**Kent Surrey Sussex
Academic Health Science
Network**

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c o n s u l t i n g

Stroke Prevention in Atrial Fibrillation (AF)

Detect. Protect. Perfect.

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Summary

KSS AHSN Alliance for Atrial Fibrillation (AF) aims to reduce the number of people dying or disabled by AF-related stroke, by increasing the detection of patients in AF and optimising the use of anticoagulants in line with NICE CG180 guidelines

Implementing a robust package of AF tools and resources to GP practices that will support them to deliver in the 3 key focus areas of Detect-Protect-Perfect. In addition the provision of Clinical Pharmacists upskilled in education and mentorship programmes.

AF package of support included: AliveCor Kardia Mobile Lead 1 ECG Devices, Virtual Anticoagulation Clinics (as per NHSE AF Demonstrator Programme), Oberoi SPAF & Case Finding Service, CVD Mentorship & Education Programmes, CVD online platform of shared learning & resources.

KSS AHSN collaborated with Oberoi Consulting and funded the implementation of the Oberoi SPAF (Stroke Prevention in AF) & Case Finding Service in 10 East Kent GP practices to facilitate the work of Clinical

Pharmacists participating in the NHSE Atrial Fibrillation Patient Optimisation Demonstrator Programme.

The Oberoi SPAF & Case Finding Service offers a systematic approach which completely integrates within the GP clinical system so there is no need for add-on software. It carries out a real-time analysis of patients who have AF and are at risk of stroke, based on certain search criteria which are already within the patient record.

A superb system to help clinicians identify, treat and optimise patients in AF and at high risk of having a stroke. The reports give detailed practice level data that they can use to facilitate increasing practice prevalence, anticoagulation rates and perfection of anticoagulation treatment. The Oberoi SPAF & Case Finding e-portal can be set up to allow access to PCN, CCG and AHSNs level monthly reporting for all participating practices.

Practices can access reporting to benchmark themselves to all practices in their PCN.

Goal - Aims/Objectives

- Increase the prevalence of AF - using AliveCor Kardia Mobile Lead 1 ECG Devices.

- Increase the identification, timely review and rate of appropriate anticoagulation – through virtual anticoagulation clinics.

- Reduce mortality and morbidity arising from AF related strokes.

- Spread the use and implementation of the Oberoi SPAF & Case Finding Service in GP Practices to support the teams to identifymissing AF and high risk AF patients in need of intervention.

- Increase the number of patients that are anti-coagulated and quality of anticoagulation in primary care.

- Reduce the incidence of AF related strokes.

- Implement innovation and the quality improvement toolkit.

- Implement cardiovascular education and mentorship programmes.

- Provide reporting to primary care across KSS with robust and transparent data that supports benchmarking and quality improvement.

- Prepare practices for the CVDPrevent Audit, which is being implemented nationally from April 2020.

Who did it?

A number of key stakeholders were involved led by:

KSS AHSN

Jen Bayly, CVD Programme Lead, Richard Blakey, CVD Clinical Lead, Justin Rocliffe, Senior Analyst.

South Kent Coast CCG

Christopher Bridge, Head of Medicines Optimisation, who led the team of 30 Clinical Pharmacists from East Kent.

Oberoi Consulting

Vivek Patel and Jo Crossan who supported the deployment and project management of the Oberoi SPAF & Case Finding Service.

What did you do?

KSS AHSN collaborated with East Kent CCGs as key delivery partner to co-ordinate the implementation of the AF package of support in 10 GP practices.

AF package of support includes:

Detect: AliveCor Kardia Mobile Lead 1 ECG Devices, training, supporting pathways and resources.

Opportunistic Case finding prompts through the Oberoi SPAF & Case Finding Service.

Protect: Virtual Anticoagulation Clinic Model (NHSE AF Patient Optimisation Demonstrator Programme).

Perfect: System searches to increase optimal anticoagulation, monitoring and ensure correct coding recorded.

Clinical Audit & Reporting Data: Measured the ongoing impact of detect, protect and perfect at Practice, PCN and CCG level through the Oberoi SPAF & Case Finding Service.

Education: CVD Education Programme for Clinical Pharmacists (quarterly).

Mentorship: CVD webex for Clinical Pharmacists led by CVD Clinical Lead (weekly).

Resources: Access to a KSS wide CVD online platform to access shared learning and resources. Including: Atrial Fibrillation, Heart Failure, Cardiac Rehabilitation, Cholesterol and Familial Hypercholesterolemia.

We offered an AF package of support to clinical teams in 10 GP Practices: (total population of 118,683 individuals)

In the 3 key focus areas:

Detect

Finding new cases of AF:

1 Check manual pulse on all over 65yrs and not on AF register (though system prompts) - if pulse irregular or unsure then:

2 Use AliveCor Lead 1 ECG Device - if abnormal result then email trace for GP to review, diagnose and treat.

3 Book patient in for next available appointment to perform 12 lead ECG to rule out any other arrhythmias.

Protect

Increasing optimal anticoagulation therapy

1 Run searches on clinical system to identify patients in need of review.

2 Review case notes / patient and make recommendations to GP / Prescriber to optimise anticoagulation.

3 Record coding whether anticoagulation takes place in or outside the practice.

Perfect

Encourage / support GP teams to:

1 Action all recommendations: to optimise correct doses of anticoagulation treatment.

2 Check key monitoring data is on clinical system, particulary TTR and Cr/Cl.

3 Ensure on-going monitoring of patients on both Warfarin and DOACS to reduce bleeding risk and ensure the dosing is within the therapeutic range for stroke prevention.

Note: KSS AHSN provided all organisations using the AliveCor Kardia Mobile Lead 1 ECG Devices with supporting documents, pathways, training and resources to ensure they were NHS IG Compliant.

We wrapped around further support:

- **Clinical Audit & Reporting** – Implemented Oberoi SPAF & Case Finding Service, and dynamic monthly reporting

- **Mentorship** – Access to weekly CVD webex for Clinical Pharmacists led by Dr Richard Blakey, CVD Clinical Lead for KSS AHSN and GPSI Cardiology.

- **Education** - Access to an online CVD shared learning and resource platform, plus a quarterly CVD Education Programme for Clinical Pharmacists.

The aim of the initiative was to avert strokes and deaths through the implementation of a range of tools and resources to support the clinical teams. We were able to measure the impact in real-time using a standardised and measurable approach of computerised interrogation of the GP database to identify at-risk patients and help specialist pharmacists identify patients in need of review. Oberoi Service Implementation Managers visited each surgery to set-up the clinical systems and train the allocated Pharmacist on the systematic approach to facilitate their work and how to use the AliveCor Lead 1 ECG devices in line with NHS guidelines.

The Oberoi SPAF & Case Finding service has proved invaluable to the pharmacists delivering the NHSE virtual clinic Demonstrator Programme.

The pharmacists uploaded non-patient identifiable data monthly to the Oberoi SPAF & Case Finding e-portal to asses the impact of their work on an on-going basis.

The Oberoi SPAF & Case Finding Service assists GP practices with the complete management of patients with AF. In real-time at the press of a button it generates lists of patients where clinical intervention is missing along with opportunistic prompts (aligned to AF NICE CG180 guidelines) to ensure AF patients with missing clinical interventions are captured during consultations.

A secure e-portal enables practices to track the level of intervention taking place in their practice as well as benchmarking their performance vs, other participating practices.

The aim in 2020 is to spread the Oberoi SPAF & Case Finding Service further using secured Medical Education Goods Services (MEGs) funding, across the whole of East Kent in all 67 GP Practices to support in-house practice clinicians to increase the prevalence of AF and rates of optimal anticoagulation to at least 90% and perfect anticoagulation thereby delivering on CVD Prevention.

Information - How was it organised?

Engagement of practices was supported and co-ordinated by KSS AHSN and South Kent CCG medicines optimisation teams. Oberoi Service Implementation Managers followed up with the practices and pharmacists to coordinate deployment.

Progress updates were provided to key stakeholders, Pharmacists, Practices, CCGs and AHSN from Oberoi Consulting on a periodic basis to communicate the impact being made.

The Oberoi SPAF & Case Finding service gives much more than other systems. The biggest advantage being the searches to identify key patient cohorts sit within the GP system along with the opportunistic prompts.[1]

The super-user' reports enable PCNs, CCGS and the AHSN to benchmark performance for all participating practices. High level target improvements can easily be tracked on increased prevalence, anticoagulation rates, perfection of treatment and best practice shared.

To support perfecting anticoagulation, the searches identify whether incorrect doses of Direct Oral Anti-Coagulants (DOACs) are being given, enabling clinicians to correct doses to improve efficacy and reduce potential side effects. For those on Warfarin it extracts which patients have time in therapeutic range (TTR) values in the system and those with a TTR < 65%.

Monthly dynamic reporting is delivered through the Oberoi SPAF & Case Finding e-portal to show the impact being made on Detect, Protect and Perfect vs baseline. Reporting is available at practice, PCN and CCG level.
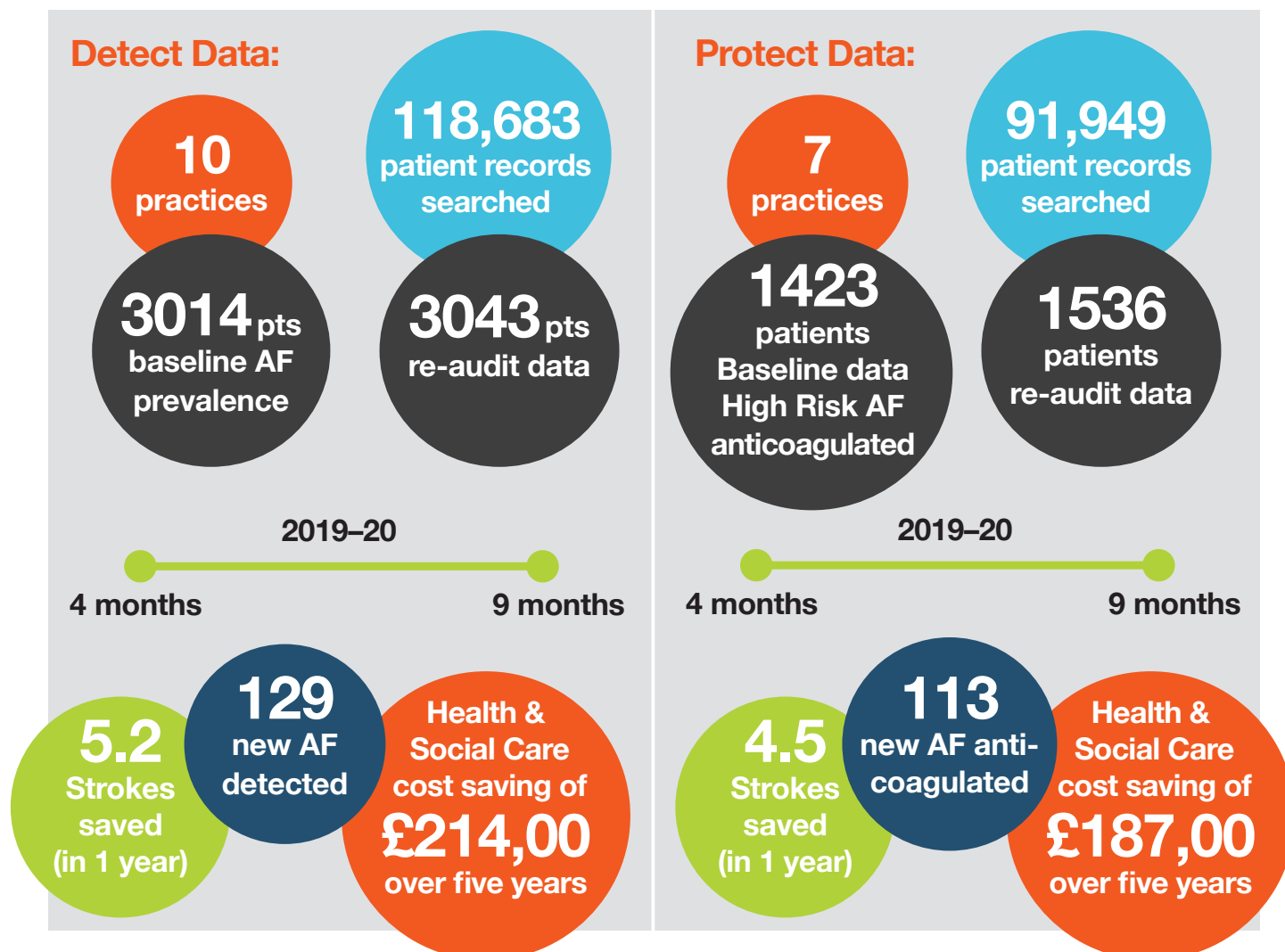
Ambitious targets for AF detection were set in East Kent of 90% and a protection (anticoagulation) rate of a minimum of 90% of the AF high risk population. Perfection of anticoagulation was also high on the agenda to ensure identification of patients with AF who maybe being prescribed sub-optimal warfarin or incorrect dose of DOAC.

The Oberoi SPAF & Case Finding data from the e-portal reports feeds into the wider AF project KSS AHSN quarterly highlight reports for Practices, PCNs / CCGs / STP and the overall project evaluation report.

[1] https://www.oberoi-consulting.com/nhs/oberoi-spaf-and-case-finding/

Outcomes

We collated the Oberoi SPAF audit data from 10 practices all with the full package of AF support implemented. All practices had AliveCor Kardia Mobile Lead 1 ECG Devices, Virtual Anticoagulation Clinics, Oberoi SPAF and Case Finding Service, access to CVD online platform for shared learning and resources and CVD Mentorship and Education Programmes.

Detect Data:

10 practices

118,683 patient records searched

3014 pts baseline AF prevalence

3043 pts re-audit data

2019–20

4 months   9 months

5.2 Strokes saved (in 1 year)

129 new AF detected

Health & Social Care cost saving of **£214,00** over five years

Protect Data:

7 practices

91,949 patient records searched

1423 patients Baseline data High Risk AF anticoagulated

1536 patients re-audit data

2019–20

4 months   9 months

4.5 Strokes saved (in 1 year)

113 new AF anti-coagulated

Health & Social Care cost saving of **£187,00** over five years

Note: 3 practices data were excluded from Protect data as the Warfarin patients were treated / monitored by a third party and the GP Practice had not coded 8B2K to say anticoagulation takes place outside the practice.
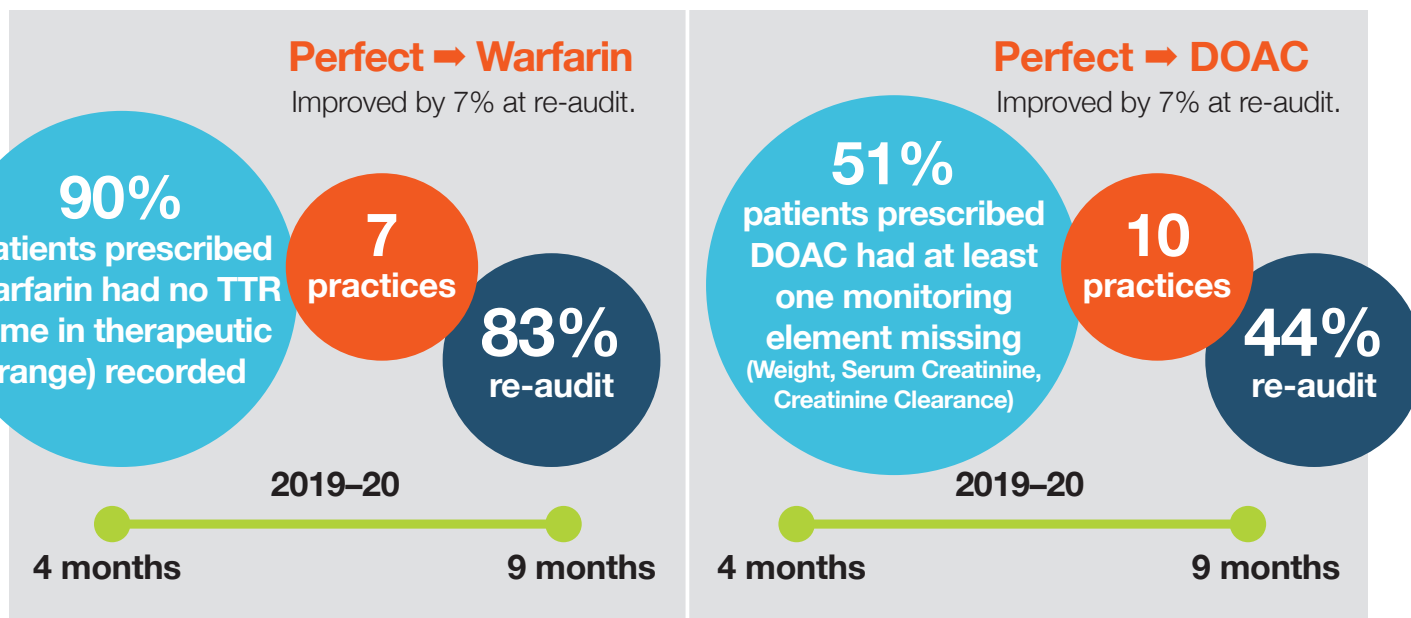
Every 25 possible AF's detected saves 1 stroke.*
The financial cost of each stroke in the first 5 years is £46,038 but the personal cost is higher.*

*Reference: Xu XM, Vestesson E, Paley L et al. The economic burden of stroke care in England, Wales and Northern Ireland: Using a national stroke register to estimate and report patient-level health economic outcomes in stroke. Eur Stroke J 2018; 3(1): 82-91. (Reference: https://www.ncbi.nlm.nih.gov/pubmed/29900412/)

Perfect:

Data is key

Perfecting treatment, monitoring patients and recording data is paramount to patient safety, whether anticoagulation takes place within or outside a practice. Dosing can then be amended accordingly.

Perfect ➡ Warfarin
Improved by 7% at re-audit.

90% patients prescribed Warfarin had no TTR (time in therapeutic range) recorded

7 practices

83% re-audit

2019–20

4 months — 9 months

Perfect ➡ DOAC
Improved by 7% at re-audit.

51% patients prescribed DOAC had at least one monitoring element missing (Weight, Serum Creatinine, Creatinine Clearance)

10 practices

44% re-audit

2019–20

4 months — 9 months

Patient Safety:

Perfecting treatment is key to reduce bleeding risk and ensure dosing is within the therapeutic range for both Warfarin and DOACs for stroke prevention.

Next steps:

To scale the Detect-Protect-Perfect project model across the region, starting with all 67 East Kent Practices (see case study for potential impact).
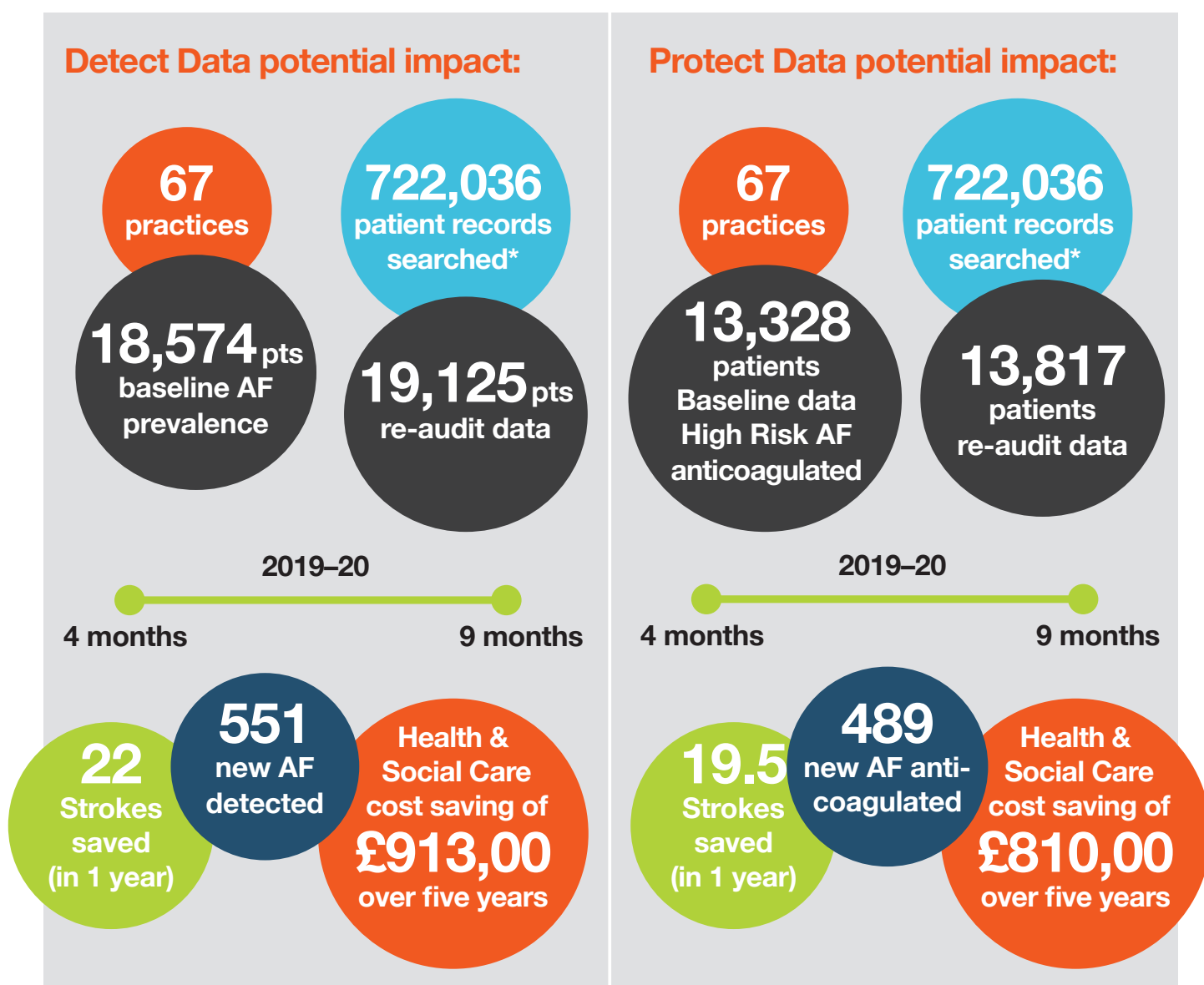
Top Tips!

- Embark on this work together as a PCN, involve the whole practice team to case find new AF and the GPs to interpret ECGs, diagnose, treat, action recommendations and ensure monitoring occurs.

- Identify a CVD Clinical Lead at each practice to drive this work forward and upload non-patient identifiable data on the 1st of every month to the Oberoi e-portal (takes 5 mins).

- Focus time on checking there is correct coding on the clinical system for diagnosis, treatment and monitoring of AF patients.

- Correct the coding on the clinical system for mis-coded or missing AF patients

- Check coding on the GP clinical system is added for patients receiving Warfarin treatment/ monitoring from a third party. (code 8B2K to say anticoagulation takes place outside the practice).

- Increase communication between Practice and Anticoagulation Clinics to ensure patients are being safely treated and monitored.

- Check TTR data is recorded on the GP Clinical System for every patient receiving Warfarin Therapy.

- Check all DOAC patients have measurements recorded on the clinical system required for initiating and dosing. These being Weight, Serum Creatinine, Creatinine Clearance (CR/CL) (*CR/CL is a calculation) recorded at baseline and every 6 months. (or at least once a year).

- Ensure patients are optimised on correct doses of warfarin and DOACs to reduce risk of strokes and bleeding side effects.

Next Steps:

Potential impact to be made when scaled across all 67 East Kent practices:

The data from the 10 practices with the full AF support package implemented has shown that our approach can make a significant impact on patient health.

If we extrapolate our data across the whole of East Kent 67 Practices with a population (722,036 individuals) the potential impact of this work when scaled can be seen.

Detect Data potential impact:

67 practices

722,036 patient records searched*

18,574pts baseline AF prevalence

19,125pts re-audit data

2019–20

4 months — 9 months

22 Strokes saved (in 1 year)

551 new AF detected

Health & Social Care cost saving of **£913,00** over five years

Protect Data potential impact:

67 practices

722,036 patient records searched*

13,328 patients Baseline data High Risk AF anticoagulated

13,817 patients re-audit data

2019–20

4 months — 9 months

19.5 Strokes saved (in 1 year)

489 new AF anti-coagulated

Health & Social Care cost saving of **£810,00** over five years

Every 25 possible AF's detected saves 1 stroke.*
The financial cost of each stroke in the first 5 years is £46,038 but the personal cost is higher.*

*Reference: Xu XM, Vestesson E, Paley L et al. The economic burden of stroke care in England, Wales and Northern Ireland: Using a national stroke register to estimate and report patient-level health economic outcomes in stroke. Eur Stroke J 2018; 3(1): 82-91. (Reference: https://www.ncbi.nlm.nih.gov/pubmed/29900412/)

Summary

We believe the KSS AHSN Alliance for AF. Detect-Protect-Perfect project has made a difference to our population in primary care settings across KSS. However, there is more to do, and support is needed to help us share our learning and scale-up the project across the region.

Executive team support is essential for successful engagement and implementation.

We have already made strides to scale the project model across East and West Kent and are keen to share the learning and project model further.

Maximising the use of available tools and resources in the management of AF and other long term conditions improves outcomes.

The lack of monitoring and recorded data for prescribed anticoagulants is an issue that needs to be addressed nationally, whether anticoagulation takes place within or outside a practice.

However audit findings do not automatically result in change of management, there is a need to streamline treatment pathways.

CVDPrevent Audit is being implemented from April 2020 which will see an automatic data extraction from all GP Practices every quarter.

The CVD Prevent audit will show practices how are they performing vs. Detect and Protect targets but will not link back to the patient record which is where this project has used the Oberoi service to support the practice teams, as its systematic approach and searches/integrated prompts sit within the clinical system.

Real time data is key to deliver CVD Prevention and is crucial to support GP practices to deliver on CVD prevention.

To access the full case study on-line and find out more visit www.kssahsn.net/atrialfibrillation

Contact your local AHSN to find out more and what is available in your local area.

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To find out more about the Oberoi SPAF and Case Finding Service:
www.oberoi-consulting.com/nhs/oberoi-spaf-and-case-finding/
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Written 21st January 2020 by Jen Bayly, Cardiovascular Programme Lead, KSS AHSN.