echocardiogram and a normal resting ECG is HIGHLY reassuring**

Palpitations: Risk Stratification

- Skipped beats
- Thumping beats
- Short fluttering
- Slow pounding
AND
- Normal ECG
AND
- No family history
AND
- No structural heart disease

**Low risk: manage in
Primary Care**

- History suggests recurrent tachyarrhythmia
- Palpitations with associated symptoms
AND / OR
- Abnormal ECG
AND / OR
- Structural heart disease

**Refer to cardiology /
arrhythmia care co-ordinator**

- Palpitation during exercise
- Palpitations with syncope / near syncope
- High risk structural heart disease
- Family history of inheritable heart disease / SADS
- High degree atrioventricular block

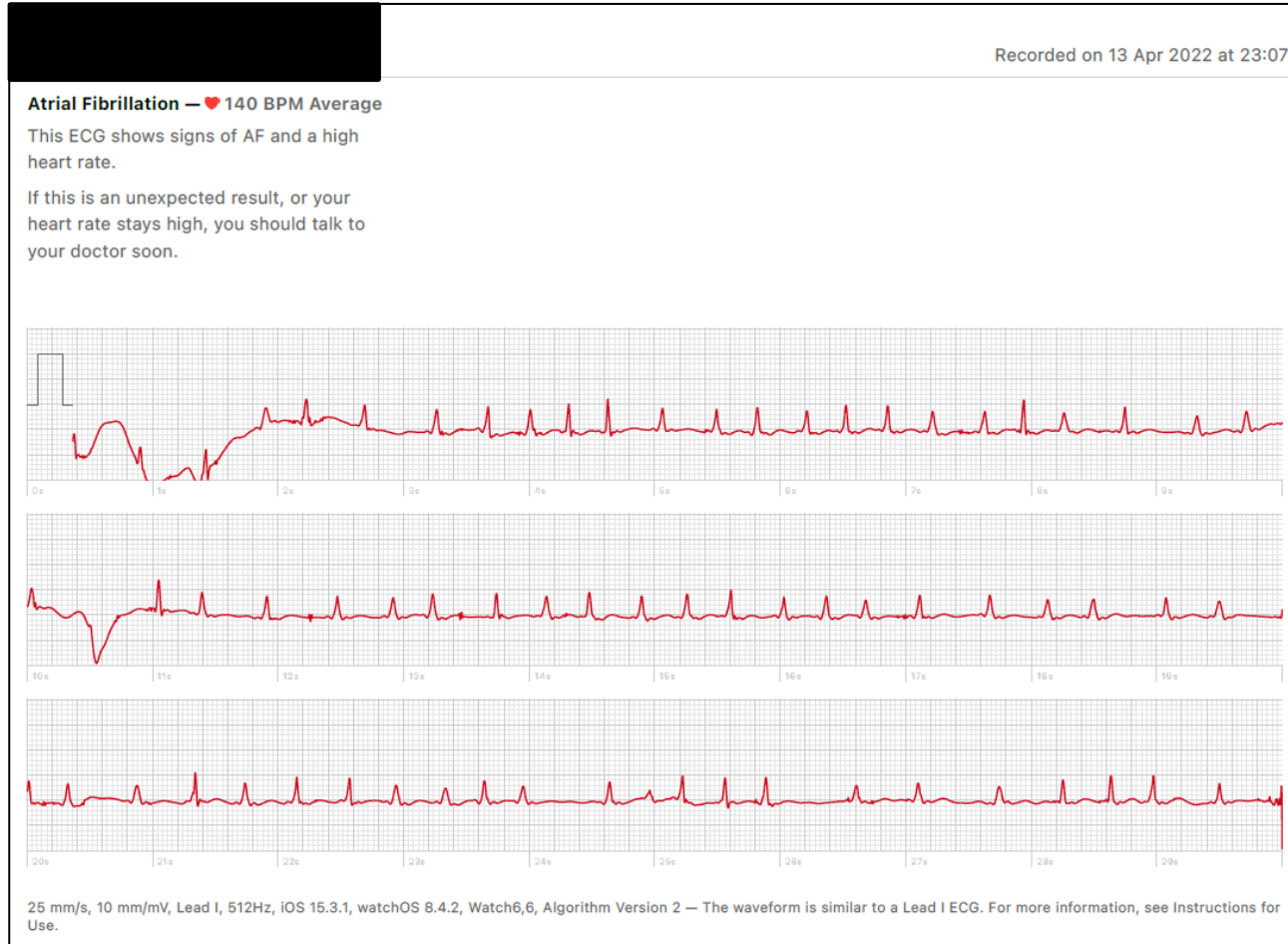
**Refer to cardiology with
urgency**

The Challenge is to Efficiently Capture a palpitation “Episode” on ECG

Case 1: 72 year old retired orthopaedic surgeon

- Palpitations for 6 months (once or twice a month)
- Abrupt onset/offset
- Last for 30mins to 2 hours
- Irregular
- No red flags
- Alcohol+++

Case 1: 72 year old retired orthopaedic surgeon

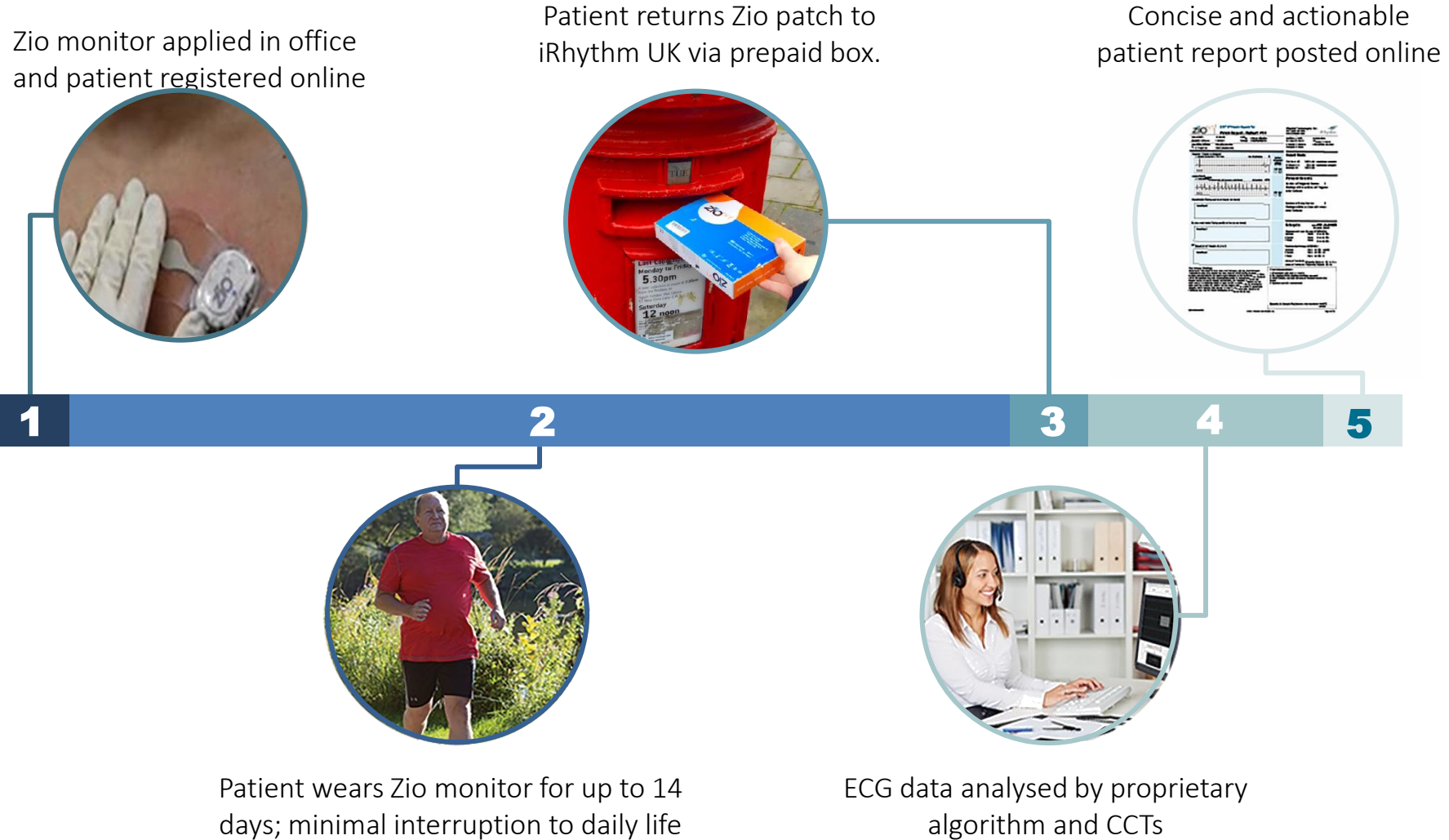


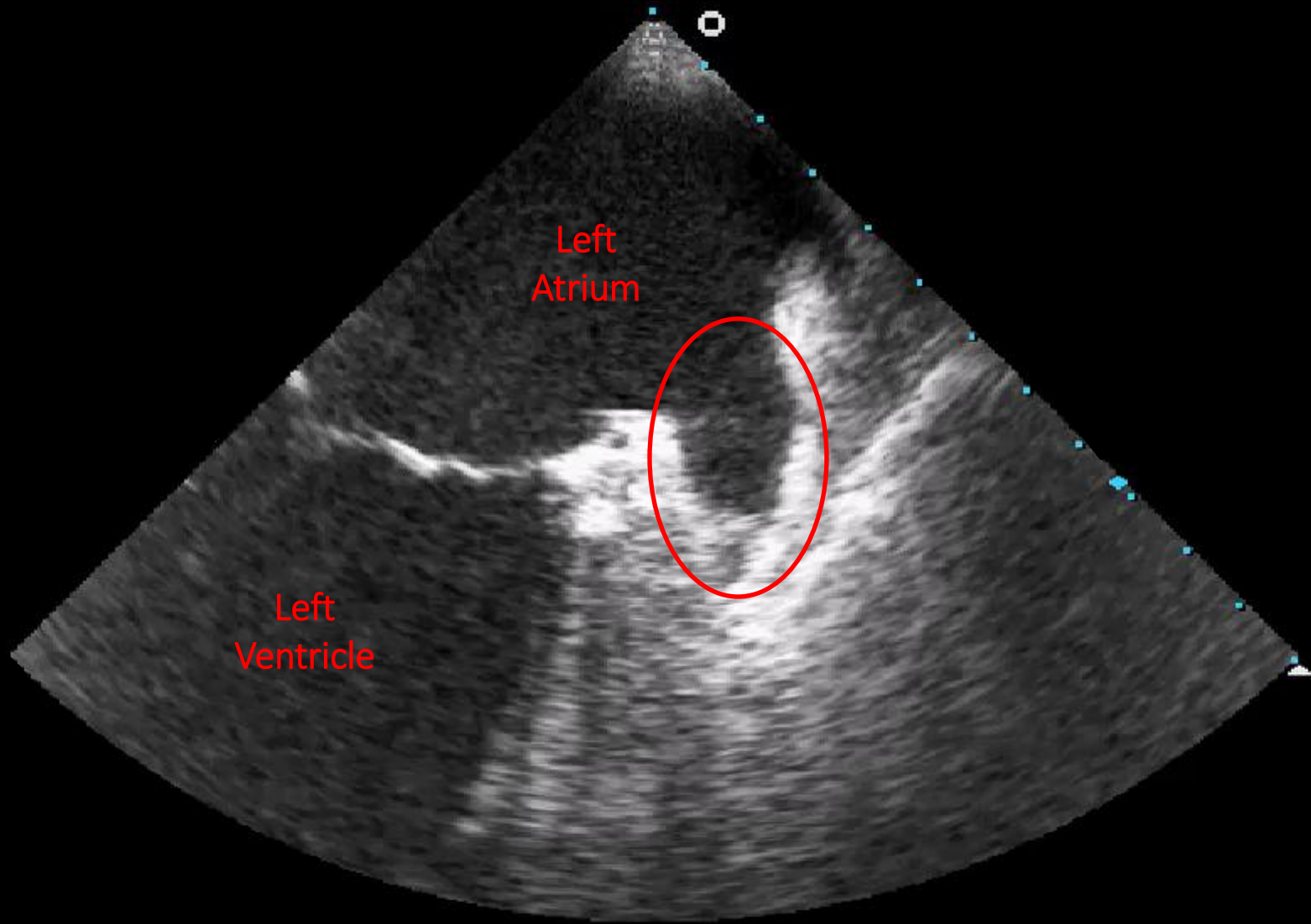
Apple watch

Samsung Galaxy watch

Fitbit sense watch

ZIO Service – Five Easy Steps to an Earlier Diagnosis

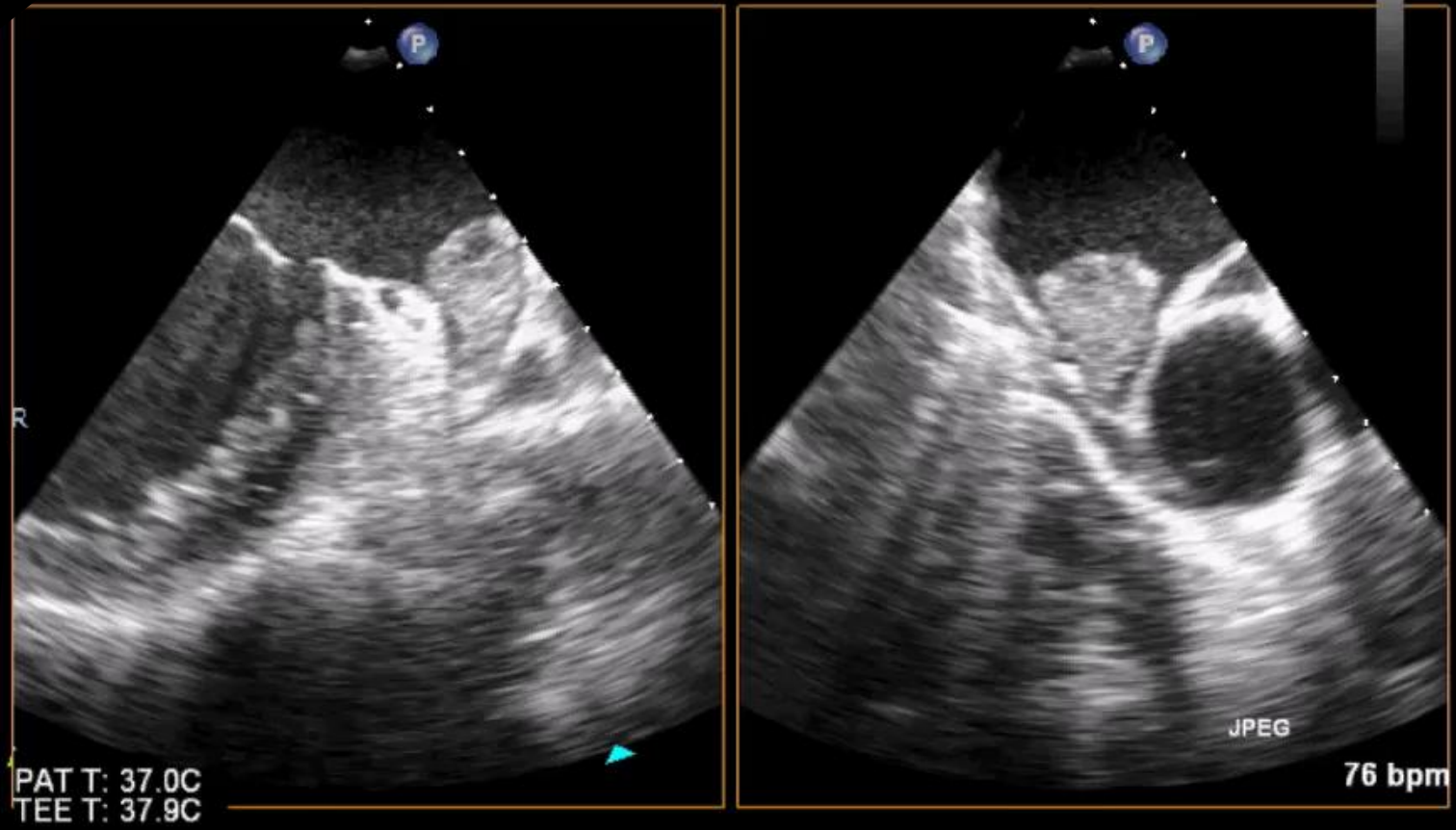




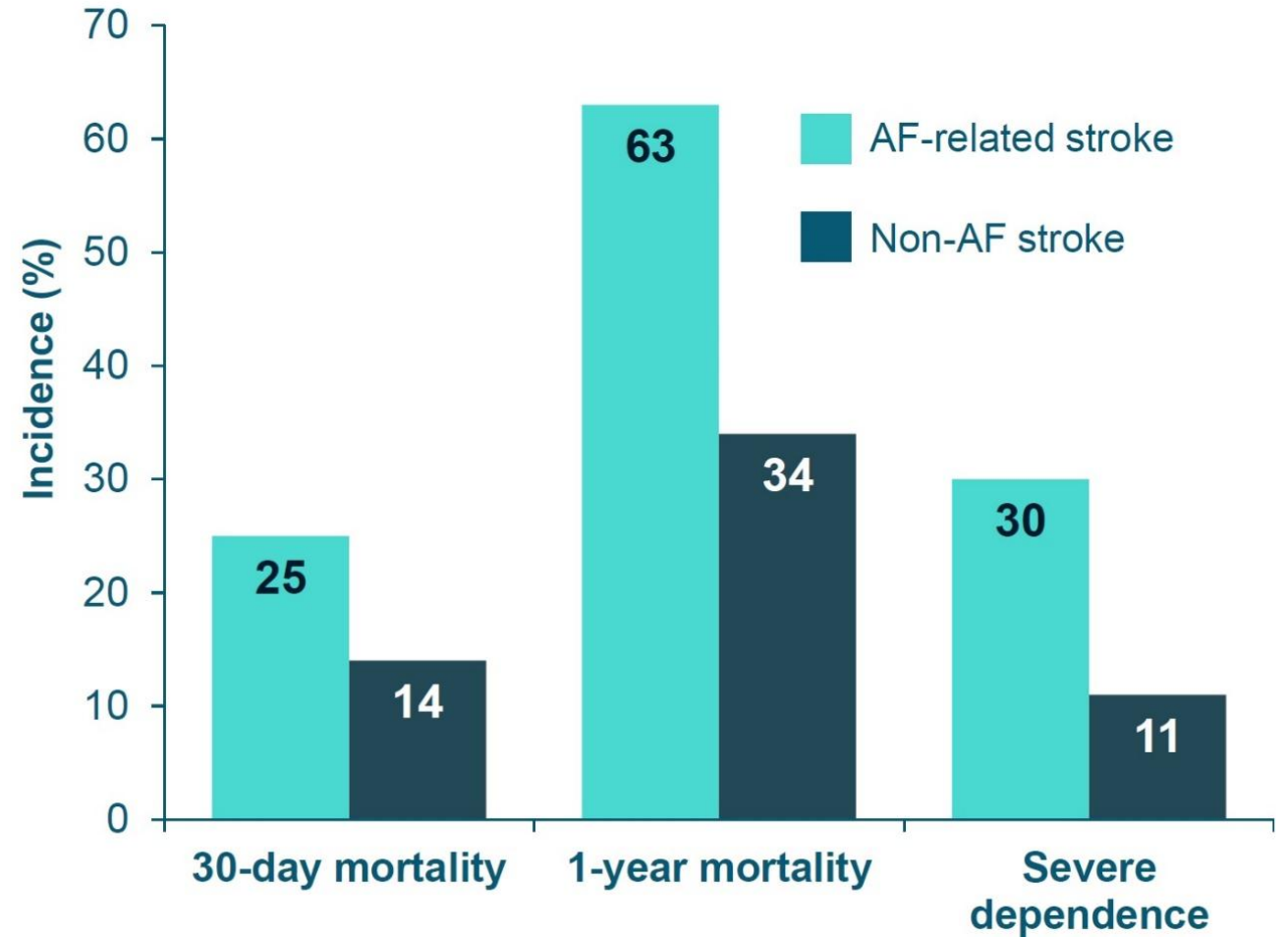
Left
Ventricle

Left
Atrium





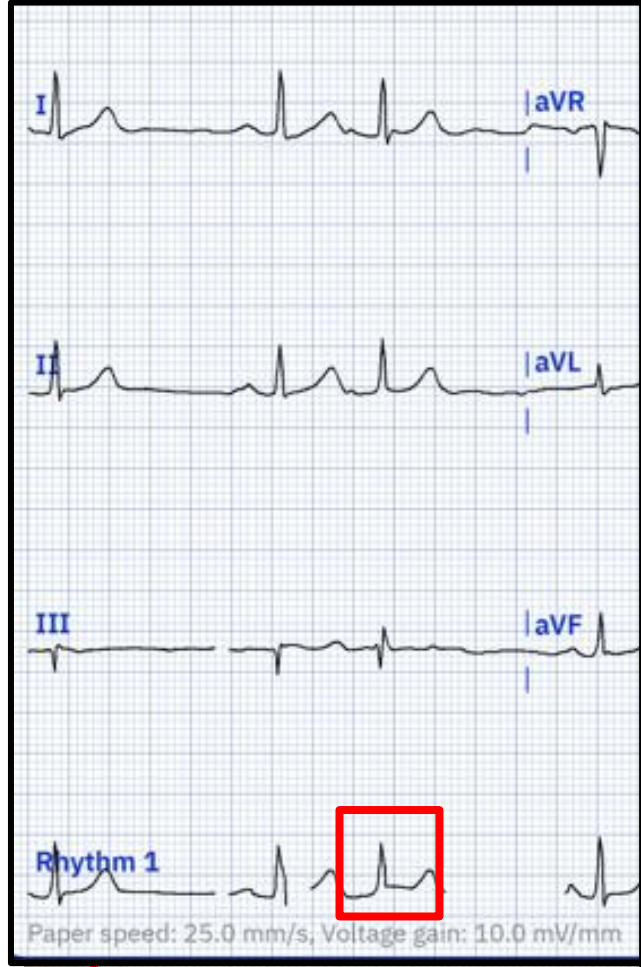
AF strokes have worse outcomes vs non-AF strokes



The Role of AI Assisted Diagnostics

The 12 Lead ECG is a key and high volume test in Primary Care

- Palpitations
- Detection of AF
- Suspected coronary disease and stable angina
- Hypertension reviews
- QT_c analysis for patients on antipsychotics
- Risk stratification:
 - Bradycardia
 - Syncope / presyncope



16:03

< Home

Report QKFXAE

Premature complexes (+1) Apr 17, 2023 63 BPM

Power Club

Diagnoses Parameters Leads

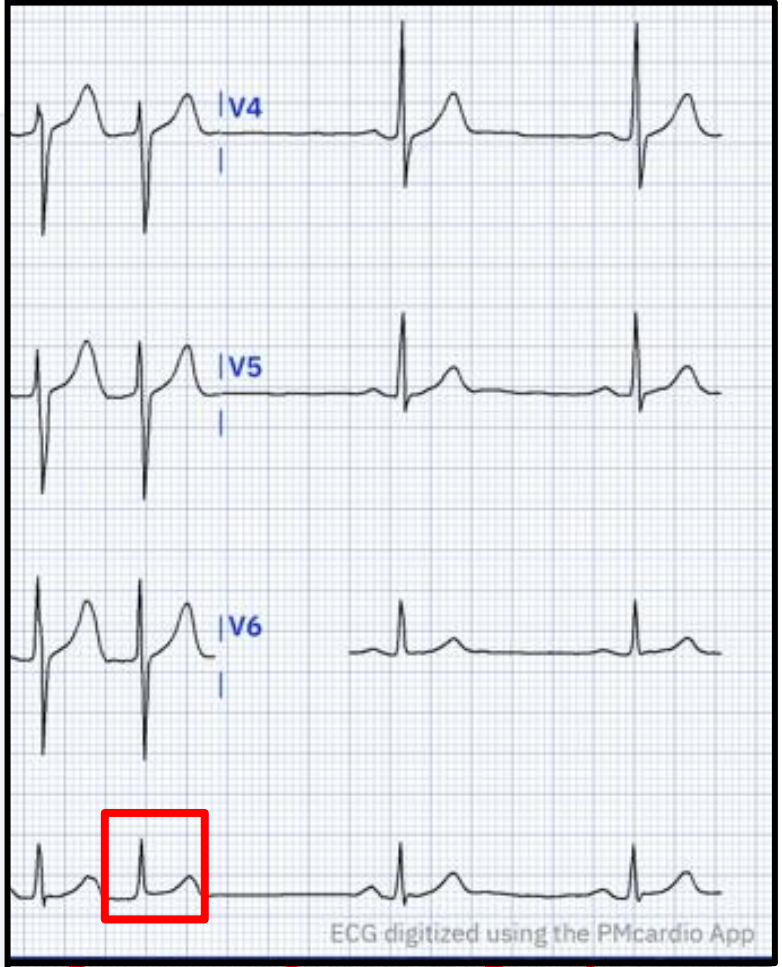
Detected diagnoses

- Premature complexes**
Abnormal High confidence (+)
- Sinus rhythm**
Normal High confidence (+)

[Get recommendation](#)

Overall average values

Cardiac axis	Normal	
PR Interval	172 ms	QRS Duration 95 ms
QT / QTcB	389/401 ms	P Wave 114 ms
RR Interval	939 ms	PP Interval 939 ms

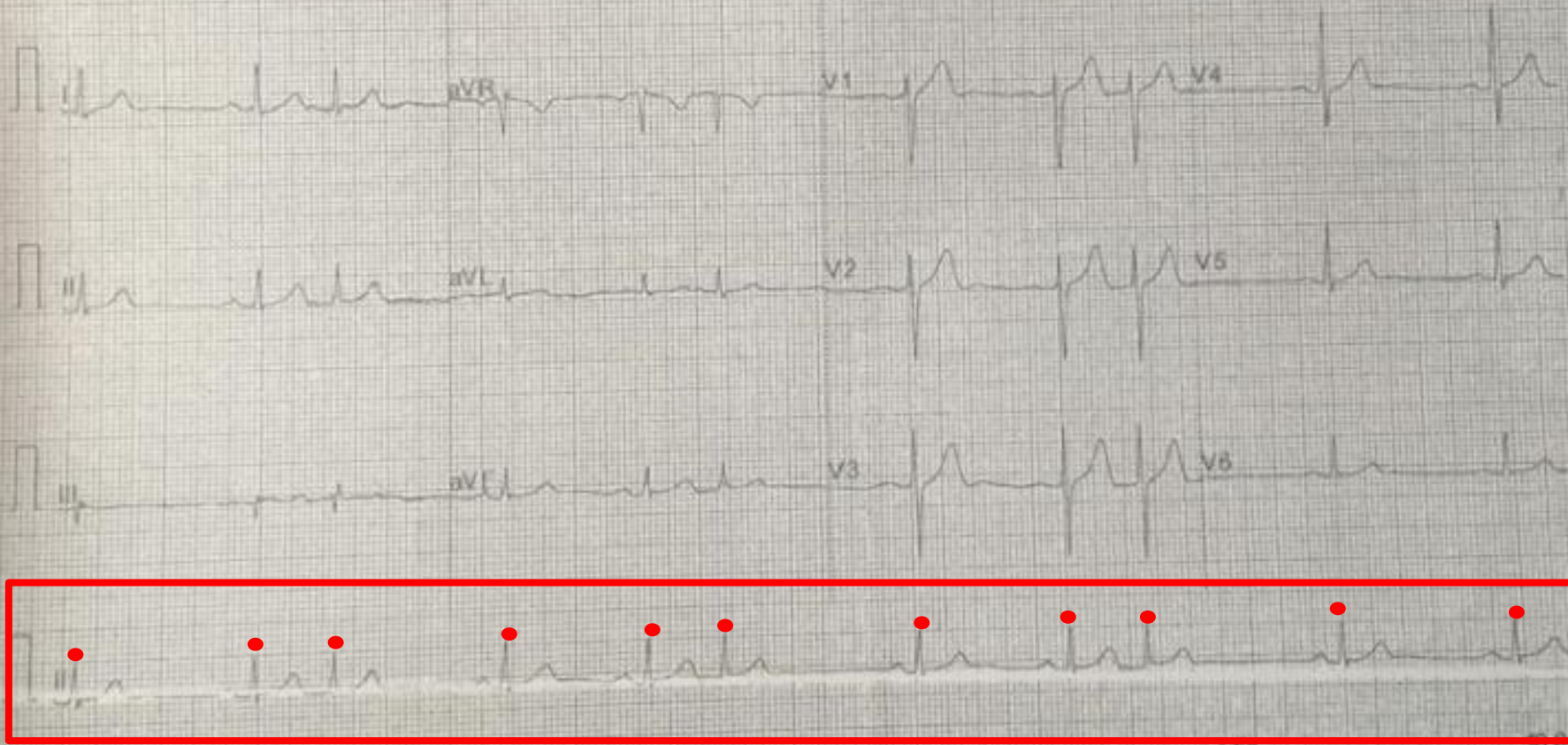


Normal ECG Report

26-10-2018 15:15:41 [Device No: 1132524042]

HR : 63 bpm
P : 144 ms
PR : 212 ms
QRS : 90 ms
QT/QTc : 384/393 ms
P/QRS/T : 41/37/41
RV5/SV1 : 0.973/1.144 mV
QTcFd : 360 ms
QTcHd : 389 ms

Diagnosis:
Atrial fibrillation
Abnormal ECG



78 year old woman with an irregular pulse on diabetic review

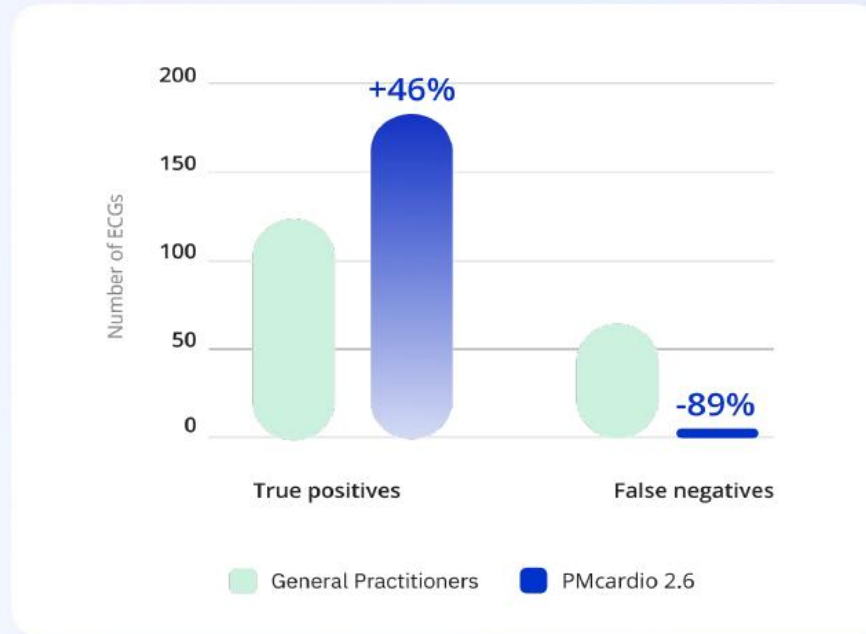




PMcardio

46% average improved detection of atrial fibrillation

Compared to general practitioners, the PMcardio app has demonstrated an average of 46% improved detection of atrial fibrillation (most common cardiac arrhythmia) compared to general practitioners.



Graph 1
Clinical Validation of PMcardio AI ECG Diagnostics Q4 2022. PMcardio diagnostic AI version 2.6 compared to general practitioners in the detection of atrial fibrillation.

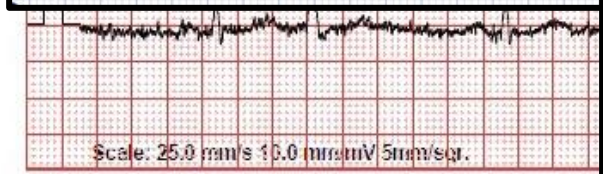
3x4 Simultaneous ECG Report

Patient Details

Name:
ID:
Gender: Male
Date of Birth: (79 years)
Height: 0 cm
Weight: 0 kg

Recording Details

Recorded: 27/0
Device: CL
Location:



16:09

< Home

Report QNHMRS

Premature complexes (+1) Apr 17, 2023 **71** BPM

Power Club

Diagnoses Parameters Leads

Detected diagnoses

- Premature complexes**
Abnormal High confidence
- Sinus rhythm**
Normal Mid confidence

Get recommendation

Overall average values

Cardiac axis	Normal
PR Interval	180 ms
QRS Duration	98 ms
QT / QTcB	427/464 ms
P Wave	111 ms
RR Interval	845 ms
PP Interval	845 ms

Share Export ECG More

Comments:

ECG traces for leads V4, V5, and V6. The V6 strip shows a premature complex highlighted with a red box. ECG digitized using the PMcardio App.

Filters: 0.05 - 150 Hz

Report EJKREE 77

Sinus rhythm Apr 17, 2023 BPM

Power Club

Diagnoses Parameters Leads

Detected diagnoses

Sinus rhythm +
Normal High confidence

[Get recommendation](#)

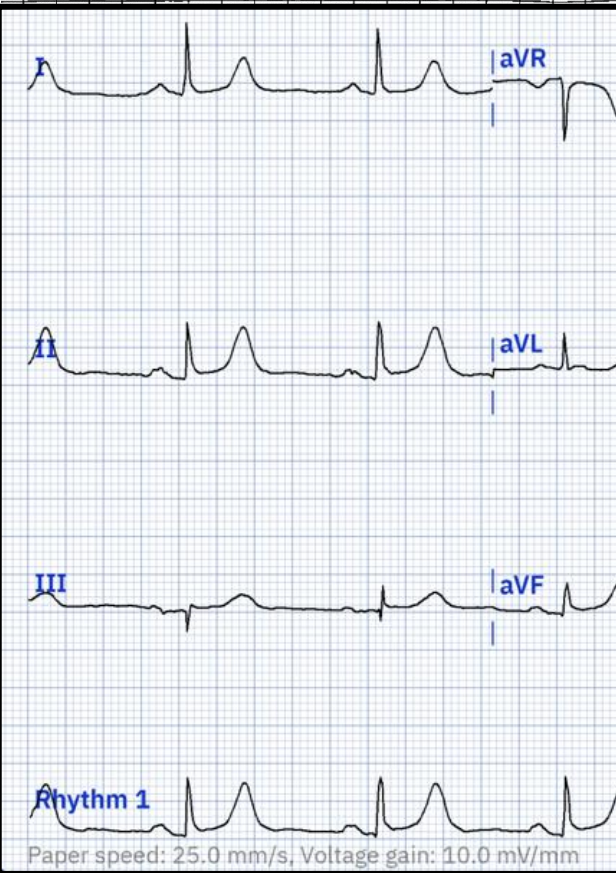
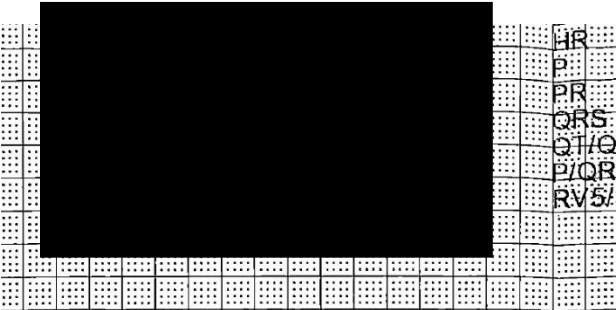
Overall average values

Cardiac axis	Normal	
PR Interval	QRS Duration	
175 ms	88 ms	
QT / QTcB	P Wave	
369/419 ms	119 ms	
RR Interval	PP Interval	
775 ms	775 ms	

Treatment recommendations version EU-DT-ESC-1.0.1

Vent. rate	79
PR interval	* r
QRS duration	86
QT/QTc	368/419
P duration	110
RR interval	759





0.0s 2.5s
0.67-150Hz AC50 25mm/s 10mm/m

16:14

Home

Report HZBOFD

Sinus bradycardia Apr 17, 2023 **59** BPM

Power Club

Diagnoses Parameters Leads

Detected diagnoses

Sinus bradycardia
Abnormal High confidence

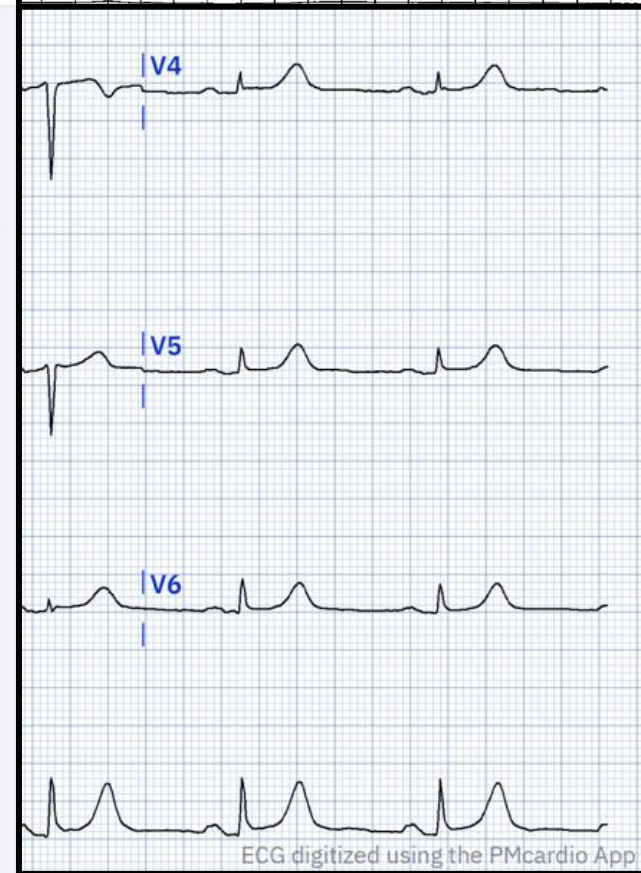
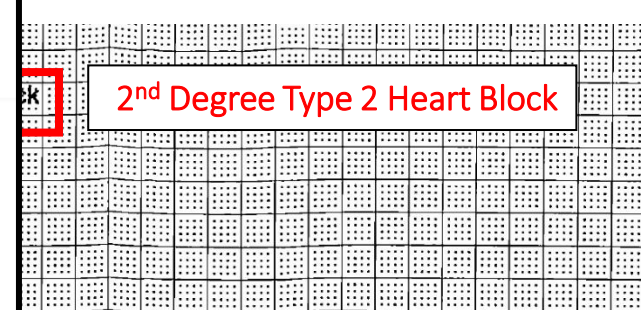
Get recommendation

Overall average values

Cardiac axis	Normal	
PR Interval	170 ms	QRS Duration 88 ms
QT / QTcB	429/428 ms	P Wave 118 ms
RR Interval	1008 ms	PP Interval 1008 ms

Treatment recommendations version EU-DT-ESC-1.0.1

Share Export ECG More



7.5s 10.0s
ECG digitized using the PMcardio App

Issues in relation to 12 Lead ECG interpretation in Primary Care

- Huge variation in ECG interpretation skills amongst primary care HCPs (low volumes to maintain skills)
- Over reliance on integrated ECG interpretative software with low negative and positive prediction results in:
 - Unnecessary referrals and advice & guidance
 - Misdiagnosis
 - Underdiagnosis

} Compromises efficiency, quality and safety
- Non-availability of real-time high quality ECG analysis reduces efficiency of primary care work up and increase follow up/reviews
 - Patients cannot often not be managed or reassured at the time of their ECG appointment



AI-Powered ECG Interpretation Leveraging Millions of Patient Cases

Join more than 25,000 healthcare professionals who are already taking advantage of Artificial Intelligence with PMcardio!

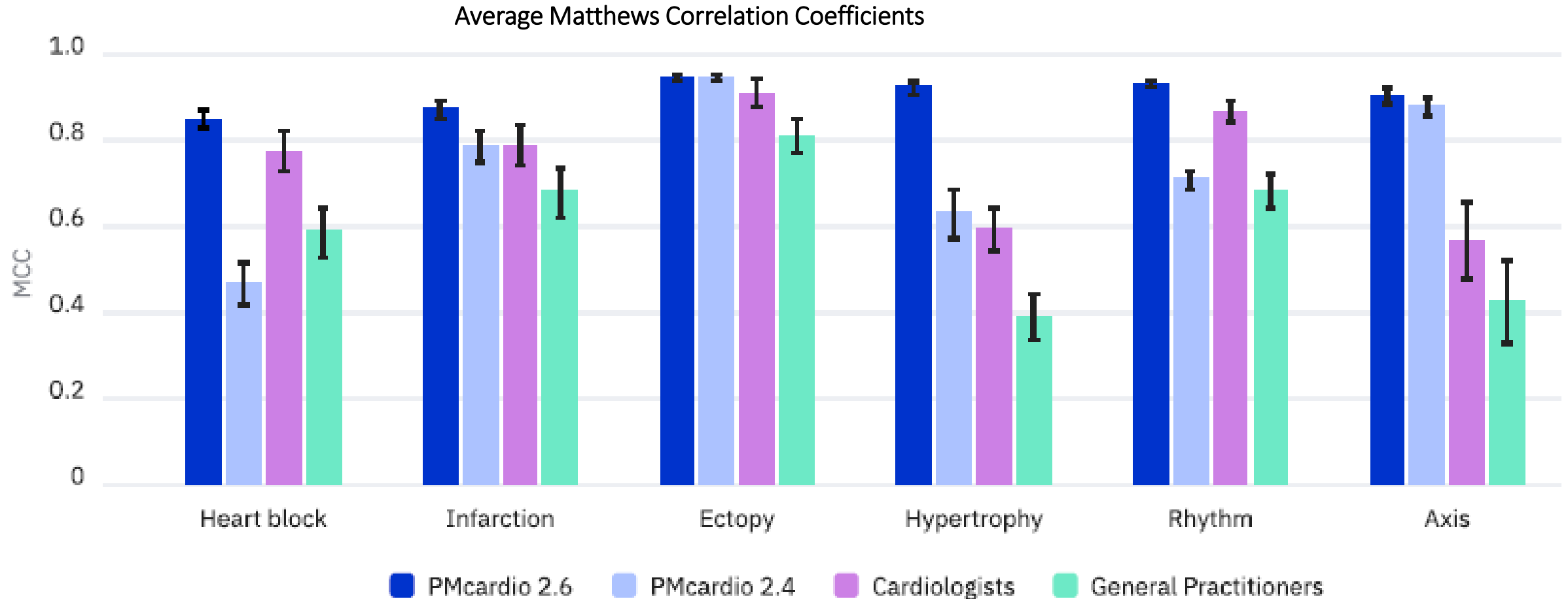
The expertise of a cardiologist whenever you need it



SUPPORTED DIAGNOSES



6 cardiologists & 3 GPs vs PMcardio diagnostic AI: A comparative benchmark of 11,932 ECGs



Diagnostic accuracy of the PMcardio smartphone application for artificial intelligence–based interpretation of electrocardiograms in primary care (AMSTELHEART-1)

Jelle C.L. Himmelreich, MD, MSc,¹ Ralf E. Harskamp, MD, PhD¹

From the Department of General Practice, Amsterdam UMC location University of Amsterdam, Amsterdam, Netherlands, and Personalized Medicine, Amsterdam Public Health, Amsterdam, Netherlands.

BACKGROUND The use of 12-lead electrocardiogram (ECG) is common in routine primary care, however it can be difficult for less experienced ECG readers to adequately interpret the ECG.

OBJECTIVE To validate a smartphone application (PMcardio) as a stand-alone interpretation tool for 12-lead ECG in primary care.

METHODS We recruited consecutive patients who underwent 12-lead ECG as part of routinely indicated primary care in the Netherlands. All ECGs were assessed by the PMcardio app, which analyzes a photographed image of 12-lead ECG for automated interpretation, installed on an Android platform (Samsung Galaxy M31) and an iOS platform (iPhone SE2020). We validated the PMcardio app for detecting any major ECG abnormality (MEA, primary outcome), defined as atrial fibrillation/flutter (AF), markers of (past) myocardial ischemia, or clinically relevant impulse and/or conduction abnormalities; or AF (key secondary outcome) with a blinded expert panel as reference standard.

RESULTS We included 290 patients from 11 Dutch general practices with median age 67 (interquartile range 55–74) years; 48% were

female. On reference ECG, 71 patients (25%) had MEA and 35 (12%) had AF. Sensitivity and specificity of PMcardio for MEA were 86% (95% CI: 76%–93%) and 92% (95% CI: 87%–95%), respectively. For AF, sensitivity and specificity were 97% (95% CI: 85%–100%) and 99% (95% CI: 97%–100%), respectively. Performance was comparable between Android and iOS platform (kappa = 0.95, 95% CI: 0.91–0.99 and kappa = 1.00, 95% CI: 1.00–1.00 for MEA and AF, respectively).

CONCLUSION A smartphone app developed to interpret 12-lead ECGs was found to have good diagnostic accuracy in a primary care setting for major ECG abnormalities, and near-perfect properties for diagnosing AF.

KEYWORDS Electrocardiogram; Smartphone; Atrial fibrillation; Cardiac arrhythmia; Primary care; Digital health

(Cardiovascular Digital Health Journal 2023; ■:1–11) © 2023 Heart Rhythm Society. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

AI ECG Interpretative Technology

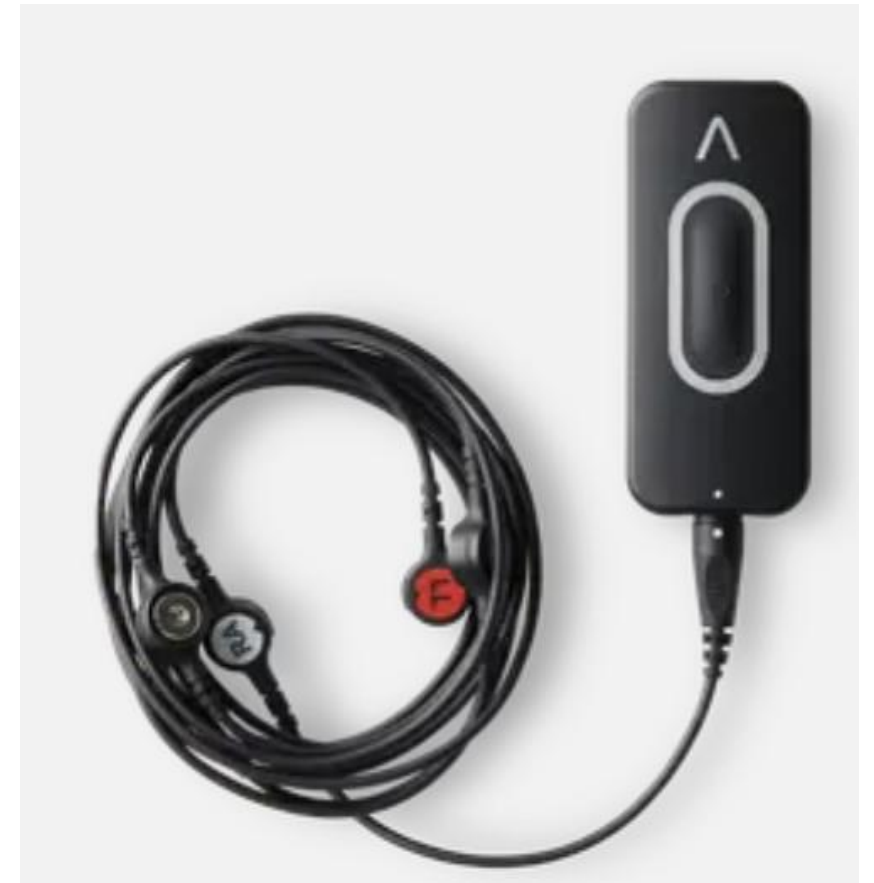
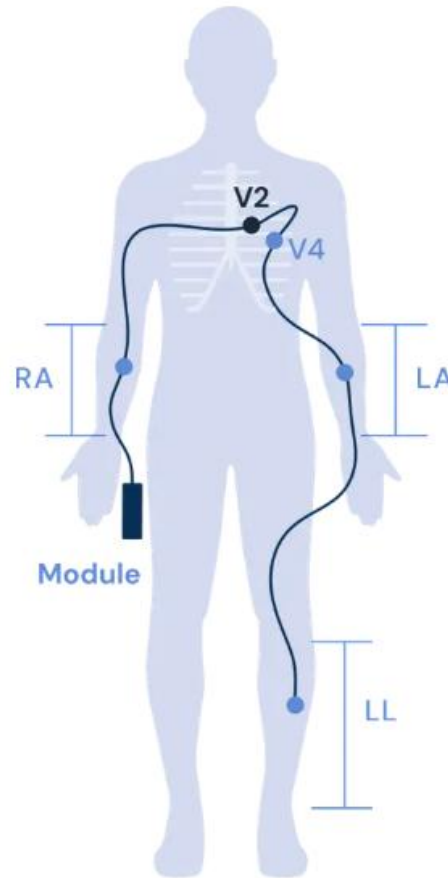
- ECG interpretation in < 5 secs
- Exceptionally high positive & negative predictive value (as good as a cardiologist)
- Immediate guideline based recommendations
- Reduction of unnecessary referrals and unwarranted variation
- Allows for immediate patient management or reassurance

AI ECG Interpretative Technology

- ECG interpretation in < 5 secs
- Exceptionally high positive & negative predictive value (as good as a cardiologist)
- Immediate guideline based recommendations
- Reduction of unnecessary referrals and unwarranted variation
- **Allows for immediate patient management or reassurance**

Kardia 12L MOBILE 12-LEAD ECG SYSTEM (FDA APPROVED)

- The future for obtaining accurate, rapid and reproducible diagnostic 12 lead ECGs in primary care



AI trained with one million ECGs and FDA cleared

Recorded Leads

Derived Leads

Synthesized Leads



Default Lead Set

I
II
V2
V4

III
aVR
aVL
aVF

V1
V3
V5
V6



Alternate Lead Set

I
II
V1
V4

III
aVR
aVL
aVF

V2
V3
V5
V6

Patient 005
Kardia 12L

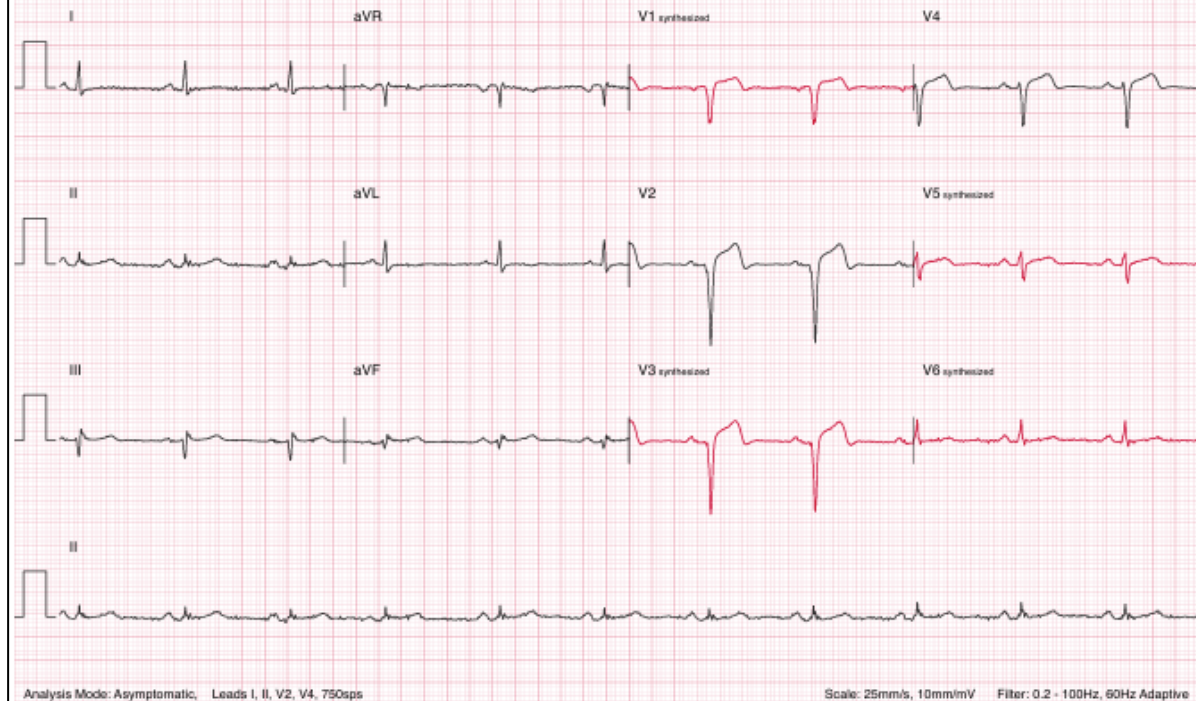
Patient: 005, Male, 65 yrs
Recorded: 20 Sep 2023 at 11:36 AM

Heart Rate: 66 bpm
PR Interval: 163 ms
QRS Duration: 104 ms
QT / QTcB / QTcF: 394 / 412 / 406 ms
P / QRS / T Axis: 48° / 10° / 67°

Interpretation: (Unconfirmed - must be reviewed by a qualified physician)

Normal Sinus Rhythm
Old Anterior MI
Old Lateral MI
Acute Anterior MI

Warning: Interpretation Hazard: Only 8 standard leads instead of 12 leads are provided and used for automated analysis. The 4 synthesized chest leads are not intended for diagnostic use and may fail to show important findings limited to those leads.



Patient 005
Conventional
12-Lead

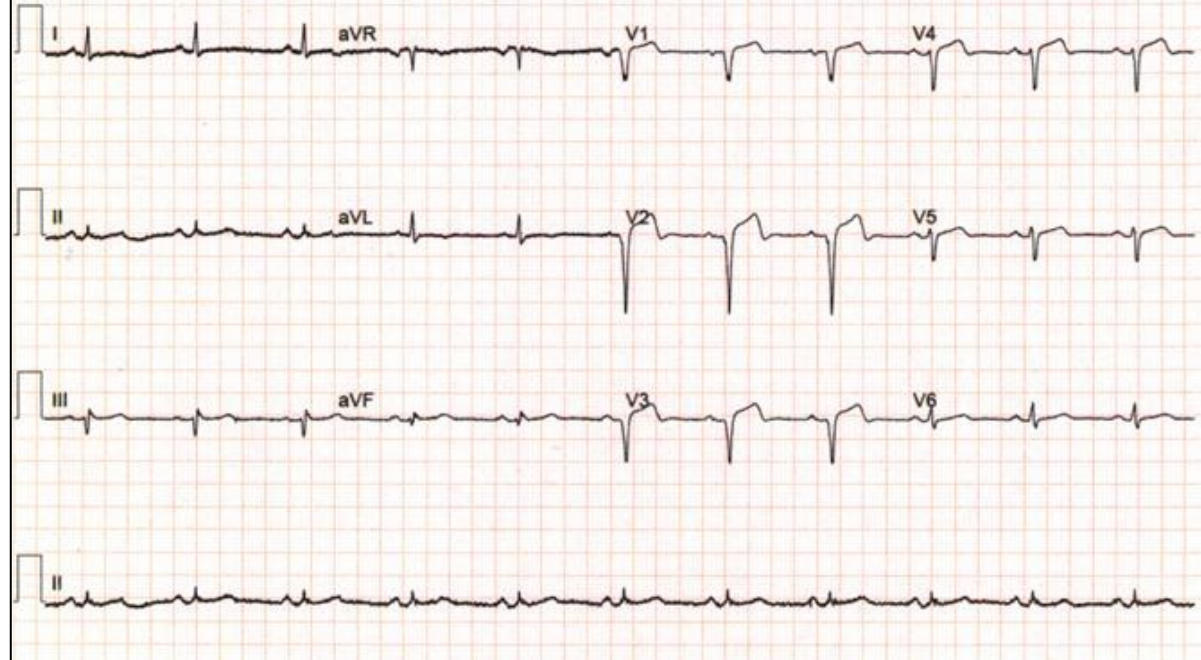
ID# [REDACTED]-005
55yr
Male Unknown
Med: .
Location: Room:
Comment:

20-Sep-2023 11:34:04

Vent rate: 65 BPM
PR int: 170 ms
QRS dur: 117 ms
QT/QTc: 364 / 376 ms
P-R-T axes: 50 13 85

SINUS RHYTHM
ANTEROSEPTAL MYOCARDIAL INFARCTION, POSSIBLY ACUTE
ACUTE MI

This electrocardiogram has been performed by [REDACTED] and electronically interpreted and signed by [REDACTED] on Thursday, September 21, 2023 6:21



Kardia 12L detects 35 determinations

Rhythm Determinations

Normal Sinus Rhythm
Sinus Rhythm
Atrial Fibrillation
Atrial Flutter
1st Degree AV Block
High degree AV block (including 2nd and 3rd degree AV blocks)
Sinus Arrhythmia
Marked Sinus Arrhythmia
Paced Rhythm
Marked Bradycardia (SR, Bradycardia)
Junctional Rhythm
Sinus Tachycardia (SR, Tachycardia)
Bigeminy
PVCs

Morphology Determinations

Right bundle branch block (RBBB)
Left bundle branch block (LBBB)
Other Intraventricular Block
Left Ventricle Hypertrophy (LVH)
Right Ventricle Hypertrophy (RVH)
Right Atrial Enlargement (RAE)
Left Atrial Enlargement (LAE)
Old Anterior MI
Old Inferior MI
Old Lateral MI
Acute Anterior MI
Acute Inferior MI
Acute Lateral MI
Anterior Ischemia
Inferior Ischemia
Lateral Ischemia
Early Repolarization
Prolonged QT
Paced ECG
Wolff-Parkinson-White (WPW)
Normal ECG

Kardia 12L algorithm has an average overall accuracy* comparable to GE 12SL algorithm using full 12-lead ECG

82.8%

Kardia 12L
Average overall accuracy

VS

82.9%

GE 12SL
Average overall accuracy

*Average overall accuracy = Average of sensitivity and specificity for rhythm and morphology, all modes
Kardia 12L data from 500K ECG validation set from Mayo Clinic*

Diagnostic accuracy of a mobile, artificial intelligence-guided, 12-lead ECG device



Seabrook Whyte, Irina Mustafina, Karlie Sample, Joel Xue, David Albert, Stavros Stavrakis

Background

- Single-lead, mobile ECG devices have enhanced the feasibility of arrhythmia diagnosis. However, the diagnosis of other cardiac pathologies is hindered by the use of a single lead, as compared to a traditional 12-lead ECG. The AliveCor Kardia 12L device is a novel device that can record a 12-lead ECG.

Objective(s)

- In this study, we evaluated the accuracy of Kardia 12L devices as compared to a 12-lead ECG

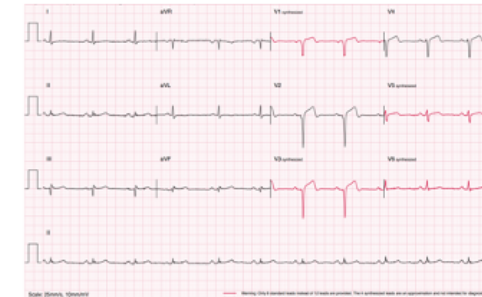
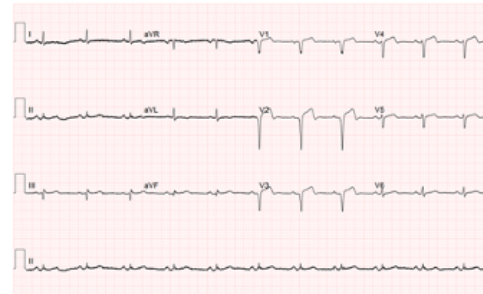
Method

- Patients seen in an outpatient cardiology clinic were enrolled in the study. Kardia 12L (leads I, II, V2 and V4) was obtained simultaneously in 50 patients and sequentially in 150 patients along with a standard, resting 12-lead ECG in the supine position
- Kardia 12L uses multiple Deep Neural Network models to expand the 7 leads into a complete 12-lead ECG, measure global intervals, determine cardiac rhythm and morphology.
- Median beats from each method were compared using Pearson's correlation and Bland-Altman plots



Results

- Two hundred patients (mean age 51±18 years, 55% female)
- Correlation between Kardia 12L and 12-lead ECG with $p < 0.001$
- AC sensitivity was 0.98 for sinus rhythm and 0.91 for atrial fibrillation
- AC specificity was 1.0 for sinus rhythm and 1.0 for atrial fibrillation



History	Morphology
44% hypertension	89% normal
30% AF	25% BBB
21% POTS	13% ST-T
7% HFrEF	11% MI
6% SVT	7% LVH
6% AV-block	2% paced
5% coronary artery disease	1% p-abnormalities
5% SSS	
4% HFpEF	
3% PVC	
1% WPW	
1% aortic stenosis	

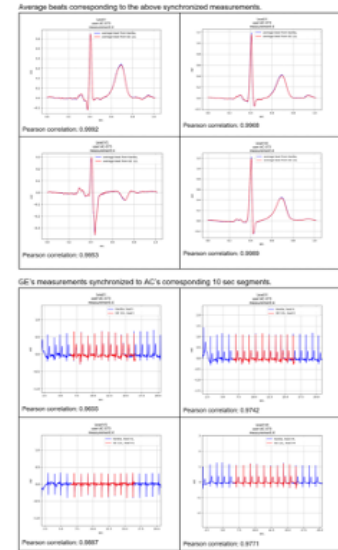
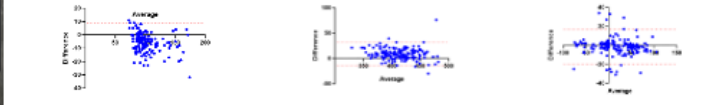
	12L/V1	12L V2
Vent rate	0.96	1.0
PR Interval	0.95	0.9
QRS duration	0.88	0.86
QT duration	0.88	0.88
R axis	0.94	0.96

Lead	ECG	Average Beat
	Correlation 95% CI	Correlation 95% CI
I	0.96955 – 0.97704	0.99214 – 0.99372
II	0.96987 – 0.97733	0.99119 – 0.99301
V1	0.96745 – 0.97763	0.99727 – 0.99790
V2	0.97802 – 0.98759	0.99658 – 0.99776
V4	0.97366 – 0.98047	0.99738 – 0.99785

Difference vs. average: Bland-Altman of Vent Rate - Standard vs V2



Difference vs. average: Bland-Altman of QRS Duration - Standard vs V2



Conclusion

- Kardia 12L data is all highly correlated with the 12-lead ECG, enabling rapid acquisition of complete ECG information
- This approach has significant implications for rapid ECG diagnosis in clinical practice

Kardia 12L MOBILE 12-LEAD ECG SYSTEM (FDA APPROVED)

- The future for obtaining accurate, rapid and reproducible diagnostic 12 lead ECGs in community settings
 - Single cable with minimal scope for incorrect electrode placement
 - Minimal requirement for clothing removal
 - Reduced time for ECG acquisition (> 50%) → releasing capacity
 - Clinical efficiency and portability potentially expanding access to 12-lead recordings to more settings:
 - GP surgeries
 - Home visits
 - Nursing homes
 - Pharmacies

Assessment of Palpitations in Primary Care: Key Points

- Most palpitations are benign but are the commonest reason for referral to secondary care cardiology
- The sticking point is efficiently capturing the “episode” and time to diagnosis can make a difference to clinical outcomes
- Embracing innovative technology in Primary care could help address the unmet need
 - Portable ECG devices: patient’s own smart watch, Kardia 6L
- Unwarranted variation in ECG interpretation and over-reliance on ECG machine software adds to the inefficiency
 - Can AI assisted ECG interpretation address this and can AI enhanced 12 lead ECG technology improve capacity, access and reproducibility of obtaining baseline 12 lead “risk assessment” ECGs?

Question Time





Skill Clinic



Dr Husain Khaki
Director
Heart Eye



Mark Connaughton
Consultant Cardiologist
Isle of Wight NHS Trust



Navin Chandra
Consultant Cardiologist
Frimley Health NHS
Foundation Trust

CARDIOVISION 2026

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TO WIN A £100 VOUCHER!

ABHI

AstraZeneca 

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BY iRHYTHM

SPACE LABS
HEALTHCARE

 **Data 4 NHS**
Data providers to the NHS

ProfilerLive

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Refreshments & Networking



Case Study



ProfilerLive

Real-Time Workforce Assurance for Physiological Science Transformation

A digital foundation for safer services, stronger governance and visible workforce readiness

Simon Brown

Director, ProfilerLive

Cardiology Conference | 30 April 2026



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Please scan the QR Code on the screen. This will take you through to Slido, where you can interact with us.





Case Study





Case Study



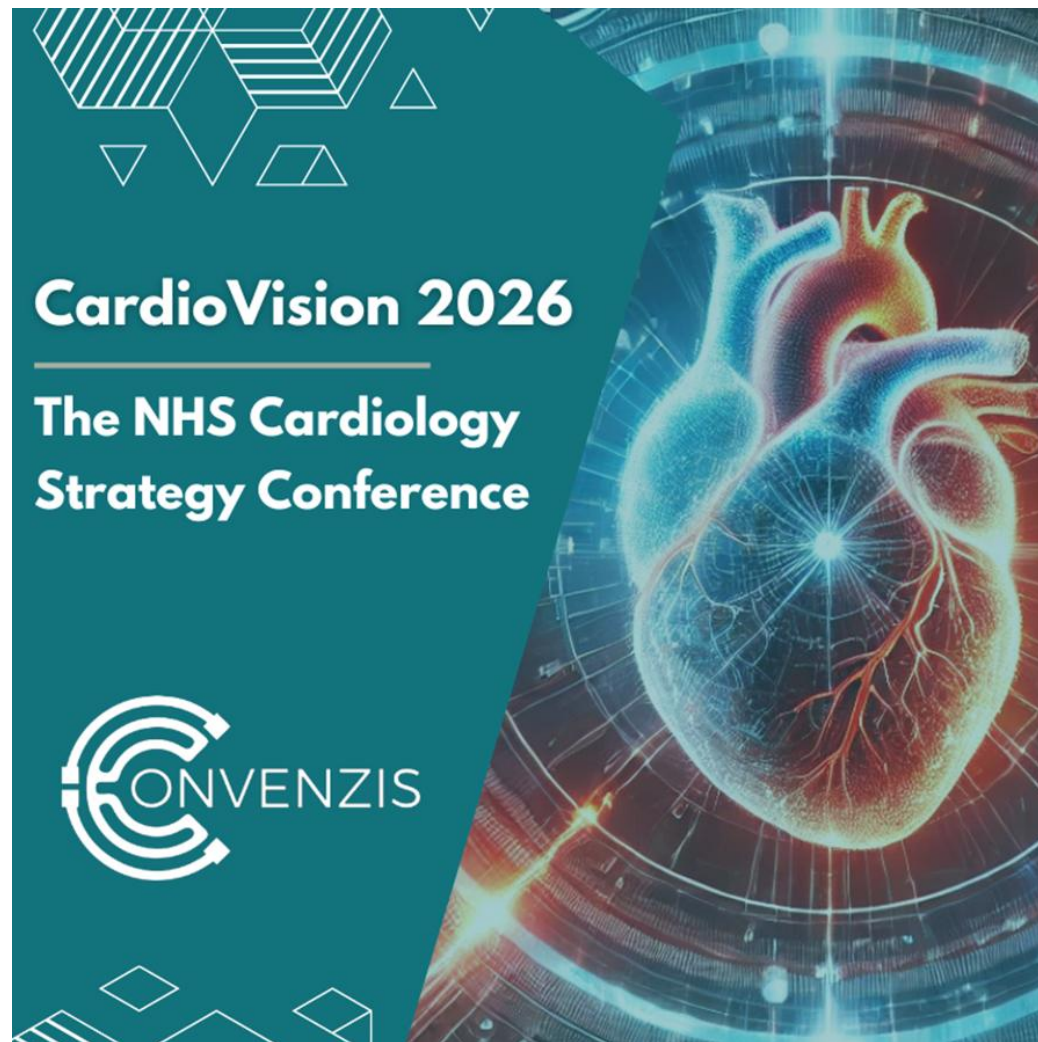
Dr Joseph Mills

***From Pandemic
Innovation to System-
Wide Standardisation:
A Case Study in
Arrhythmia Diagnostics***

Dr Joe Mills

Consultant Cardiologist, Liverpool Heart & Chest
Hospital NHS FT

Clinical Lead: Cheshire & Merseyside Cardiac Network



iRHYTHM[®]

-
- The opinions expressed within this presentation are on behalf of the speaker and do not represent the views of iRhythm.



Disclosures

• Dr Joseph Mills has received transfers of value from:

- Medtronic
- Inspira Health
- Novartis
- iRhythm
- Boston Scientific
- Edwards Lifesciences

M odernise, **O** ptimise & **T** ransform arrhythmia
management -
Time for an arrhythmia pathway **M.O.T**

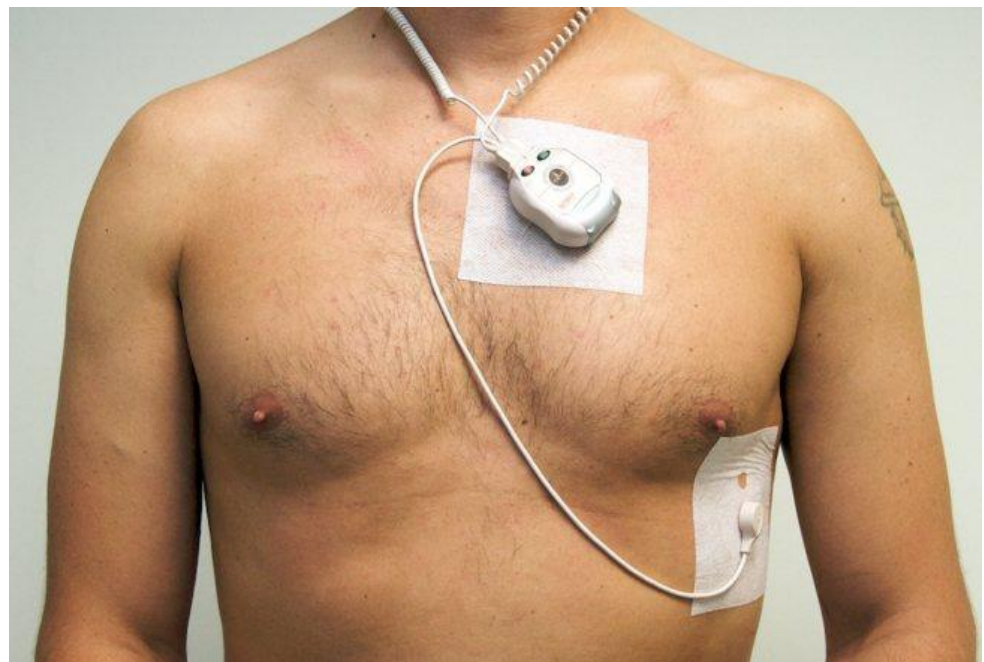
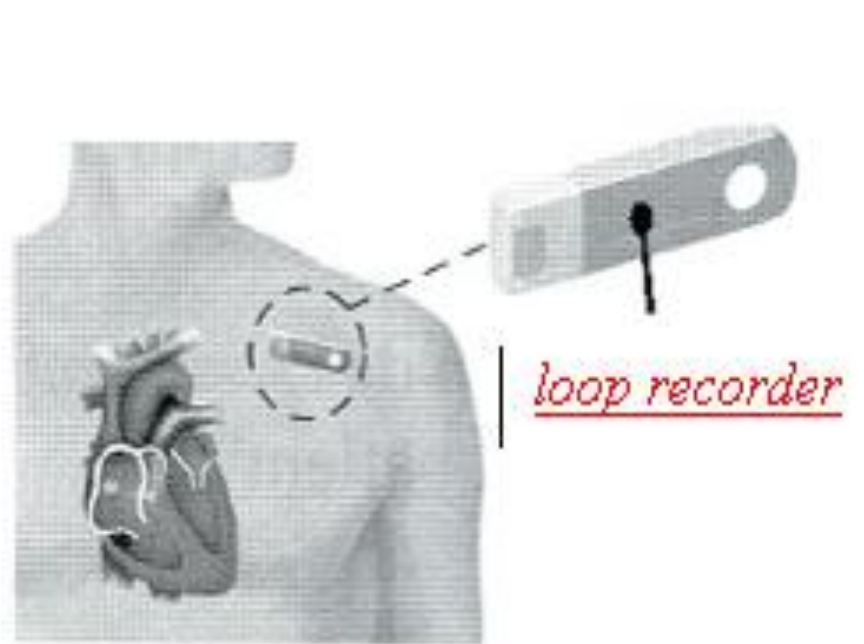
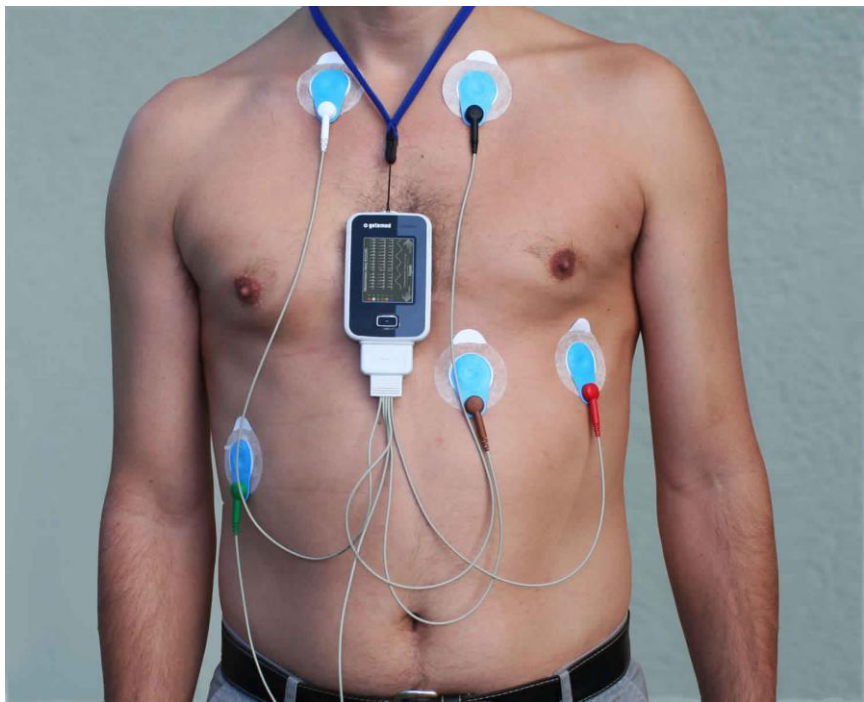
*Transforming patient pathways in the North-
West*

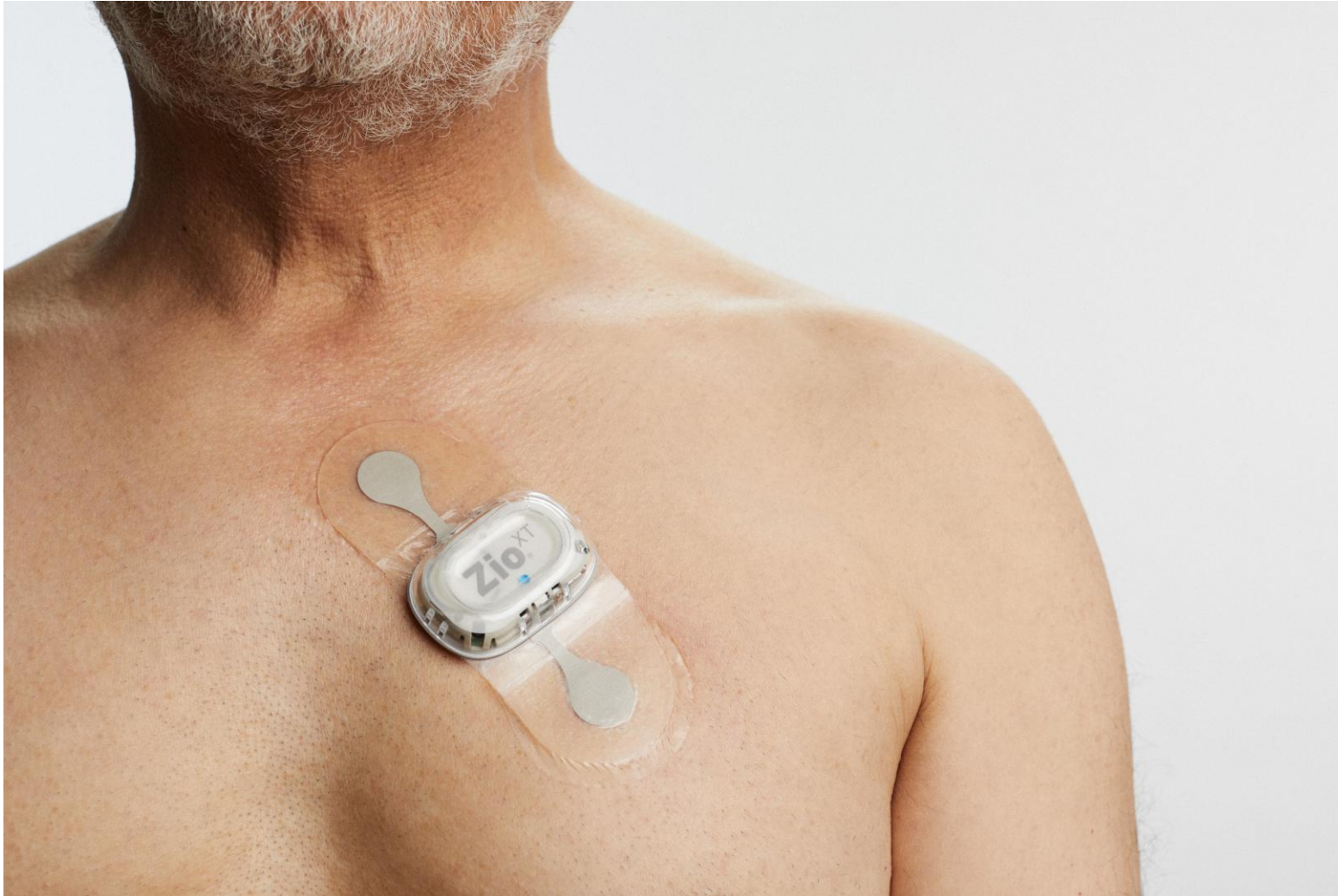
The Ideal Pathway

Dr Joe Mills

Overview:

- Pandemic (& AI) inspired service redesign
- Improved diagnostic yield, outcomes, patient experience & cost-efficacy
- Regional pathway transformation: The Journey (so far)





The Zio™ service is a long-term continuous ambulatory cardiac monitoring service. It consists of the Zio™ XT that collects beat-to-beat ECG data and can be worn for up to 14 days; the Zio™ ECG Utilization Service (ZEUS) System deep learned algorithm which detects arrhythmias. The data is reviewed and curated by a team of Qualified ECG Specialists (QES) to provide the final patient report.

For indications for use, warnings & contraindications visit our website

iRhythm, Zio, Zio XT, MyZio and ZioSuite are trademarks of iRhythm Technologies, Inc. ©2024 All rights reserved.

Zio™ XT and ZEUS are UKCA-marked (UKCA0086)

- Pandemic (& AI) inspired service redesign
- 

Five Easy Steps to an Earlier Diagnosis: Direct-to-patient

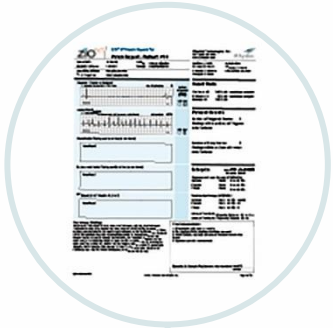
ZIO device/instructions posted to patient – device applied at home



Patient returns Zio patch to iRhythm UK via prepaid box.



Concise and actionable patient report posted online



Patient wears Zio monitor for up to 14 days; minimal interruption to daily life



ECG data analyzed by proprietary algorithm and CCTs

Pioneering a New Standard for Cardiac Detection Algorithms

- iRhythm's deep neural network (DNN) exceeded cardiologist ECG interpretation for all 12 rhythm classes
- DNN optimization built on a proprietary database of 10+ years and >400 million hours of curated data
- Improves the accuracy and scalability of ECG analysis, reducing the rate of misinterpretations and inappropriate patient management
- Manually derived ECG features represent only a fraction of the information rendering feature diagnosis a technique of the past

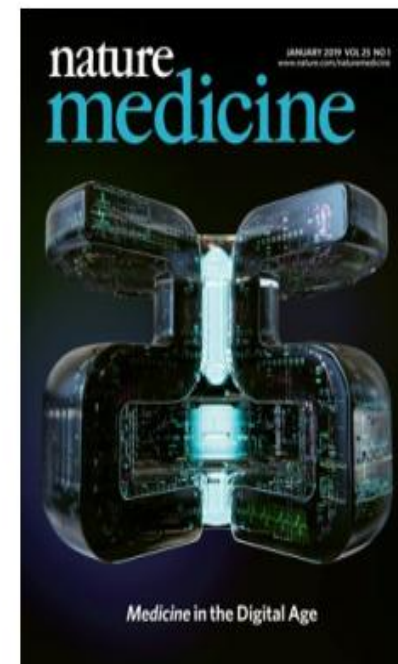
Source: Hannun, Nature Medicine, January 2019

nature
medicine

FOCUS | LETTERS
<https://doi.org/10.1038/s41591-018-0268-3>

Cardiologist-level arrhythmia detection and classification in ambulatory electrocardiograms using a deep neural network

Awni Y. Hannun^{1,6*}, Pranav Rajpurkar^{1,6}, Masoumeh Haghpanahi^{2,4}, Geoffrey H. Tison^{3,6},
Codie Bourn⁷, Mintu P. Turakhia^{4,5} and Andrew Y. Ng¹



Birch Lounge
Allergies: No Known Allergies

Order: ECG - Ambulatory Monitoring ZIO 14 Day

Order ID: 001417SCR

Requested By: MILLS, JOE

Template Name: ECG - Ambulatory Monitoring ZIO 14 Day -

Messages:

All monitoring requests default to this !

NOTE: Scheduled Date to be Completed by Cardiac Diagnostic Administration Staff Only

NOTE: Is This Test to be Scheduled for a Future Appointment?

Select

If Yes, Approximate Time to be Scheduled

Clear

Test Scheduled Date

- Next Available Slot
- Attached to Next OPD Appointment
- Other Timeframe / Additional Information

ACHD Patient?

Care Level

ISCV Modality

ISCV Order

Clear

NHS

ISCV Order

Yes

Priority of Test to be Scheduled

Symptoms

Clear

- Palpitations (Symptoms Not Daily)
- Pre Syncope / Dizziness (Symptoms Not Daily)
- Syncope
- Suspected AF due to Symptoms / Embolic Event

Pacemaker/ICD:

Clear

No Yes

Relevant History and Cardiac Medication

Repeat

View Document

OK

Cancel



Search



13:07

17/04/2026

AI device cuts waiting times for heart patients to 'matter of days'

New technology tested on patients in Liverpool has provided dramatic results



 [Comments 0](#)

A trial of artificial intelligence coupled with a new medical device has provided dramatic results in heart patients at a Liverpool hospital.

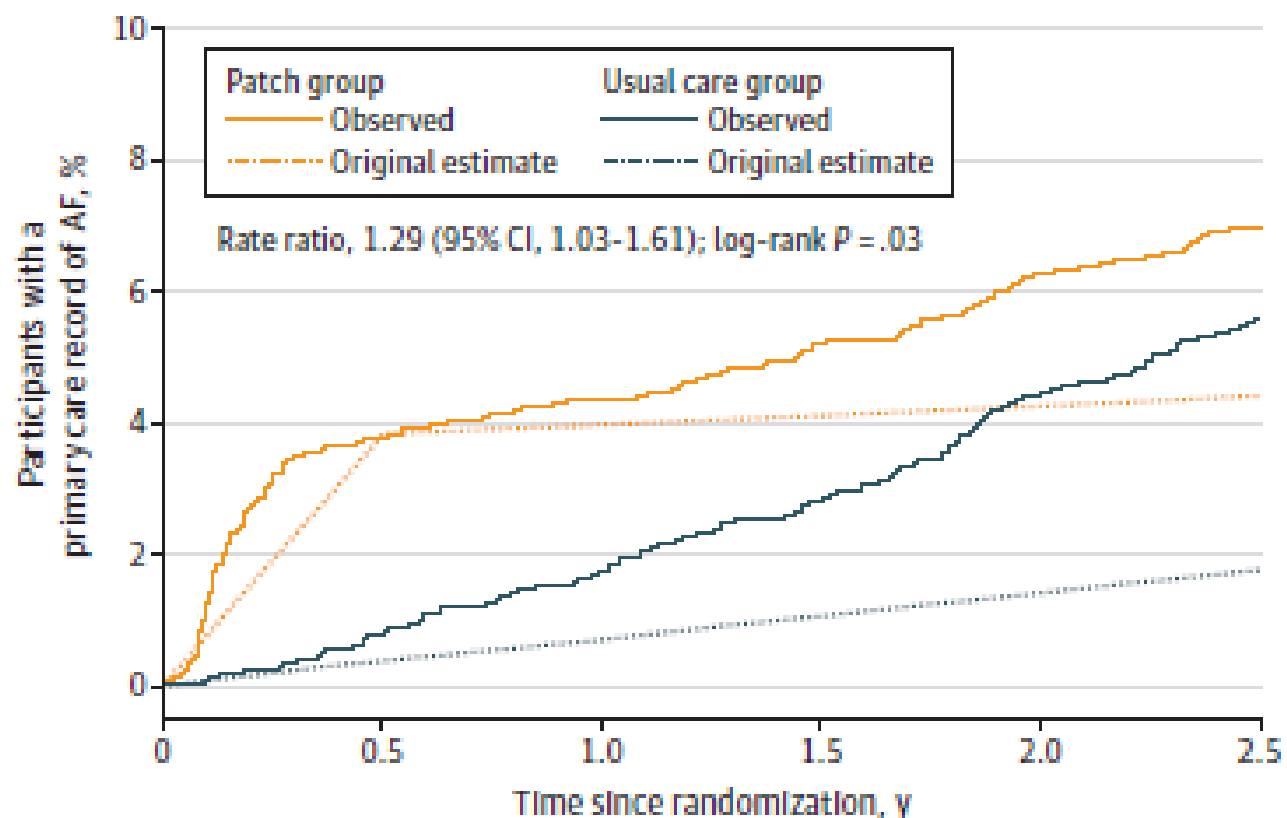
Liverpool Heart and Chest Hospital is trialling the monitoring device, which patients wear at home, to help improve and speed up the diagnoses of irregular heart rhythms (arrhythmia). Since the pilot began patient **waiting lists** have reduced from as high as eight weeks to a matter of days, despite concerns that **covid** could have hit waiting times.

- Improved diagnostic yield, outcomes, patient experience & cost-efficacy
- 

Remote Screening for Asymptomatic Atrial Fibrillation

The AMALFI Randomized Clinical Trial

Figure 3. Kaplan-Meier Plot of Time From Randomization to First Primary Care Record of Atrial Fibrillation (AF) by Randomization Group



No. of participants at risk	0	0.5	1.0	1.5	2.0	2.5
Patch group	2520	2403	2338	2283	2219	2150
Usual care group	2520	2473	2416	2338	2253	2175

Aims

- Improve capacity and reduce waiting times
- Reduce cost
- Improve quality of care and clinical outcomes
- Aligned to STP priorities:
- *Delivering care more efficiently*
- *Improving the quality of care*

Liverpool Heart and Chest Hospital **NHS**
NHS Foundation Trust



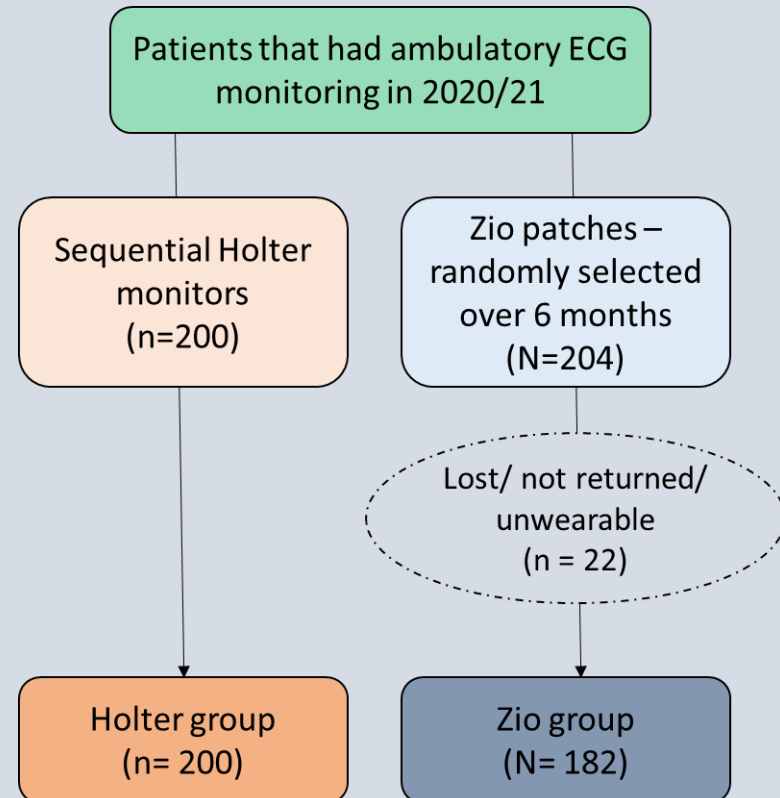
Arrhythmia Clinic



Palpitations Clinic
(Direct access)

Source: Data from Liverpool Heart and Chest Hospital

Methodology



- **Primary outcomes:**

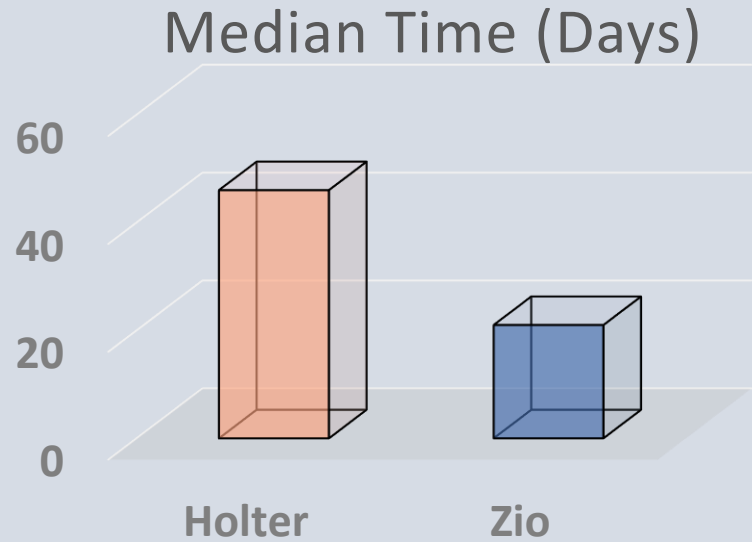
- Time to results
- Arrhythmia detection rate

- **Secondary outcomes:**

- Proportion (%) that had heart rhythm monitoring in the preceding 12 months
- % that needed repeat tests
- Rates of outpatient appointments (OPAs) for device-fitting and follow-up, device implantation and ablations

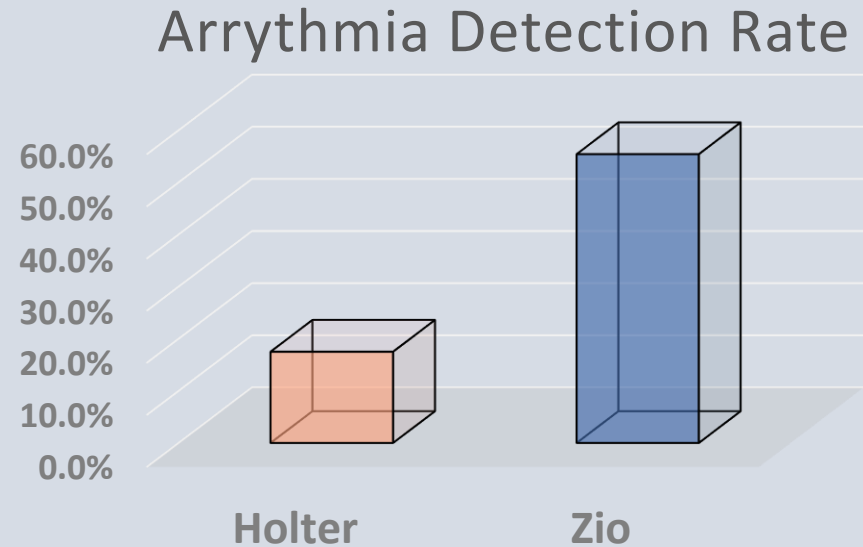
Source: Data from Liverpool Heart and Chest Hospital

Time to Results



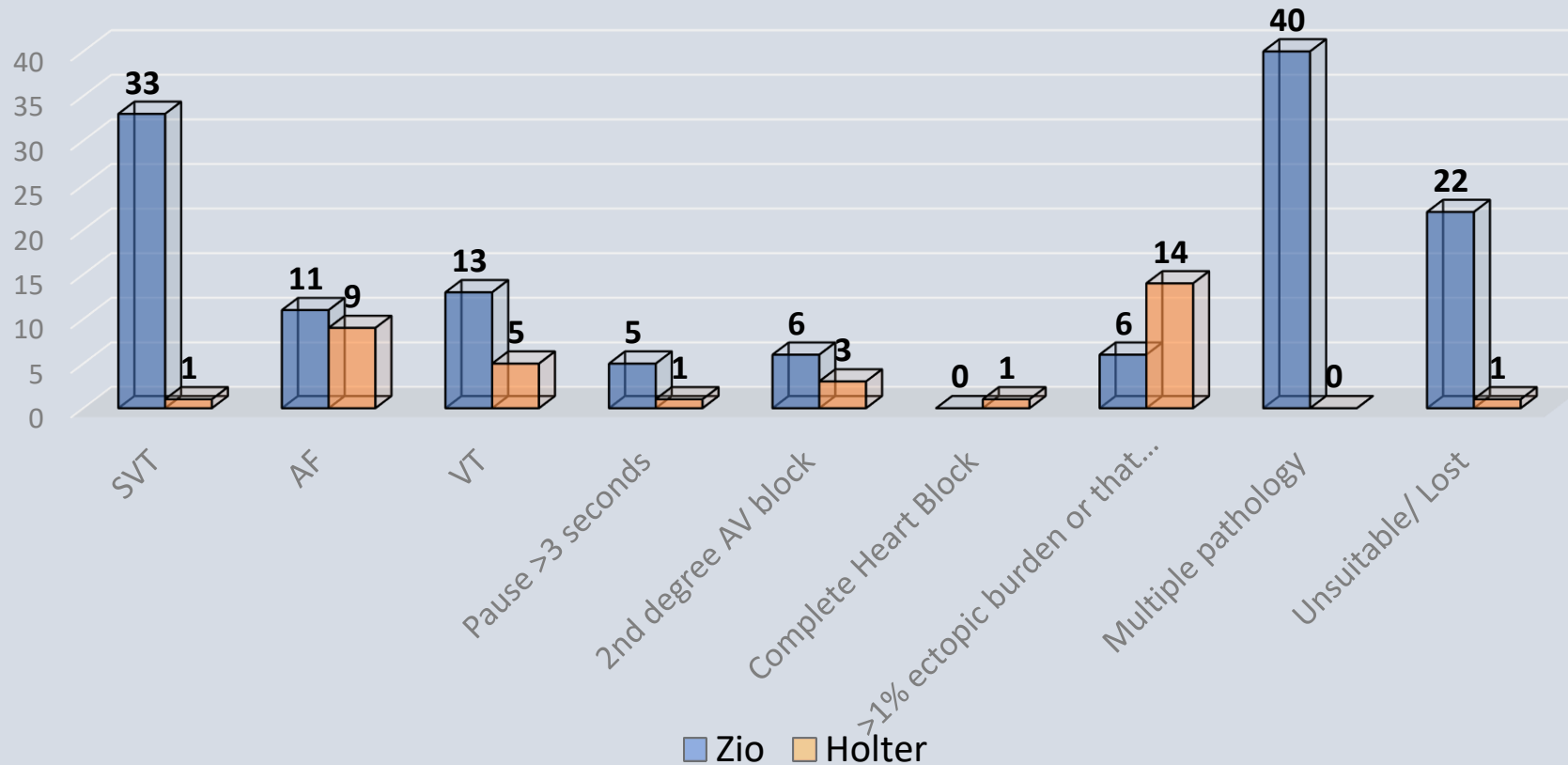
- Significantly shorter with Zio XT compared to Holter monitors
- Median time: 21 days (interquartile range (IQR) 18-25) vs. 46 days (IQR 37.3 – 87.8), $p < 0.001$

Arrhythmia detection



- Significantly higher arrhythmia detection rate with Zio XT compared to Holvers, 55.4% vs. 17.5%, $p < 0.001$

Breakdown of positive findings



Source: Data from Liverpool Heart and Chest Hospital

Outpatient appointments

	Zio		Holter		Net Difference (no. of appointments/ year)
	% that required FU in our SE	Number that would require FU in a year	% that required FU in our SE	Number that would require FU in a year	
Monitor fitting	0.5%	10	96%	1920	-1910
Outpatient follow-up	70.1%	1402	87%	1740	-338
Total impact of Zio service on appointments per year					-2248

Abbreviations: FU – follow-up, No. number, SE – service evaluation

- Zio XT would reduce the number of OPAs/ year by approximately **2248**

Impact on cardiology workforce

Ambulatory ECG monitoring	Mins per test	No. of tests	Band	Hours per year	WTE	Total WTE
Holter						
Monitor fitting	20	1920	4	640	0.41	0.79
24 hr tape – reporting	30	1248	6	624	0.40	
48 hr tape – reporting	45	230	6	173	0.11	
7-day tape – reporting	60	442	6	442	0.28	
Zio						
Monitor fitting	20	10	4	3	0.002	0.002
Reporting	-	2000	-	-	-	

- A WTE of 0.41 can be saved on monitor fitting and 0.788 on rhythm analysis with use of Zio

Impact on ILR insertions

	Service evaluation outcomes		Service evaluation outcomes extrapolated to annual cohort	
	Zio	Holter	Zio	Holter
Patient cohort	204	200	2000	2000
ILR insertions	1	6	9.8	60

Extrapolations based on:

- Device cost - £1800
- Implantation by a Band 6 Physiologist
 - Procedure time: 15 mins
- Explanation by a Band 6 physiologist
 - Procedure time: 30 mins

Zio could result in:

- Potential reduction in annual cost impact associated with reduced ILR insertions (~50 ILR insertions = **£90,000/year**)
- **38 hours** of a physiologist's time a year on ILR implants and explants

Conclusions

- Zio XT associated with a statistically significant reduction in time to results, higher arrhythmia detection rate and a reduced need for OPAs.
- Potentially significant time and cost-savings.
- Reduced need for long-term ECG monitoring with ILR but increase in procedures such as ablations – need further evaluation
- Liberate valuable cardiologist time that can be redirected towards other services
- Improvements expected as we emerge from learning curve
- Further large-scale evaluation needed to yield vital information on management pathways and cost efficacy.

Turnaround time(TAT)



Zio XT
17.1 Days



Holter
120 Days

Patient satisfaction survey

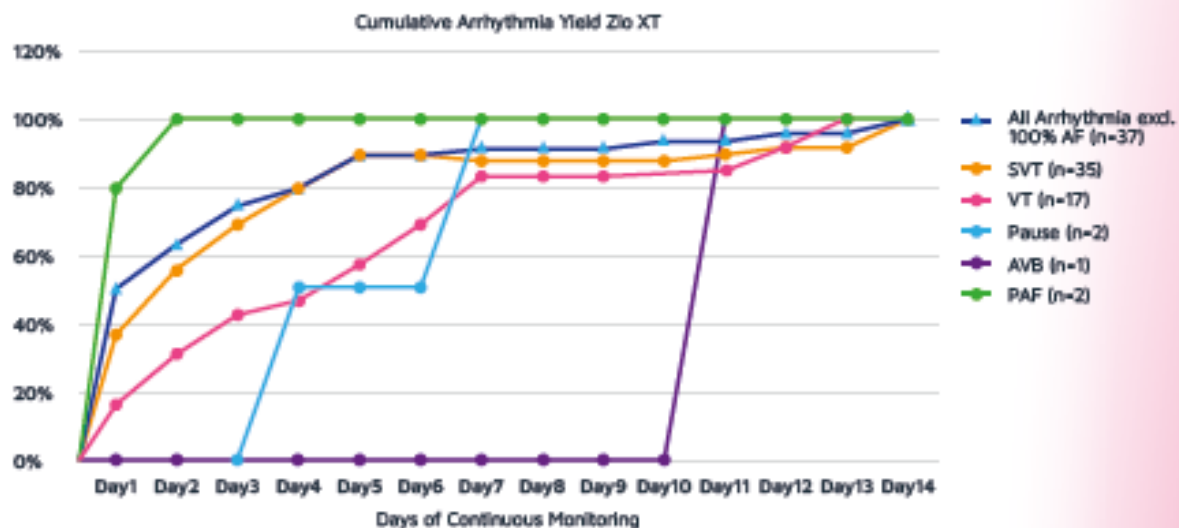
91% Easy to use

71% Comfortable to wear

87% Would wear Zio again

86% Ability for normal activity

ZIO™ XT Results – CoCH AMU



Source: Poster presentation: End of 24 hour / 48-hour Holter Monitoring, Extended ECG monitoring for Cardiac syncope. Countess of Chester Hospital NHS Foundation Trust. Cara Watson & Anu Jatachandran

Zio XT Service evaluation demonstrated many clinical, operational efficiencies and financial savings*

38%

increase in arrhythmia detection rate¹

83%

reduction in ILR implantations²

25

day reduction in Time to Results¹

2000+

Outpatient appointments released per year²

156 days

Physiologist's time released from fitting & ECG analysis²

17%

reduction in Outpatient follow up¹

14%

reduction in DNA monitor appointments^{3,4}

30%

Patients had first run of AV block after 7 days of monitoring⁴

CAMELOT study: Annualized healthcare resource utilization (HCRU)

	LTCM	HOLTER	EXTERNAL AEM	MCT	P-VALUE
Total (N)	38,318*	154,970	29,724	64,777	
Follow-up all-cause HCRU, mean (SD)					
Inpatient hospitalizations	0.45 (3.12)	0.45 (2.03)	0.60 (3.14)	0.60 (3.19)	<0.001
Δ from baseline	0.21 (3.13)	0.30 (2.03)	0.32 (3.14)	0.30 (3.20)	<0.001
D-in-D compared to LTCM (p-value)	–	0.08 (<0.001)	0.10 (<0.001)	0.09 (<0.001)	
ED visits	0.70 (1.40)	0.78 (3.31)	0.87 (1.92)	0.85 (4.91)	<0.001
Δ from baseline	–0.04 (1.59)	0.15 (3.35)	0.00 (2.03)	0.05 (4.96)	<0.001
D-in-D compared to LTCM (p-value)	–	0.18 (<0.001)	0.04 (0.014)	0.08 (0.002)	
Outpatient visits	25.3 (16.5)	24.5 (16.9)	24.5 (15.9)	26.1 (17.4)	<0.001
Δ from baseline	3.11 (13.72)	4.03 (14.40)	4.00 (13.41)	4.28 (14.74)	<0.001
D-in-D compared to LTCM (p-value)	–	0.92 (<0.001)	0.89 (<0.001)	1.17 (<0.001)	

Conclusions There was large variation in diagnostic monitoring strategy. A specific LTCM was associated with the highest adjusted odds of a new arrhythmia diagnosis and lowest adjusted odds of repeat ACM testing. LTCM as a category had the lowest incremental acute care utilization. Different monitoring strategies may produce different results with respect to diagnosis and care. (Am Heart J 2024;269:25–34.)

AVALON Study Builds on CAMELOT Study Reinforcing iRhythm’s LTCM Clinical Performance

In the largest real-world study of its kind with 428,707 patients, the Zio LTCM service outperformed other studied monitoring approaches in cardiac arrhythmia diagnostic yield, time to diagnosis, cardiovascular events and total health care costs.

Publication | Articles | August 13, 2025
[The American Journal of Managed Care](#)

- February 2026
- Volume 32
- Issue 2
- Pages: 65-73

TABLE 3. Adjusted Odds of New Arrhythmia Diagnosis^a, Retests, and CV Events^b by ACM Type or Manufacturer^c

Cardiac monitor	Cohort size	New diagnosis of specified arrhythmia within 90 days			ACM retest within 180 days			Any CV event (excluding arrhythmia) within 365 days		
		%	OR (95% CI)	P	%	OR (95% CI)	P	%	OR (95% CI)	P
Monitor type										
iRhythm LTCM (ref)	95,324	26.5%	—	—	3.1%	—	—	11.2%	—	—
Non-iRhythm LTCM	59,370	18.4%	0.64 (0.63-0.65)	<.001	5.6%	1.95 (1.85-2.06)	<.001	13.3%	1.23 (1.19-1.27)	<.001
Holter	156,469	14.7%	0.49 (0.48-0.50)	<.001	6.2%	2.16 (2.06-2.26)	<.001	10.5%	1.13 (1.10-1.16)	<.001
External AEM	117,544	17.0%	0.59 (0.58-0.60)	<.001	2.8%	0.94 (0.89-0.99)	.016	15.0%	1.21 (1.18-1.24)	<.001

Zio XT can streamline the patient journey and diagnostic odyssey, with the fastest time to diagnosis and lowest likelihood of emergency and inpatient hospital utilization.^{1,2}

1

HIGHEST DIAGNOSTIC YIELD

Zio XT is associated with the highest diagnostic yield and the fastest time to clinical diagnosis compared to all other ambulatory monitoring services when looking at specified arrhythmias.^{1,2}

2

LOWEST LIKELIHOOD OF RETEST

With the highest diagnostic yield, Zio XT is also associated with the lowest likelihood of retesting.^{1,2}

3

LOWEST HEALTHCARE RESOURCE UTILISATION

Zio XT is associated with the lowest acute care healthcare resource utilisation compared to all other monitoring services.^{1,2}

1. Reynolds et al. Comparative effectiveness of ambulatory monitors for arrhythmia diagnosis: A retrospective analysis of Medicare beneficiaries managed with ambulatory cardiac monitors between 2017 and 2019. Accepted for ACC.23 presentation, presented in New Orleans, LA.

2. Specified arrhythmias defined by HCC 96.

Zio XT for detecting cardiac arrhythmias

HealthTech guidance | HTG562 | Published: 01 December 2020

HTG562

“Zio XT is recommended as an option for people with suspected cardiac arrhythmias who would benefit from ambulatory electrocardiogram (ECG) monitoring for longer than 24 hours only if NHS organisations collect information on:

- resource use associated with use of Zio XT
- longer-term clinical consequences for people who have monitoring with Zio XT”

- Regional pathway transformation: The Journey (so far)
- 

The Problem

- Cardiac arrhythmia pathway didn't exist!
- Local services have developed in a disjointed, disorganised manner
- Limited access to cardiac monitoring with long waiting times
- Multiple touchpoints with the NHS – GP, monitoring services, secondary care, A&E
- High cost, low value care: Approx £9 million per year across C&M; 90% of patients have no symptoms during 24hr Holter / monitoring leads to an intervention in < 15% of patients.
- Limited or no access to 14-day patch monitoring such as ZIO.

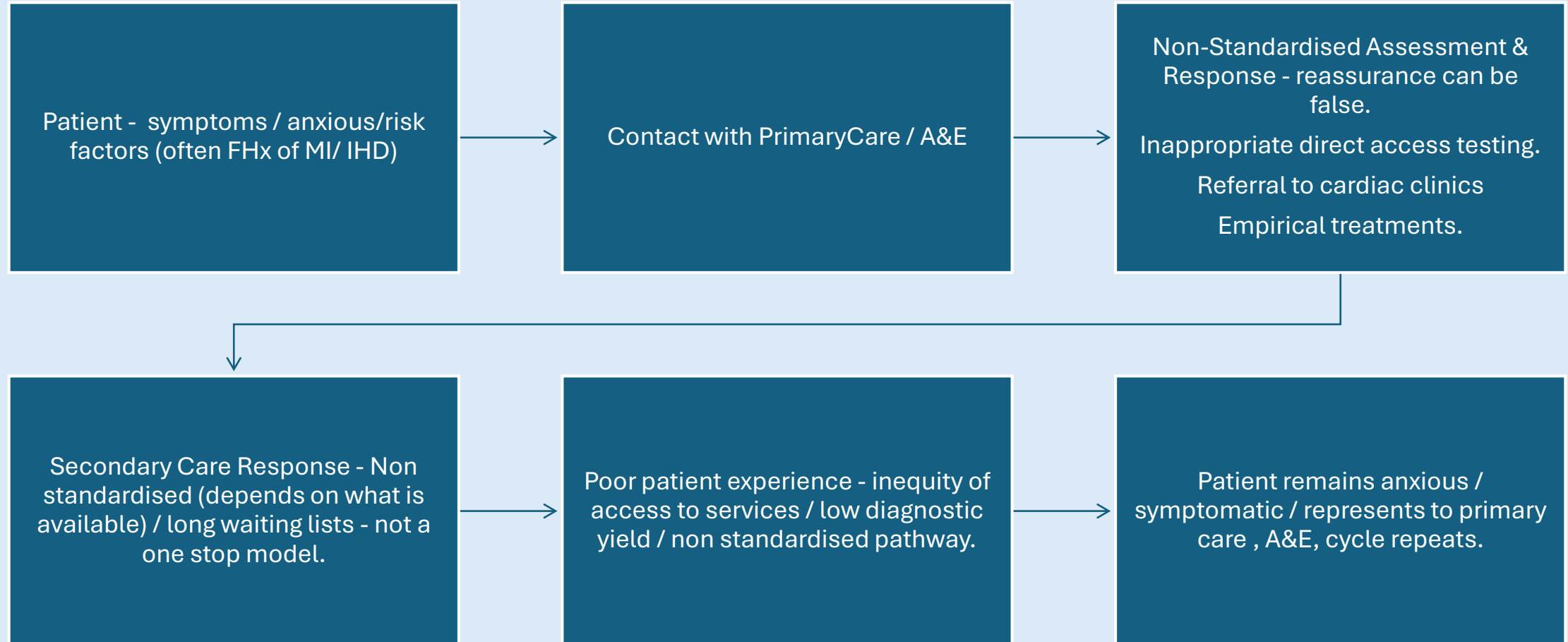
WIRRAL DATA

- 24hr: 3400 / 544 DNA (16%)
- 7 day: 700 / 77 DNA (11%)
- Cost: £36 - £48 per report (before pre-discount)

WCHC Diagnostic Referral In/DNA Figures				
Diagnostic	Sep-22			
	No. Ref In	DNA's	No. Ref In	DNA's
24 Hr ECG	265	46	271	85
7 Day Event Recorder	61			

REPORT COST:
£220,000 pa
(£540,000@tariff)
 (does NOT include staff, admin, consumables, loss or damage)

Current Pathway of Care



Cheshire & Merseyside Cardiac Arrhythmia Pathway

Pathway programme Objectives

AIMS

- 1 Improve** outcomes for people with cardiac arrhythmia.
- 2 Promote** gold standard clinical / medical management across the pathway of care for patients with or have undiagnosed cardiac arrhythmia.
- 3 Refine** effectiveness and efficiency in the NHS.
- 4 Streamline** referral process across Cheshire & Merseyside for cardiac arrhythmia detection.
- 5 Reinforce** evidence-based cardiac arrhythmia diagnostic service delivery and clinical management.

Key Initiatives

- 1 Reduce diagnostic service waiting times.**
- 2 Increase cardiac arrhythmia detection rates.**
- 3 Reduce hospital outpatient appointments.**
- 4 Ensure equity of access is achieved across C&M region.**
- 5 Reduce impact on the NHS workforce.**

Pathway Programme contents

- Pathway Model
- Patient Questionnaire
- Symptom Directory
- Arrhythmia Referral Proforma
- Arrhythmia Triage Proforma

THE PATHWAY MODEL

Pathway for a patient with suspected or confirmed Cardiac Arrhythmia

Patient presents with symptoms – cardiac arrhythmia suspected then use the **Patient Questionnaire** to aid clinical assessment

SYMPTOM CLASSIFICATION

1. History/symptoms suggest significant underlying conditions, e.g., sepsis, severe anaemia, thyrotoxicosis, that are accompanied by pre syncope or syncope or hypotension, respiratory distress or chest pain.
2. ECG: narrow complex tachycardia (not reverted to SR by vagal manoeuvres or is incessant).
3. ECG: new AF with high ventricular rate (>150 bpm) and associated with symptoms at rest (breathlessness / chest pain / dizziness)
4. ECG: broad complex tachycardia
5. ECG: high grade AV block with symptoms / symptomatic pauses (6 seconds or greater)

Catergorised – EMERGENCY direct for admission

1. Symptoms (palpitations/ syncope/ pre-syncope) during exercise.
2. Syncope NB (Orthostatic Intolerance excluded).
3. Palpitations / pre-syncope + ischaemic or high-risk structural heart disease (dilated or hypertrophic cardiomyopathy/ severe aortic or mitral stenosis/ severe LVOT obstruction).
4. Palpitations/ pre-syncope + confirmed family history of inherited heart disease, especially inherited cardiomyopathy/ channelopathy.
5. ECG 2nd degree block, Mobitz type II.

Categorised URGENT

Undertake: History and clinical examination – (lying and standing) BP, pulse, CV exam, 12 Lead ECG

Complete **Cardiac Arrhythmia referral proforma** – category “**URGENT**”. Review **Symptom Directory** for further information.

1. Pre-syncope/ dizziness (orthostatic intolerance excluded).
2. Sustained palpitations (duration more than seconds) associated with symptoms (chest pain, dizziness, breathlessness).
3. Sustained palpitations + abnormal ECG.
4. Sustained palpitations + structural heart disease (ischaemic cardiomyopathy, moderate LVSD, RVSD, moderate valve stenosis or regurgitation).

Categorised Routine

Undertake: History, 12 Lead ECG

Complete **Arrhythmia Referral Proforma** – category “**ROUTINE**”. Review **Symptom Directory** for further information.

1. New presentation of uncomplicated palpitations in people otherwise fit & well.
2. Suspected vasovagal syndrome / orthostatic intolerance
3. Incidental finding/ new diagnosis of atrial fibrillation / flutter (asymptomatic, >65yrs)

No referral or use Advice & Guidance

Undertake: History, 12 Lead ECG

Clinical management in Primary / Community Care. If plan is not clear- refer to Advice & Guidance service to gain specific management plan.

PATIENT QUESTIONNAIRE

The question sets below have been designed to gain as much information about the patient's symptoms and lifestyle to support further clinical assessment and next steps of investigation or referral; and can also prompt preventative lifestyle advice and signposting.



QUESTIONS about your SYMPTOMS -

Please read carefully and answer all the questions if you can. Your answers will help your clinician understand your symptoms better, determine whether you need tests arranged and / or a specialist referral.
NB Most patients can be managed in primary-care and most symptoms, particularly palpitations, are entirely harmless.

1. What does your heart feel like when it's not normal?	Answer
a. Does it feel like a fluttering in your chest?	Yes/No
b. Does it feel like something is pushing or squeezing on your chest?	Yes/No
c. Does it feel like your heart misses a beat, or skips one?	Yes/No
d. Does it feel like your heart stops for a second, then starts beating very fast?	Yes/No
2. When your heart feels different, what else do you feel?	
a. Do you only notice your heart, nothing else feels wrong?	Yes/No
b. Does your chest hurt?	Yes/No
c. Does your chest feel tight or heavy?	Yes/No
d. Do you feel worried or scared?	Yes/No
e. Do you feel dizzy, or lightheaded?	Yes/No
3. When your heart feels different, how often does it happen?	
a. It only happened once?	Yes/No
i) Tell us when e.g., last Tuesday, last week, last month-	
b. It has happened more than once, please tick only ONE of the following -	Yes/No
i) Not very often at all? (e.g. few times a year)	<input type="checkbox"/>
ii) About once a month? (e.g. once every few weeks)	<input type="checkbox"/>
iii) About once a week? (e.g. once every few days)	<input type="checkbox"/>
iv) About once a day? (e.g. once every day)	<input type="checkbox"/>
v) Almost every hour? (e.g. many times, throughout the day)	<input type="checkbox"/>
4. When your heart feels different, does it happen at a particular time of day, or when you are doing something specific?	
a. When you are moving around a lot, e.g. exercising or walking fast?	Yes/No
b. When you are resting or relaxing, e.g. watching TV or sitting quietly?	Yes/No
c. When you are sleeping, and it wakes you up?	Yes/No
d. It can happen at any time?	Yes/No
5. When your heart feels different, how long does that last? Please tick only ONE of the following,	
a. It goes away very quickly and only lasts a few seconds.	<input type="checkbox"/>
b. It lasts a little while but no more than a few minutes.	<input type="checkbox"/>
c. Between 5 minutes and 1 hour?	<input type="checkbox"/>
d. It lasts for a long time. An hour or even longer.	<input type="checkbox"/>
6. If the feeling in your heart lasts for more than 10 minutes, how does it start?	
a. It starts <u>all of a sudden</u> , with no warning (like a light turning on with a switch).	Yes/No

SYMPTOM DIRECTORY

This directory is intended to support the decision-making process. Choose from the symptom category set that most fits with your patient’s clinical assessment. This will then give you advice for action and which (if any) test(s) that may be considered at the point of triage, or which could be requested locally via a direct access pathway.

Presenting Symptoms	Action	Diagnostic test
Incidental finding/ new diagnosis of atrial fibrillation or flutter, asymptomatic and >65 years old – treat as per local / NICE guidance. Overview Atrial fibrillation: diagnosis and management Guidance NICE	Attempt to manage in primary care	Consider transthoracic echocardiography, particularly for new AF
New presentation of uncomplicated palpitations in people otherwise fit & well with normal 12 lead ECG.		
Suspected vasovagal syndrome, responding to simple conservative measures.		
New presentation of uncomplicated dizziness (especially if orthostatic intolerance suspected / POTS suspected) in people otherwise fit & well with normal 12 lead ECG.	Attempt to manage in primary care	NASA lean test
Known atrial fibrillation – rate control assessment.	Referral via arrhythmia pathway proforma	24 hr cardiac ECG monitor
Recurrent, sustained, daily palpitations with associated symptoms (chest discomfort / dizziness/ breathlessness) and/ or 12-lead ECG abnormalities.		
Recurrent, sustained, palpitations occurring weekly/ monthly with associated symptoms and/ or 12-lead ECG abnormalities.	Referral via arrhythmia pathway proforma	14-day wearable cardiac ECG monitor
Symptoms of pre- syncope/ dizziness (NOT due to change in posture/ orthostatic intolerance).		
Suspected cardiac syncope (postural/ orthostatic intolerance excluded)	Urgent referral to cardiology outpatient. Advice and guidance to patient.	14-day wearable cardiac ECG monitor. Transthoracic echocardiogram
Palpitations/ pre-syncope + ischaemic or high-risk structural heart disease (dilated or hypertrophic cardiomyopathy/ severe aortic & mitral stenosis/ severe LVOT obstruction).		
Palpitations/ pre-syncope + confirmed family history of an inherited cardiac condition, especially inherited cardiomyopathy/ channelopathy.	Urgent referral to cardiology outpatient Advice and guidance to patient.	14-day wearable cardiac ECG monitor
2 nd degree heart block with non-compromising tolerated symptoms.		
2 nd degree heart block with compromising symptoms.	Immediate action required - Refer to medicine and call ambulance.	Emergency tests as required
3 rd degree heart block.		
Ventricular tachycardia on ECG.	Immediate action required - Refer to medicine and call ambulance.	
Patient acutely unwell, haemodynamic compromise, heart failure.	Immediate action required - Refer to medicine and call ambulance.	

ARRHYTHMIA REFERRAL PROFORMA

Patient Details: Surname: _____ Given Name: _____ D.O. B: _____ Address: _____ Phone Num: _____ Email: _____ NHS Num: _____ (Interpreter required:) Yes _____ No _____ If yes language spoken: _____			Referring Doctor / Practitioner Details: Name: _____ Referring NHS structure: _____ Contact details: _____		
Clinical Details: Use the Patient Questionnaire to assist clinical evaluation. Other clinical history: _____ Current Medications _____ Clinical examination – pulse, BP, 12 Lead ECG, CV exam if clinically indicated – (Please include results of investigations FBS, HB, U&E, TFT, 12 Lead ECG)					
Clinical Indication Criteria: Refer to the categories below to assign the management action plan for presenting symptoms. Refer to the Symptom Directory .					
No referral or Advice & Guidance Presenting symptoms that do not require diagnostic testing and meet the criteria of low risk through the Cardiac Arrhythmia Pathway and can be treated in primary / community care. Management Action Plan *Clinical indications are clear, and management can be delivered in primary / community care. *Clinical indications are not clear- refer to Advice & Guidance service to gain specific management plan to manage in primary /community care.		ROUTINE Significant symptoms but in the absence of high-risk features. Management Action Plan *Routine referral via Arrhythmia referral proforma.		URGENT Symptoms with high-risk features or syncope in the absence of orthostatic intolerance. Management Action Plan *Urgent referral via Arrhythmia referral proforma.	
EMERGENCY Clinically unwell/ unstable patients. Management Action Plan *Emergency care required.					
Clinical Indication for referral: Arrhythmia Referral: Advice & Guidance only- <input type="checkbox"/> Arrhythmia Referral: Routine- <input type="checkbox"/> Arrhythmia Referral: Urgent- <input type="checkbox"/>					

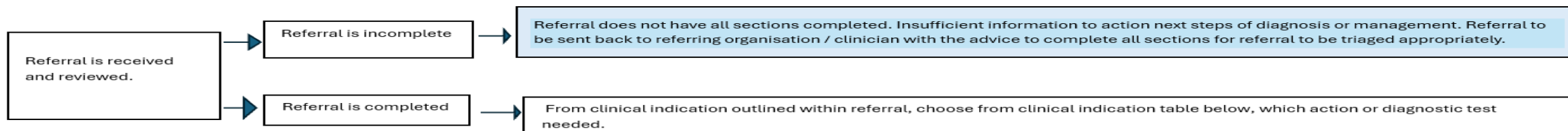
ARRHYTHMIA TRIAGE PROFORMA

This process supports the decisions to be made, and the responsibilities, that rest with the service provider to appropriately allocate diagnostic testing for patients deemed appropriate from the referral form, and if not appropriate will action accordingly to the guidelines outlined in the triage process plan below. The recommendations are colour coded to direct the action of the clinical practitioner who is triaging the referral. If the presenting symptoms are categorised as:

Not enough information received within the referral form and sent back to referring organisation/ clinician to complete.	Referral request does not meet criteria for diagnostic testing appointment or outpatient appointment, will receive advice and guidance management plan.	Referral request indicates a routine diagnostic appointment allocation needed with results sent back to referring organisation/ clinician with either an advice and guidance for management plan or details of a cardiology outpatient consultation.	Referral request indicates urgent diagnostic appointment allocation needed (with results/ management plan conveyed to referring organisation/ clinician) and/ or an urgent cardiology outpatient consultation.
--	---	--	--

This document section is provided as a guide not as a protocol. Timeframes for actions will vary between services and diagnostic testing will vary according to what services are available. The diagnostic tests outlined below have been deemed most appropriate with the most effective and efficient outcome for diagnosis and treatment.

Triage Process Plan



CLINICAL INDICATION	Action / Diagnostic test
New presentation of uncomplicated palpitations in people otherwise fit & well with normal 12 lead ECG.	Manage in primary care.
Suspected vasovagal syndrome, responding to simple conservative measures.	
New or existing diagnosis of AF/ flutter with associated symptoms – treat as per local / NICE guidance. Overview Atrial fibrillation: diagnosis and management Guidance NICE	Alive core/ 24 hr cardiac ECG monitor (Persistent / chronic AF) 14-day wearable cardiac ECG monitor (Paroxysmal AF)
Recurrent, sustained, daily palpitations with associated symptoms (chest discomfort/ dizziness/ breathlessness) and / or 12-lead ECG abnormalities.	24 hr cardiac ECG monitor
Known AF – rate control review.	
Recurrent, sustained palpitations occurring weekly/ monthly with associated symptoms and / or 12-lead ECG abnormalities.	14-day wearable cardiac monitor
Unexplained dizziness/ pre-syncope.	
Syncope (orthostatic intolerance excluded).	14-day wearable cardiac ECG monitor +/- Transthoracic echocardiogram +/- urgent cardiology outpatient consultation.
2 nd degree heart block / VT.	Urgent cardiology outpatient consultation.

Development, Governance & Implementation

The image shows the cover of a book titled "STRATEGY IMPLEMENTATION" with the subtitle "The Governance Imperative". The cover is primarily dark blue with a yellow banner at the bottom left containing the subtitle. On the right side, there is a photograph of a person in a suit moving a chess piece on a wooden chessboard. The text "Future State PERFORMANCE" is in the top right corner, and the website "www.futurestate.com" is at the bottom right.

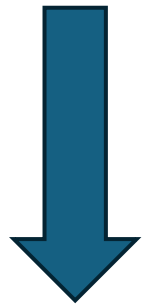
**STRATEGY
IMPLEMENTATION**

*The Governance
Imperative*

Future State
PERFORMANCE

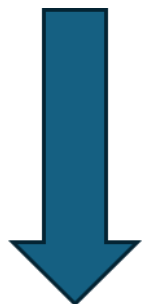
www.futurestate.com

Pathway Development Group*



9 months

Final Pathway Document



3 months

Approved by Cardiac Network / ICB Board



3 months

ICB Clinical Effectiveness Group review



6 months

Pilot sites agreed / protocols developed



9 months

Pilot project complete and data evaluated

*PDG: Medics/Spec Nurses/Physiologists/Managers

51 yr old peri-menopausal lady

- Aware of flutters / missed beats / thuds & thumps, on and off over several weeks, sensation of “catches her breath”
- At rest, can come and go for seconds/minutes. Makes her very anxious
- Strong family history of IHD
- Takes sertraline and ramipril (for hypertension)
- BMI 35 / stressful job / minimal exercise / 30 units EtOH per week
- Normal 12-lead ECG and CVS examination

What to do next?????

7 Day Ambulatory ECG Holter Report



Test Date: 18/01/2022 15:51:37
 Requesting Site: Wirral Heart Centre
 Requesting Clinician: --

Metrics

Duration of Recording
 Total monitoring time: 5d 23h 36m 38s
 Total time analysed: 5d 14h 39m 54s
 Noise burden: 0.84 %

Heart Rate
 Max: 23/01/2022 00:06:29 116 bpm
 Min: 20/01/2022 18:00:40 68 bpm
 Average: 82 bpm

Premature Supraventricular Complexes
 Total PSVC beats: 1115 (0.17%)
 No. of couplets: 11 (<0.01%)

Premature Ventricular Complexes
 Total PVC beats: 513 (0.08%)
 No. of morphologies: 2
 No. of couplets: 36 (0.01%)
 Total Bigeminy beats: 0
 Total Trigeminy beats: 0

Episodes

Pauses
 No. of pauses:
 Longest RR interval:

Atrioventricular block
 Type:
Atrial Fibrillation / Flutter
 Burden:
 Longest episode:
 Max HR:

Ventricular Tachycardia
 No. of episodes:
 Longest episode: 22/01/2022 04:56:48 10

Other Supraventricular Tachycardia
 No. of episodes:
 Longest episode: 21/01/2022 10:51:05 6

Patient Notified Events
 Count:

Cardiac Physiologist Report

This is a 7 day Holter recording report.
 Reason for request: Not given.

The dominant rhythm is sinus rhythm.
 Sinus tachycardia is seen diurnally and is of gradual onset/offset.
 No sinus bradycardia noted.

Minimum sinus rate 68 bpm on Day 3 / 18:00:40
 Maximum sinus rate 116 bpm on Day 6 / 00:06:29 (max HR noted nocturnally - no activity specified).
 Average rate 82 bpm.
 Normal diurnal and nocturnal variation in heart rate seen across the recording period.

There are rare atrial ectopics (burden = 0.17 %) seen as 1027 isolated beats, 11 couplets, 10 triplets and 8 salvos - longest 6 beats @ 105 bpm.

There are rare ventricular ectopics (burden = 0.08 %) seen as 356 multi focal isolated beats, 36 couplets, 8 triplets and 11 episodes of non-sustained complex tachycardia - longest 10 beats @ 133 bpm / fastest 174 bpm lasting 4 beats.

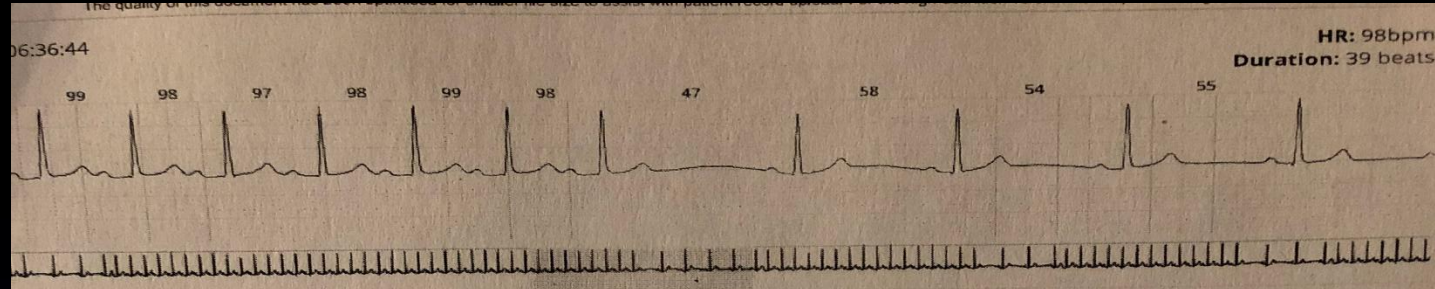
DATE
 DR. *Mills*
 DR. SIGN
 (stamp)

Dr Mills

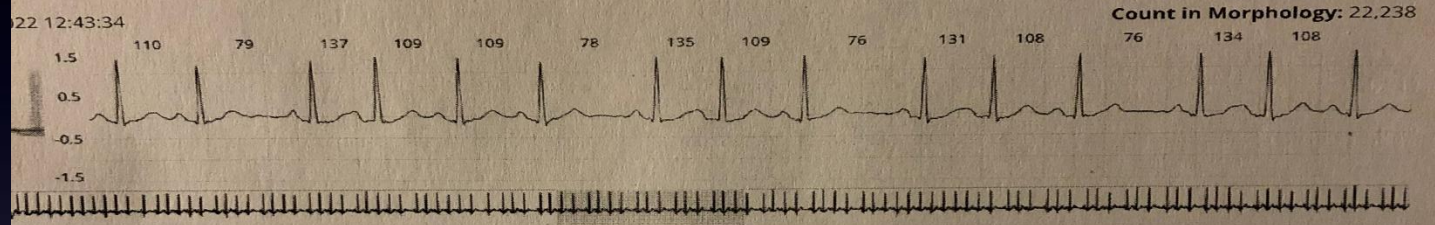
Dr Joe Mills
 Consultant Cardiologist
 Wirral Heart Centre

Reporter: Holly Simpson
 Physiologist
 25/01/2022 12:22:41
 0345 5212992
 cardiology@ecg-od.com

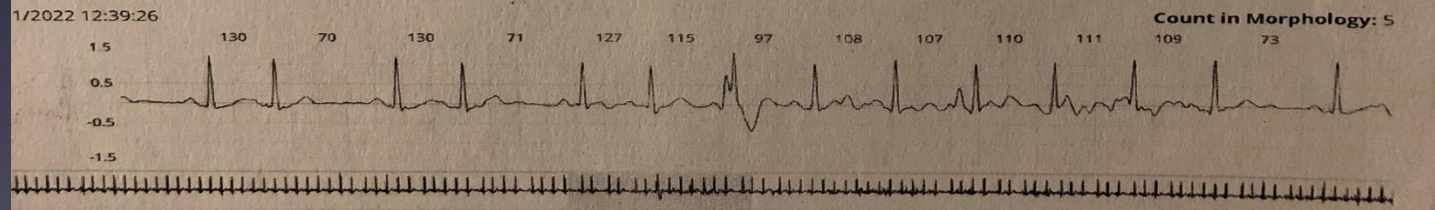
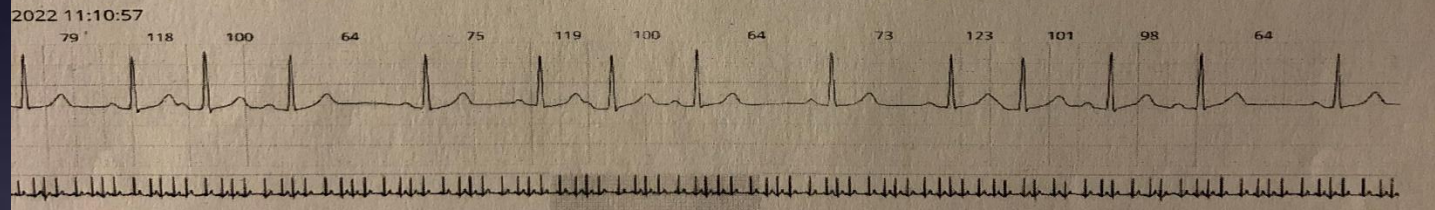
ECG On-Demand
 Unit 23, 1912 Mill, Sunny Bank
 83-85 Town Street, Farsley
 West Yorkshire
 LS28 5UJ



offset



ventricular Couplet



48 yr old peri-menopausal lady

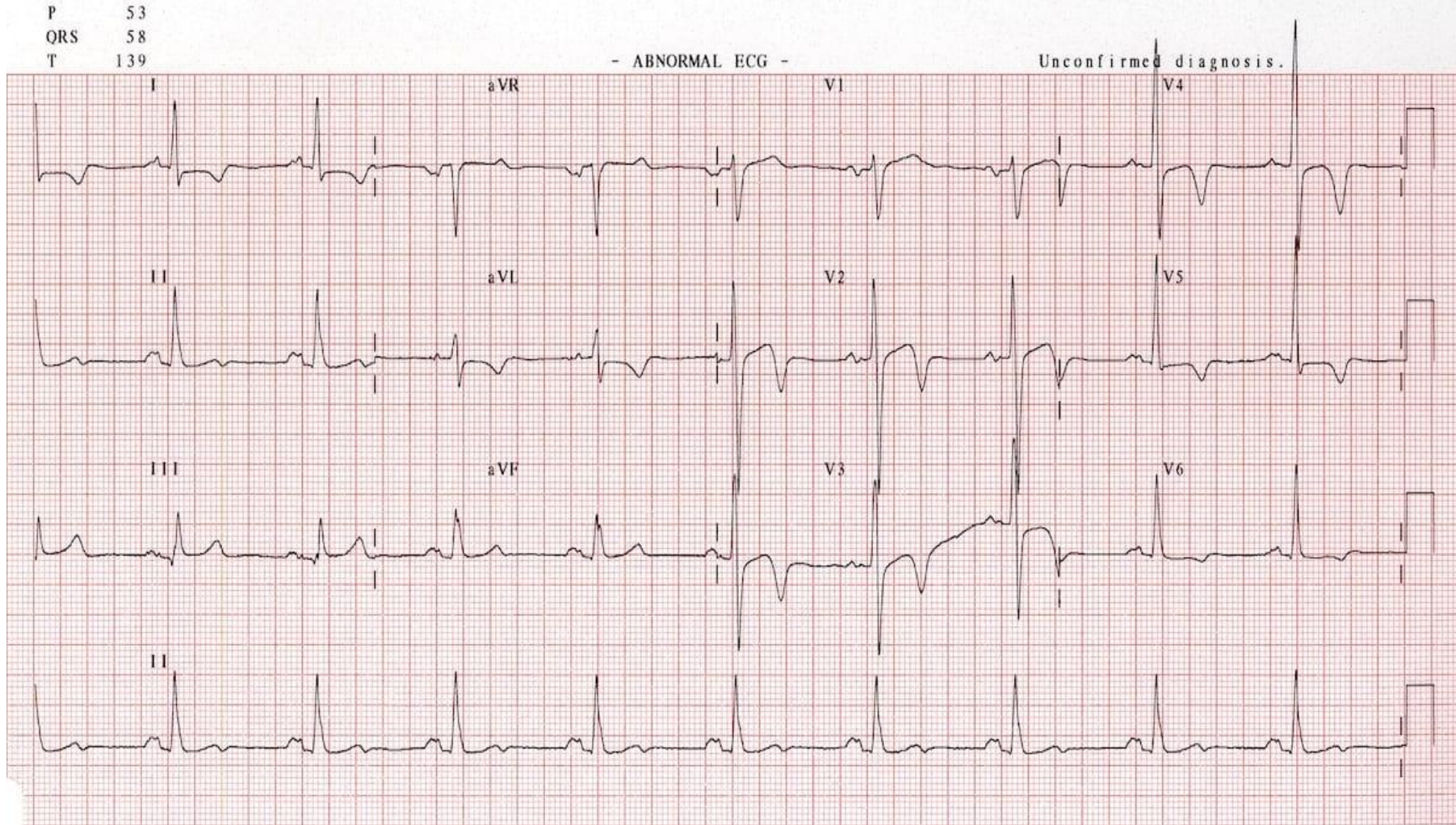
- Episodes of sustained (minutes / max 10 mins) of fast, forceful heartbeats. Happens anytime and can feel dizzy. Reports LOC x 1
- Symptoms occurring 1-2 times per month over last 6 months
- Father died age 49 – heavy smoker, presumed MI
- Takes sertraline and ramipril (for hypertension)
- BMI 35 / stressful job / minimal exercise / 30 units EtOH per week
- Normal CVS examination

What to do next?????

P 53
QRS 58
T 139

- ABNORMAL ECG -

Unconfirmed diagnosis.





Zio XT Final Report for Report, Patient #18

iRhythm Technologies

Tel: 0808 189 3411



Date of Birth 12/12/67 (51 yrs)	Patient ID	Gender Female	Primary Indication (R94.31) Abnormal electrocardiogram
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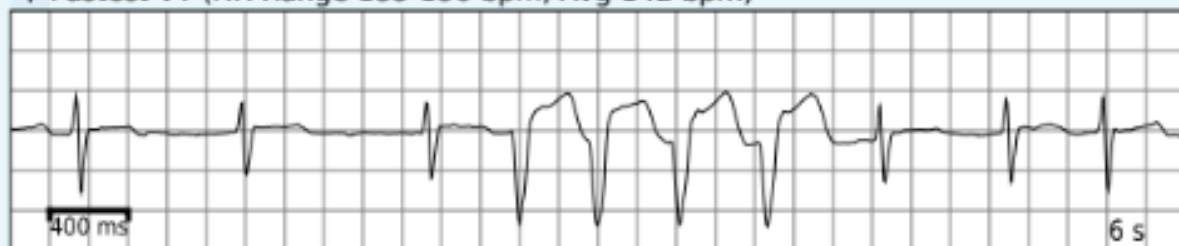
Prescribing Clinician Dr. E. Physician	Managing Location London
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Enrollment Period 13 days 19 hours 22/03/19, 12:24 to 05/04/19, 08:40

Analysis Time 13 days 19 hours (after artifact removed)
--

Ventricular Tachycardia (4 beats or more)

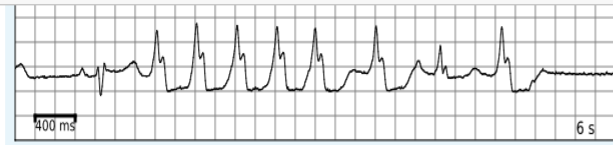
▼ Fastest VT (HR Range 135-150 bpm, Avg 142 bpm)



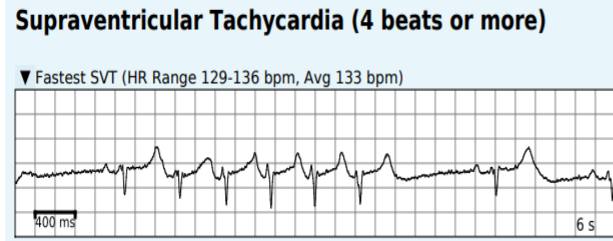
Episodes	5
HR Range	116-150 bpm
Avg	132 bpm

Heart Rate

Overall	Max	154 bpm	16:49, 25/03
	Min	50 bpm	06:59, 23/03
	Avg	78 bpm	
Sinus	Max	96 bpm	18:14, 24/03
	Min	50 bpm	06:59, 23/03
	Avg	66 bpm	



48-158 bpm
Avg
113 bpm



Pauses (3 secs or longer)

None found

AV Block (2nd° Mobitz II, 3rd°)

None found

Atrial Fibrillation

None found

	Min	40 bpm	05:30, 07/06
	Avg	61 bpm	
Sinus	Max	149 bpm	18:34, 30/05
	Min	40 bpm	05:30, 07/06
	Avg	61 bpm	

Patient Events

Total Triggers: 0 Total Diaries: 0

Findings within ± 45 sec of triggered events or diary entries:

	Range	Trigger	Diary
None found			

Ectopics

	Rare <1%	Occasional 1% to 5%	Frequent >5%
Supraventricular Ectopy (SVE/PACs)			
Isolated	Rare	<1.0%	
Couplet	Rare	<1.0%	
Triplet	Rare	<1.0%	

Ventricular Ectopy (VE/PVCs)

Isolated	Rare	<1.0%
Couplet	Rare	<1.0%
Triplet	0	

Longest Ventricular Bigeminy Episode	28.5 s
Longest Ventricular Trigeminy Episode	0 s

Preliminary Findings
Patient had a min HR of 40 bpm, max HR of 158 bpm, and avg HR of 61 bpm. Predominant underlying rhythm was Sinus Rhythm. 2 Ventricular Tachycardia runs

Final Interpretation



Hypertrophic Cardiomyopathy diagnosed / ICD implanted.....

Summary:

- The majority of cardiac monitoring services are inefficient, expensive and are exemplars of “**low-value healthcare**”!
- The evidence-base for long-term ECG patch monitoring (e.g. ZIO^{XT}) is strong and evolving.
- Local pathway redesign, involving all stakeholders is essential.
- Understanding local governance/commissioning structures is also critical.
- Secondary care SHOULD provide rapid access “arrhythmia” services (specialist nurse / physiologist-led) and adopt “new” cost-effective monitoring technologies.



Information available from
Joseph.mills@lhch.nhs.uk

iRHYTHM[®]



CONVENZIS

Leadership Lessons from the Front Line



Dr Simon Thackray

Chief of Cardiovascular Services
Humber Health Partnership (HUTH
and NLAG NHS Trusts)



Keynote Presentation



Dr Shahed Ahmad
Medical Director System Improvement and
Professional Standards
NHS England



Lunch & Networking



Chair Afternoon Address



Mr Chris Sleight MSc BSc FIBMS
Chief Executive Officer of Sleight Insights
Formerly Chief Officer of the Greater Manchester
Diagnostic Networks



NHS Deep Dive



Kishan Moosai
Consultant Cardiologist &
Electrophysiologist
East Sussex NHS Trust

Cardiovision 2026

Every little difference helps

*Navigating Today's Challenges Through Strong Leadership
and the Power of Doing Simple Things Well*

Dr Kishan Moosai
Consultant Cardiologist & Electrophysiologist
East Sussex NHS Trust
Guy's & St Thomas' Hospitals NHS Trust

The Scale of the Challenge Today

7.6M

People on NHS
waiting lists

40%

Cardiologists report
burnout symptoms

£22bn

NHS deficit
forecast 2024/25

1 in 4

Doctors considering
leaving the NHS

Challenge 1: Operational Pressures

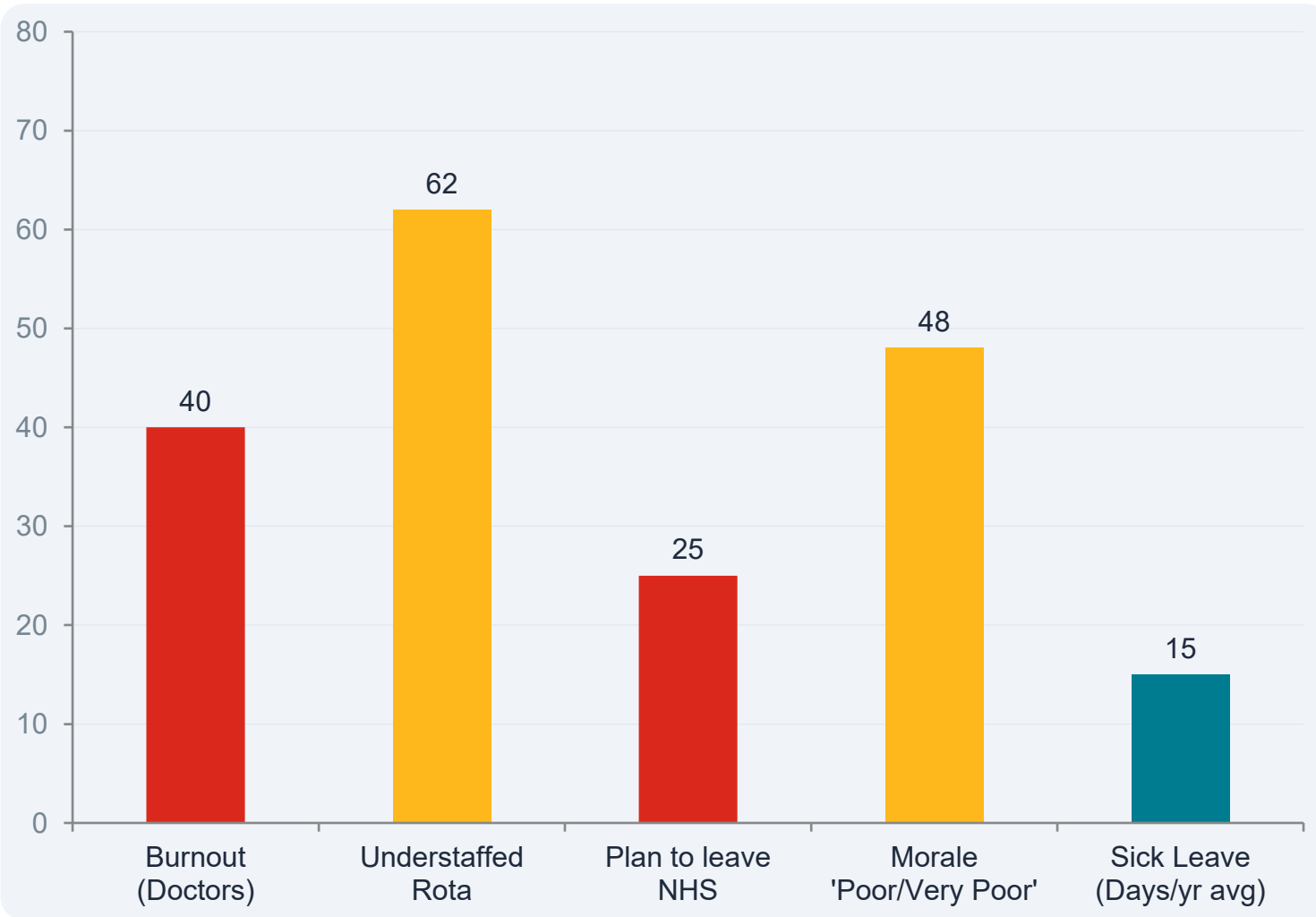
Emergency Pressures

- A&E 4-hour target met by only 58% of trusts
- Ambulance handover delays averaging 45 minutes
- Cardiac catheter lab backlogs growing post-COVID
- Bed occupancy running above 95% nationally
- Surge capacity frequently activated outside winter

Cardiology-Specific Challenges

- Heart failure readmission rates under scrutiny
- PPCI pathway delays in high-demand periods
- Outpatient cardiology waits exceeding 18 weeks
- Cardiac imaging (echo/MRI) capacity constraints
- Complex AF/HF patient complexity rising year-on-year

Challenge 2: The Workforce Crisis



Key Insights



NHS has ~112,000 vacancies



Resident doctors among hardest hit by rota gaps



International recruitment adds short-term relief but long-term dependency



Cardiology consultant posts take 18+ months to fill

Challenge 3: Patient Safety & Quality Culture



Incident Reporting

Under-reporting of near-misses estimated at over 50%. A blame culture continues to suppress speaking up. Psychological safety remains inconsistent across trusts.



Communication Failures

Poor handover remains the #1 cause of preventable harm. SBAR and structured handover under-used in busy cardiac units. Hierarchy still inhibits challenge.



Clinical Variation

Wide variation in cardiology outcomes between trusts — up to 3x difference in heart failure mortality. Inconsistent adherence to NICE guidelines.

The Leadership Imperative

Why leadership is the single greatest lever for change

1 Culture flows from leadership:

Trusts with visible, values-led leaders consistently outperform on safety, staff retention and patient outcomes.

2 Doctors as leaders, not just clinicians:

Clinical leadership — at ward, department and board level — drives credibility and adoption of change.

3 Psychological safety starts at the top:

Leaders who model openness to challenge create units where errors are reported, learned from, and prevented.

4 Resilience is built, not innate:

Supportive leadership structures reduce burnout and protect the workforce needed for long-term NHS sustainability.

Doing Simple Things Well: Clinical Excellence

"Excellence is not a destination — it's a habit. The NHS doesn't need more complexity; it needs consistent brilliance in the basics."

Structured Handover (SBAR)

Implementing SBAR reduces cardiac adverse events by up to 30% in studies. Simple, consistent, life-saving.

Checklists & Protocols

WHO Surgical Safety Checklist equivalents in cardiology cath labs reduce complications. Standardise the standard.

Timely Medication Reviews

Beta-blocker optimisation, anticoagulation reviews and statin titration: simple wins that reduce readmissions.

Multidisciplinary Team Meetings

Regular, structured MDTs improve complex HF and ACS decisions. Preparation and discipline matter more than frequency.

Clear Discharge Planning

Early discharge planning reduces length of stay. Cardiac rehab referral at point of discharge doubles uptake.

Outcome Monitoring

Reviewing your own data — mortality, readmissions, complication rates — is the single best driver of improvement.

Example 1 – Improving care for medical outliers

Problem: unable to get hold of doctor for medical outliers on weekends

Delays in care
Quality of care affected
Unresolved despite Datix

Intervention – new bleep chart on wards

Identify problem – incorrect bleeps
Update bleep system/switchboard
Laminated poster on wards, communicate through grand round

Result

Can now get hold of doctors for medical outliers
Better quality of care at weekends

Figure 1 **Medical Weekend Bleeps**



Simple solution
Few hours work
Huge positive impact

Poster & Prize best QIP at Trust

Example 2 – Reducing drug errors in Cardiology

Problem: recurring theme of common drug errors

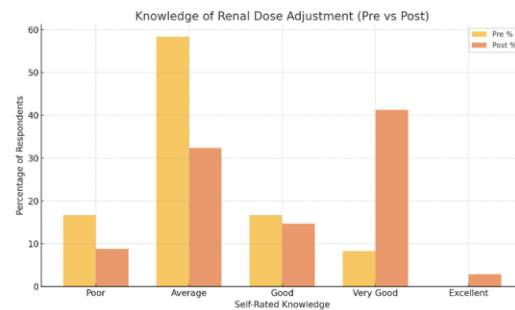
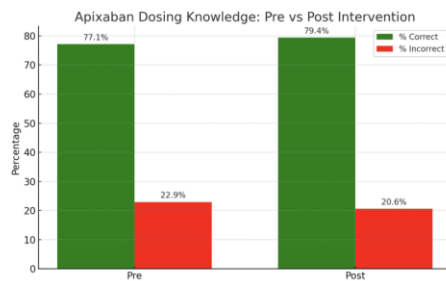
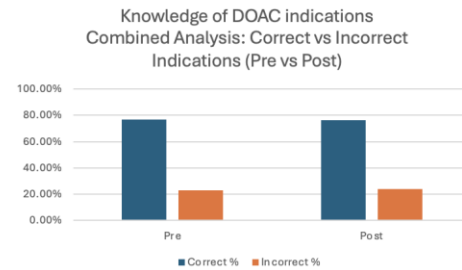
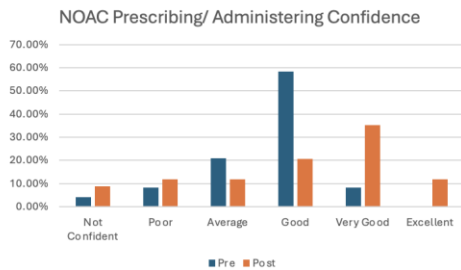
Quality of care
Longer wards rounds
Potential for harm

Intervention – education & upskilling

2 min teaching at end of handover on 5 common errors to doctors/nurses
Education sessions
Posters

Result

Up skilling of staff
Fewer errors
Improvement in quality of care provided



Simple solution
Few hours work
Huge positive impact on quality of care

Example 3 – Improving awareness of Amyloidosis

Problem: under diagnosis of amyloid

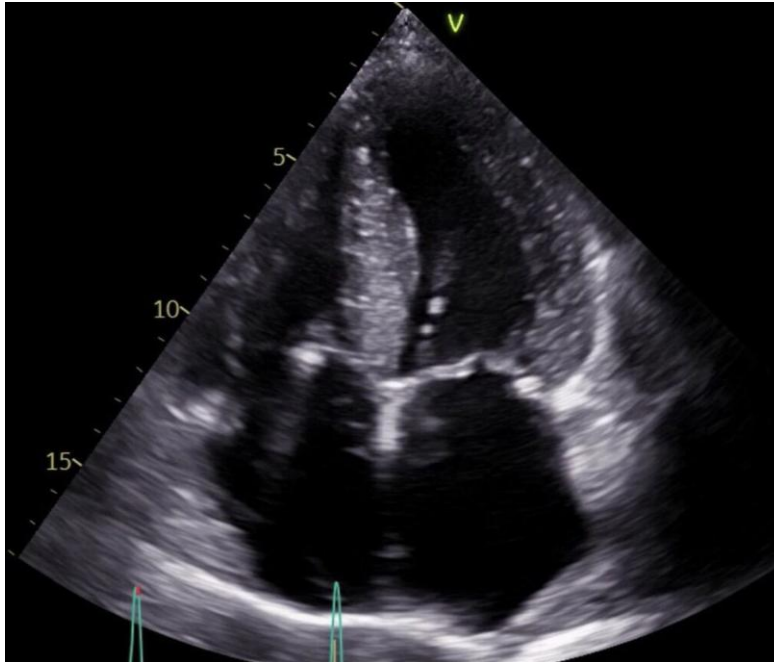
Lack of awareness/recognition of amyloid
Effect on patients (morbidity/mortality)
NHS pressures – multiple OPA, admissions,
financial implications

Intervention – education & upskilling

Education for cardiac physiologists
Advice on reporting/comments on
summary to act as flag to clinician
Amyloid pathway

Result

Physiologists empowered
Better recognition/awareness
Better quality of care for pts



Simple solution

Few hours work

Huge positive impact on quality of care

Doing Simple Things Well: Leadership in Practice

Walk the Floor

Leaders who are visible on the ward — not just in meetings — build trust, spot problems early, and model care.

Brief and Debrief

5-minute team huddles before shifts and structured debriefs after critical events improve communication and morale.

Say Thank You — Specifically

Recognising specific actions (not just generic praise) is proven to boost staff retention and discretionary effort.

Act on Feedback — Fast

Teams that see their feedback acted upon quickly become more engaged. Close the loop visibly and quickly.

Protect Learning Time

Cardiologists and trainees need protected time for CPD, simulation, and reflection. Good leaders fight for it.

Model Vulnerability

Saying "I don't know" or "I got that wrong" is leadership strength. It normalises honesty and reduces errors.

What Good Looks Like

Work smart

- Above QIPs all had impact on clinician
- Time delays
- Extra workload
- Solution would improve quality of care but save time, less stress

Do small things well

- More thinking, less doing
- Few hrs > improved pt safety/poster/prize
- Drug teaching – 2mins/day
- Amyloid – win/win through echo teaching

Team work & patient safety

- Pt safety first
- Use team
- Empower/upskill
- Great leaders inspire greatness in others

The Path Forward

What Every Doctor and Clinical Leader Can Do — Starting Now

- 1 Own your environment: commit to one simple quality improvement in your unit this month
- 2 Invest in your team: find one person to thank specifically, coach, or protect this week
- 3 Speak up: raise one concern you've been sitting on — and model the courage you want to see
- 4 Standardise the basics: adopt SBAR, structured handover, or outcome monitoring in your department
- 5 Lead from where you are: leadership is not a title — it's a choice made every day, by every clinician

"The NHS is built on thousands of small acts of excellence — yours matter."

Questions – kishan.moosai@nhs.net



NHS Deep Dive



Dr Mahrous Alsoud
Cardiology Consultant
Walsall HealthCare Trust

Prevention of CVD

Dr Mahrous Alsoud
Consultant Cardiologist MD

The Global Burden

CVD is the leading cause of death

20.5 million deaths in 2025

Up from 13.1 million in 1991

Projected 35.6 million in 2050

Burdens >600 million

28 million US adults

79% of premature CVD deaths are attributable to modifiable risk factors

Why Does Prevention Matter?



Majority of CVD events are preventable



Prevention reduces hospital admissions



Improves QoL



Improves longevity



Reduces costs for NHS

Risk Factors

High BP

DM

Smoking

Lack of
physical
activity

High alcohol
consumption

High LDL
cholesterol

Diet

Stress

Level of Prevention

0. Primordial prevention

- Address root cause ; prevent risk factors from developing

1. Primary Prevention

- Control risk factors; to prevent disease

2. Secondary Prevention

- Prevent recurrence of disease

3. Tertiary Prevention

- Prevent complications, manage chronic disease to improve QoL

Major Modifiable Risk Factors

HTN

Smoking

DM

Dyslipidemia

Obesity

Sedentary lifestyle

Poor Diet

Life Style Prevention Strategies

Smoking cessation

Healthy, mediterranean style diet

Regular physical activity

Weight control

Reduced alcohol intake

Population Level Prevention

Public Health Policies

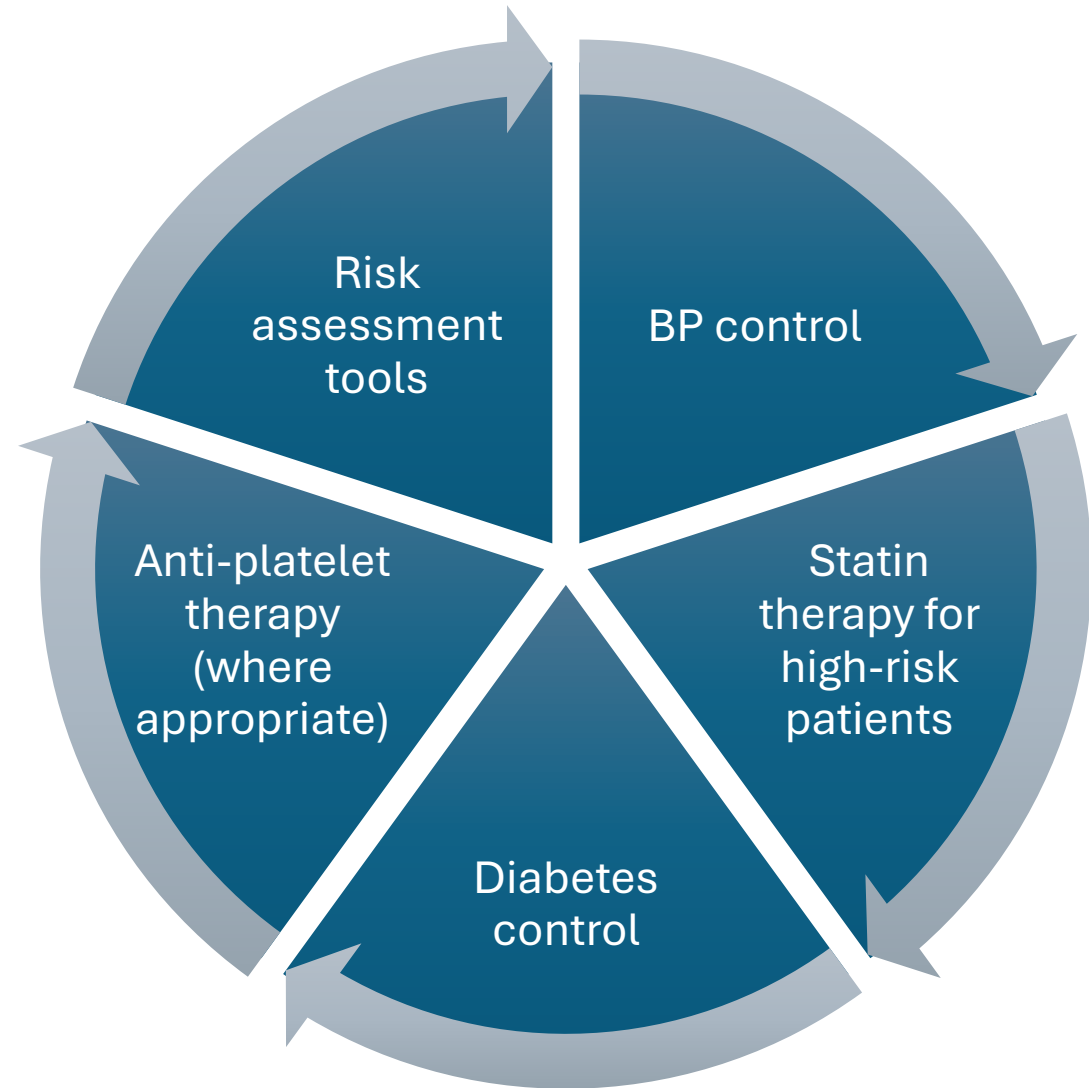
Tobacco Taxation

Salt reduction programs

Health education campaigns

Urban planning centered around
encouraged physical activity

Clinical Prevention Strategies



Risk Assessment Tools

QRISK3 (UK)

Framingham
Risk Score

SCORE2

What is included in Secondary Prevention?



ANTI-PLATELET
THERAPY



STATINS



ACE INHIBITORS



BETA BLOCKERS



CARDIAC
REHABILITATION

Cost Reduction



Reduces expensive hospital admissions



Decreased demand for PCI and CABG



Reduced long-term admission costs



Increases social productivity



= long term saving for healthcare systems



Preventative interventions are cost-effective



Lifestyle programs are cheaper than treating advanced disease

Role of Healthcare Professionals



Proactive, early
risk identification



Patient
education



Promote lifestyle
modifications



Guideline-based
treatment

Future Direction?



Digital health
monitoring



AI risk prediction scores

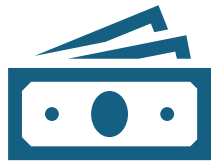


Personalised medicine



Wider preventative
cardiology programmes

Conclusion



CVD prevention saves
lives and money



Combination of lifestyle
changes and medical
therapy is key



Proactive prevention
must be a priority for
health systems



Together we can curb the
CVD pandemic



NHS Deep Dive



Dr Sotiris Antoniou

Director of Clinical Services,
St Bartholomew's Hospital, Barts
Health NHS Trust

Bridging Health Gaps in prevention: Cardiovascular Risk Assessments in Community Pharmacies

April 2026

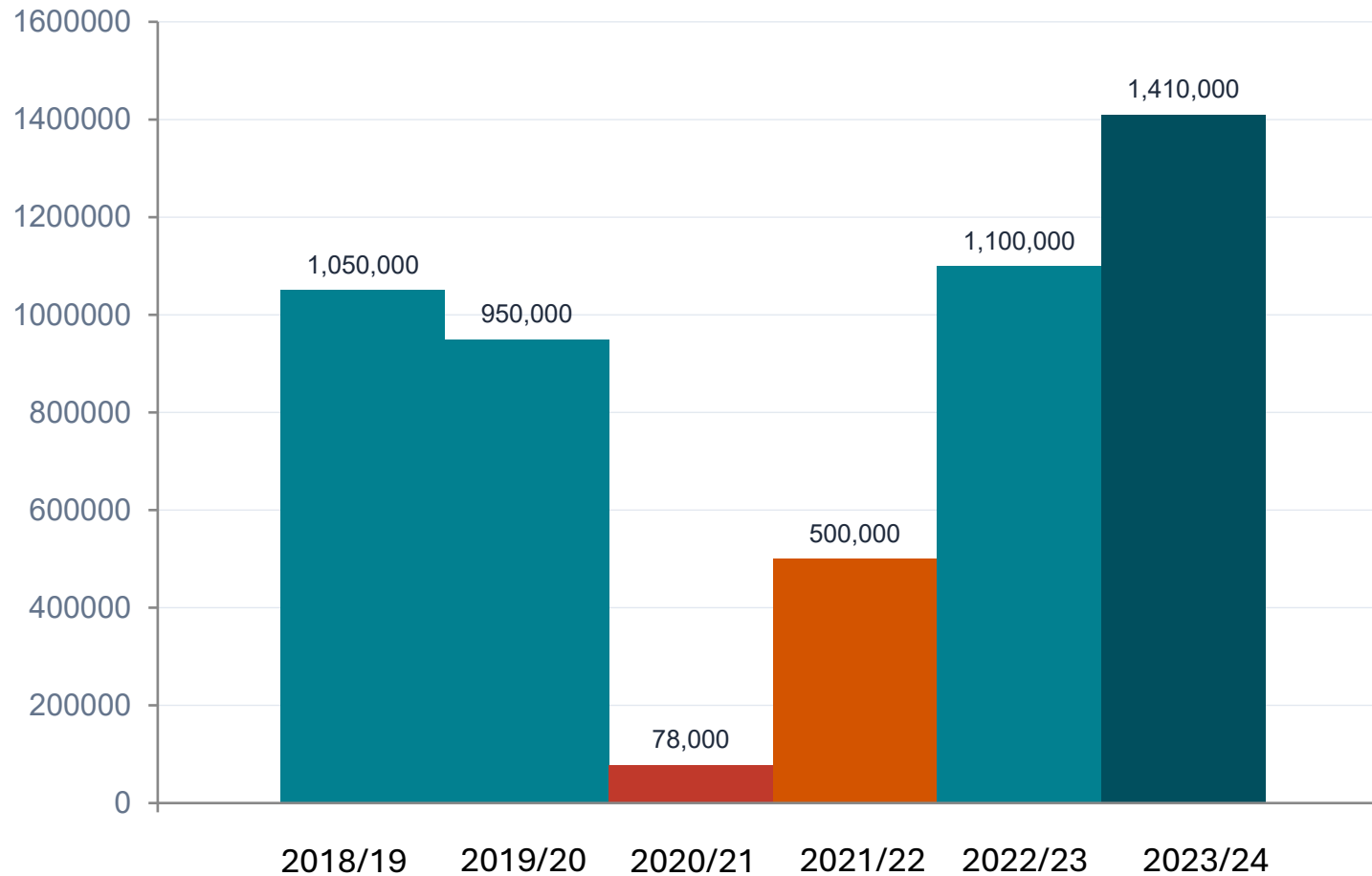
Dr Sotiris Antoniou
Divisional Director, Clinical Services,
St Bartholomew's Hospital





The Pandemic Created a Structural Backlog

Annual NHS Health Checks delivered — England (OHID/Fingertips 2018–24)



Pandemic collapse

2020-21: only ~78,000 checks delivered. A fall of 92% vs prior year.

Pandemic backlog

An estimated 4-5M eligible adults missed their 5-year check during 2020-22.

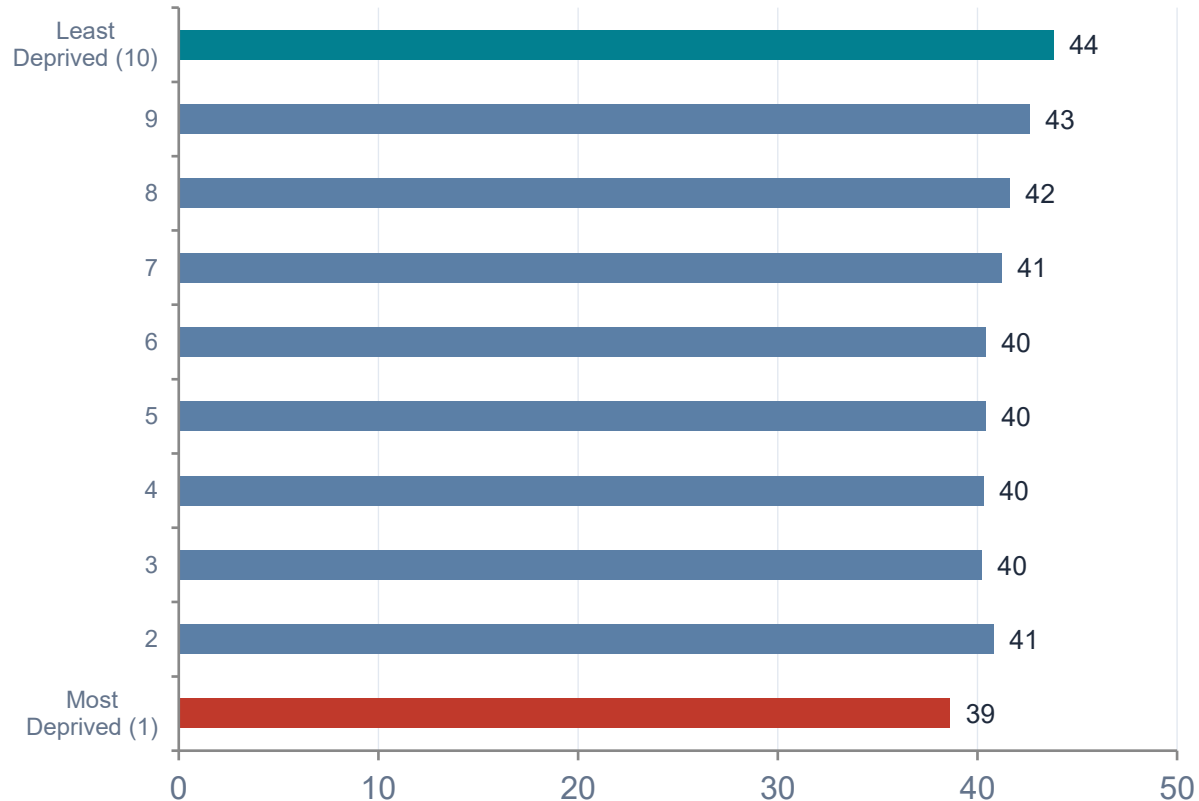
2023-24: record high

1.41M checks - highest since 2014/15. 3.6M offered, 2.1M still declined or did not respond (OHID, 2024).

Who Is Being Missed?

Deprivation and ethnicity gaps in NHS Health Check attendance (2017-2018)

Attendance Rate by Deprivation Decile



Ethnicity & Attendance (2017–18)

Asian or Asian British

Attending: 8.9% of attenders | Not attending: 5.4% of non-attenders

Over-represented among attenders relative to non-attenders — positive signal, but absolute non-attendance still large (85,550 in 2017–18 alone)

Black or African/Caribbean

Attending: 4.1% of attenders | Not attending: 2.9% of non-attenders

Higher CVD risk, yet 46,952 did not attend in 2017–18.
Disproportionate impact given elevated baseline risk.

Ethnicity not recorded

Attending: 6.2% of attenders | Not attending: 26.7% of non-attenders

Missing ethnicity data disproportionate among non-attenders — a significant data quality issue masking true equity gaps.

CVD Prevention: Drivers and unmet need




Around 130,000 people are living with heart and circulatory diseases in the NHS East London area

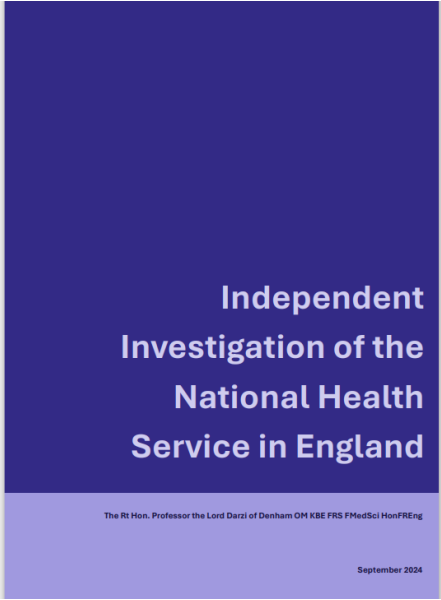

220 Heart and circulatory diseases cause **220 deaths** each month in the NHS East London area



'What matters to me, not what's the matter with me'



'The number of people dying before the age of 75 in England from CVD has risen to the highest level in 14 years'



'...increase their [community pharmacy] role in the management of long-term conditions... and treatment of obesity, high blood pressure and high cholesterol.'



1. NHS England. NHS long term plan. NHS England website [online] Available at: www.longtermplan.nhs.uk/publication/nhs-long-term-plan. January 2019.
 • Fuller, C. Next Steps for nitrating primary care: Fuller Stocktake report. [online] Available at: <https://www.england.nhs.uk/wp-content/uploads/2022/05/next-steps-for-integrating-primary-care-fuller-stocktake-report.pdf>. May 2022.
 • NHs England,. Delivery plan for recovering access to primary care. [online] <https://www.england.nhs.uk/wp-content/uploads/2023/05/PRN00283-delivery-plan-for-recovering-access-to-primary-care-may-2023.pdf>. May 2023.
 • Lord Darzi. Independent Investigation of the National Health Service in England. [online] <https://assets.publishing.service.gov.uk/media/66f42ae630536cb92748271f/Lord-Darzi-Independent-Investigation-of-the-National-Health-Service-in-England-Updated-25-September.pdf>. September 2024.

New



Total cholesterol:
4.96 mmol/L
LDL: 2.64mmol/L
HDL: 1.29mmol/L
Triglycerides:
2.27mmol/L

6.3

53/102mmHg
52/103mmHg
50/103mmHg

4ABPM offered

Cardiovascular Health: Cholesterol Point of Care Testing in Community Pharmacies

A third of heart attacks are attributable to high cholesterol.

12,356 patients in North East London have accessed NHS Community Pharmacy Blood Pressure Check Service, in Feb 2025.

Complementing BP checks with point of care testing (POCT) for cholesterol enables holistic CVD risk review, improves access to screening and treatment alongside tackling health inequalities.





60 years
5'9"
80 kg



patient@email.com

- My health profile
- Account settings
- Authorized apps**
- Connected devices
- Log out

My results 7

New 7



Heart ▶

QRISK3 Cardiovascular disease risk		Low Risk < 10	Nov 26, 2024
Total Cholesterol All forms of cholesterol		Low Risk < 5.2	Nov 26, 2024
HDL Clears cholesterol		Low Risk > 1.53	Nov 26, 2024
LDL Deposits cholesterol		Low Risk < 2.6*	Nov 26, 2024
CHOL/HDL Ratio of cholesterol balance		Low Risk < 3.5	Nov 26, 2024
Non-HDL All 'bad' cholesterol		Low Risk < 3.4	Nov 26, 2024

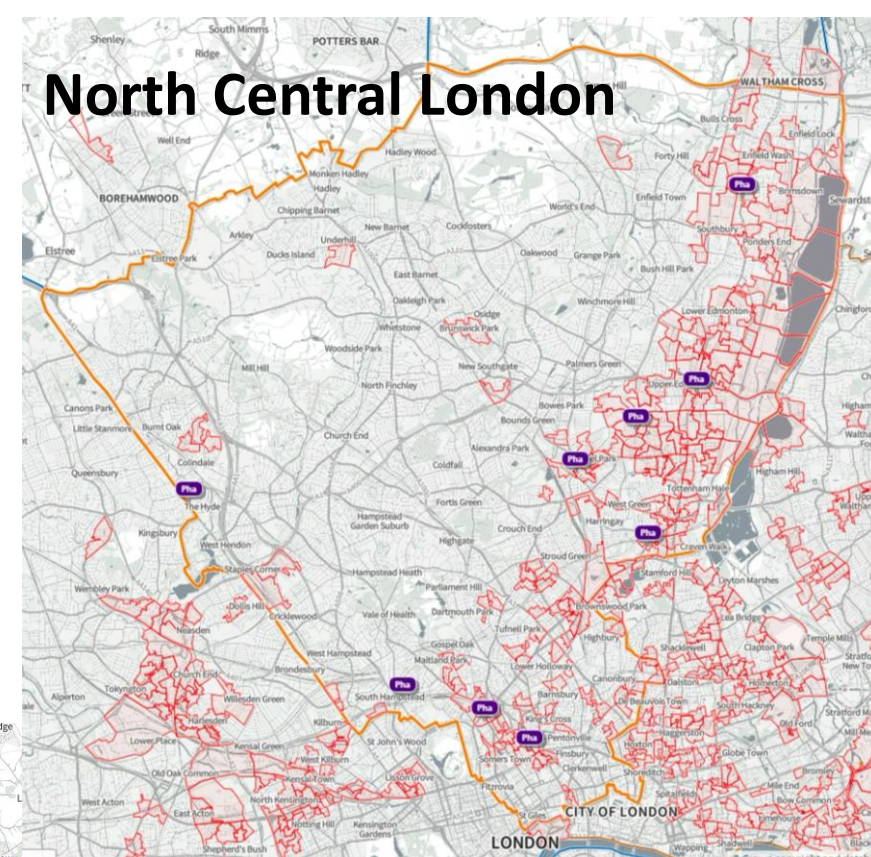
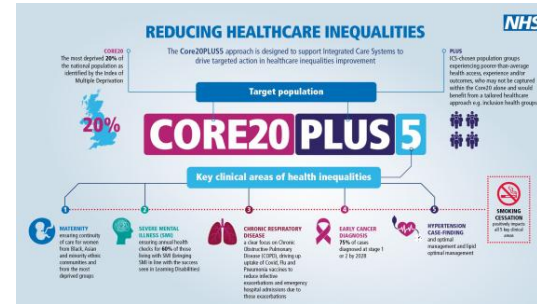
Latest results from 06 Jan

Cholesterol [Moles/volume] in... mmol/L	06 Jan 16:09 3.96 >	Latest: no change in range
	06 Jan 15:11 3.96	in range
Cholesterol non HDL [Moles/v... mmol/L	06 Jan 16:09 2.53 >	Latest: no change in range
	06 Jan 15:11 2.53	in range
HDL-Cholesterol [Moles/volu... mmol/L	06 Jan 16:09 1.43 >	Latest: no change out of range
	06 Jan 15:11 1.43	out of range
LDL-Cholesterol [Moles/volu... mmol/L	06 Jan 16:09 1.56 >	Latest: no change in range
	06 Jan 15:11 1.56	in range
Total cholesterol:HDL Molar ra...	06 Jan 16:09 2.8 >	Latest: no change in range
	06 Jan 15:11 2.8	in range
Triglyceride [Moles/volume] i... mmol/L	06 Jan 16:09 2.13 >	Latest: no change out of range
	06 Jan 15:11 2.13	out of range

Selected community pharmacies

7 pharmacies - NEL

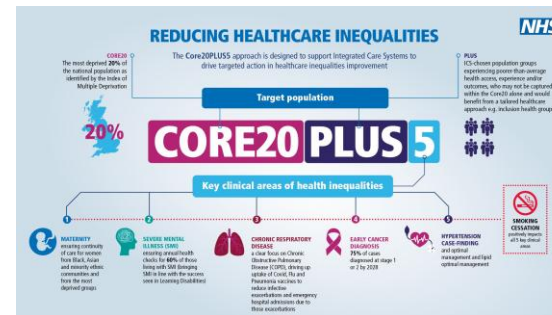
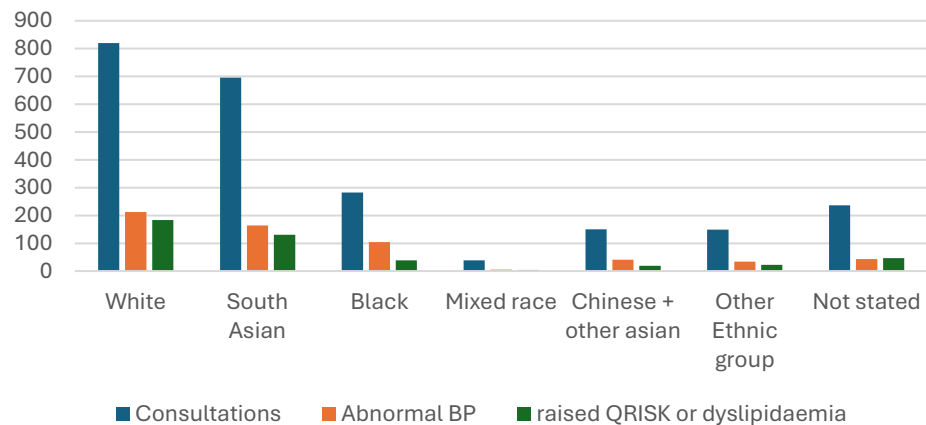
6 pharmacies - NCL



Outcomes

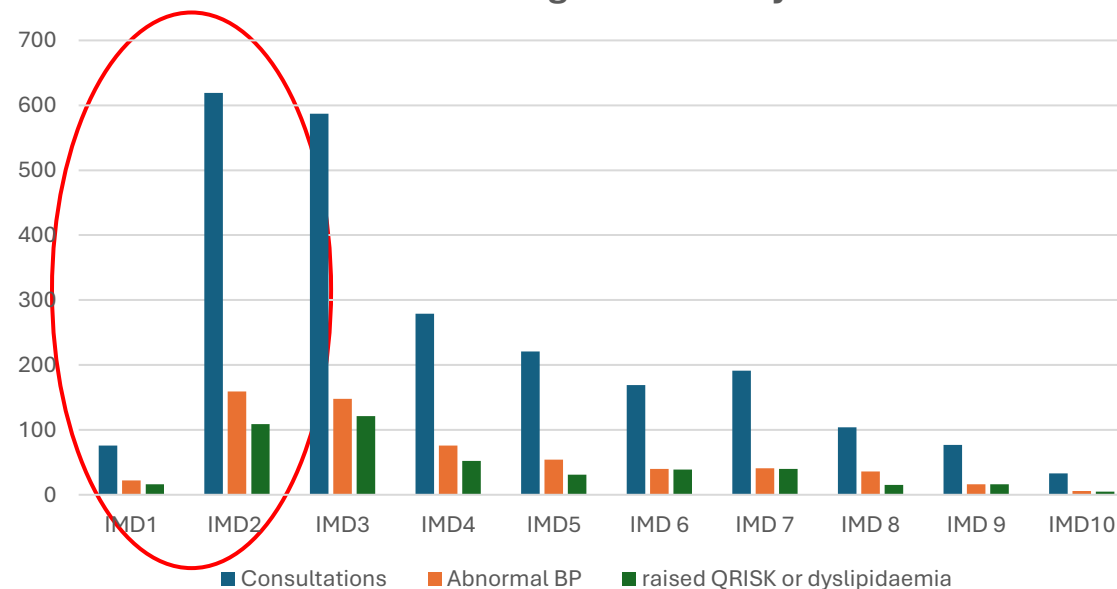
- Jan 25– Mar 26
- Patients tested: 2067 (59 pharmacies)
- **445 (19%) identified with QRISK \geq 10% or significantly raised lipids**
 - Patients opting for lifestyle changes before initiating statins
 - 71 patients initiated on statin therapy
- 52/103 (**50%**) patients with diabetes have QRISK \geq 10%
- 603 (25%) raised clinic BP

Number of people accessing the service and being identified as high CVD risk by Ethnicity



33.2% within CORE20

Number of people accessing the service and being identified as high CVD risk by IMD





100% of respondents would recommend the cholesterol test to your friends and family'

This is such an incredible service to have access to. There is heart disease in my immediately family.... The time saved is invaluable as this service no longer warrants an online submission for a GP appointment, wait of 3 plus weeks for an appointment, just to request a blood test form. Then having to go to the medical centre for the blood test. Followed by waiting for the results to be processed before contacting my GP again. I work full time as a Secondary teacher, please continue this service for the local community

Figure 12. Smoking status and QRISK score

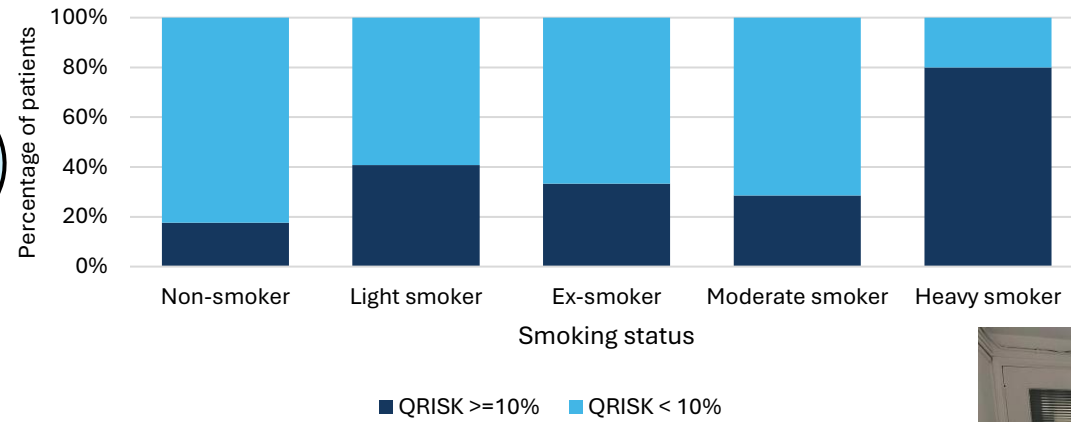
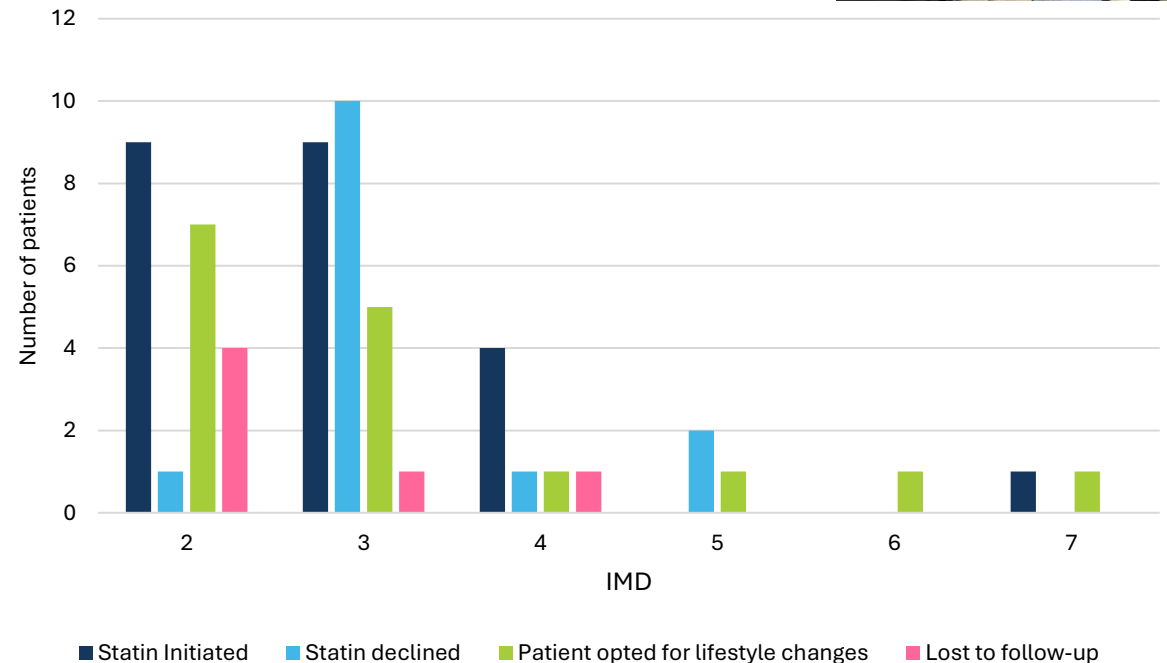


Figure 16. Patient outcomes by IMD decile



Feedback from patient interviews



Barts Health
NHS Trust

"As an Asian. we have lots of butter and lots of oil so just to alternate, they gave a list of things we can eat alternatively"



"In the pharmacy, it was fantastic. I mean, they were very polite, they were helpful."

"There was no waiting. I was given a time slot, and I was there about five minutes before - and I was seen literally about two or three minutes before my actual time slot."

"I now take around about 30/40-minute walk per day and I've cut out a lot of fatty food"

"This service could genuinely save lives and money."

"It takes about 8 minutes, and you get the results then and there. It was a no-brainer."

"It's life-changing. Especially for people like me who work long hours, and for older people like my parents."

NE London: HbA1c outcomes (Feb–Mar 2026)

- 1,557 HbA1c tests completed (alongside lipid testing)
- **123 (7.9%) abnormal HbA1c results identified (≥ 42 mmol/mol)**
 - 99 patients with prediabetes (HbA1c 42–47 mmol/mol)
 - 24 patients with diabetes-range results (≥ 48 mmol/mol)
- **27% of all NEL consultations had ≥ 1 cardiometabolic abnormality**
 - Raised QRISK, abnormal HbA1c, or elevated BP — 1 in every 4 patients
- If restricted to over-40s: pick-up rate rises to 12.5%
- 69% of tests in most deprived populations (IMD 1–3); 40.7% CORE20

NE London at a glance

1,557

HbA1c tests completed

7.9% (12.5% Health Check)

abnormal HbA1c yield

27%

had ≥ 1 cardiometabolic abnormality

40.7%

CORE20 population (IMD 1–2)

Prevention: Evolution and plans for community pharmacy clinical services



Primary prevention:

Pilot CVD risk assessments in 13 community pharmacy

- Complementing blood pressure checks
- Facilitated by:
 - Lipid POCT
 - Digital solution



Secondary prevention:

Lipid POCT testing for people with previous CVD, identifying whether people are being treated to target and administration of Inclisiran

- Aligning with Innovation in Healthcare inequalities Programme

Publications



- ▶ Health, wellbeing and community in Lewisham
- ▶ Helping residents stay stronger for longer in Bexley
- ▶ Reducing health inequalities in Bromley
- ▶ ShowerBox – free hot showers and clean underwear for people experiencing homelessness
- ▼ Barts brings life-saving cholesterol check to east London

UCLP Launching rapid cholesterol testing in community pharmacies

From a UK research institute

Watch on YouTube

ability to walk in and get a test makes

Barts Health NHS Trust have pioneered a fast, free cholesterol test, available at local pharmacies across east London. It is helping people catch hidden heart risks early – potentially preventing heart attacks and strokes.

[Barts Heart Centre](https://www.england.nhs.uk/london/our-work/10-year-health-plan-for-england-fit-for-the-future/sickness-to-prevention/), working with [UCLPartners](#), has introduced this seven-minute test – first launched in Newham – that shows your cholesterol levels and estimates your risk of heart problems over the next 10 years.

the PHARMACEUTICAL JOURNAL

Community pharmacy cholesterol testing pilot expands across east London

Under the scheme, pharmacies use a seven-minute test to assess patients' cholesterol levels and offer an estimate of their risk of heart problems over the next ten years.



Barts Health rolls out cholesterol-lowering jobs in community pharmacies

These jobs are traditionally administered in hospital settings



Community Pharmacy CVD Prevention: The Case for scaling

Addressing the Prevention Gap

- NHS Health Check backlog left an estimated 4–5M adults unscreened during 2020–22
- Deprivation and ethnicity gaps persist;
- community pharmacy reaches populations who do not present to GP

The Pharmacy Offer: Holistic CVD Risk in 7 Minutes

- Full lipid panel (POCT) + BP + HbA1c + QRISK3 — same visit, immediate results,
- Personalised Consultation
 - Lifestyle counselling and structured referral to GP for treatment where indicated
- Accessible – 80% population within 20mins of a pharmacy
- Scalable frontline model for Cardiovascular Prevention within NHS

Complementing, Not Duplicating, Primary Care (Neighbourhood Health)

- Pharmacy identifies risk;
 - Independent Prescribers, GP initiates treatment with documented referral pathway
- Reduces avoidable GP demand: patients screened without requiring an appointment, freeing capacity for complex care
- Strong patient acceptability (100% satisfaction) supports sustained population-level engagement and health behaviour change

Programme at a glance

2,067

patients screened (59 pharmacies)

1 in 4

had ≥1 cardiometabolic abnormality

40.7%

CORE20 (IMD 1–2)

69%

IMD 1-3

71

patients newly initiated on statins

100%

would recommend to family & friends

Bridging Health Gaps in prevention: Cardiovascular Risk Assessments in Community Pharmacies

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April 2026

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Skill Clinic



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Trust



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Cardiology and Respiratory
Great Western Hospital
Trust