Response to RFP: IGLC – AFIB Stroke Reduction

Section A: Cover page

Title of proposal:

Delivering specialised expertise in anticoagulation initiation in the primary care setting; harnessing the skills of Specialist Pharmacists in the prevention of AF related stroke.

Collaborators:

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Abstract:

Providing anticoagulation therapy to patients with Atrial Fibrillation (AF) is a role that has traditionally sat in General Practice. The introduction of 4 NOACs to the market, each with specific contraindications, side effects and dosing regimens has markedly increased the complexity of this area of pharmacology placing a significant burden on the GP to communicate complex information on the risks and benefits of anticoagulation and each drug to patients within a traditional 10-minute appointment slot.

Key issues that need to be addressed to ensure that sustainable step changes in anticoagulation rates are achieved are:

- Confidence and expertise in initiating anticoagulation
- Capacity in primary care to have detailed and prolonged conversations with patients about risks and benefits

We propose to address these issues through developing and evaluating a novel model of anticoagulation initiation, within the primary care setting, harnessing the specific expertise of Specialist Pharmacists to counsel patients, assess bleeding and stroke risk and use shared decision making techniques to decide on appropriate anticoagulation. The Specialist Pharmacists will prescribe the first month’s anticoagulation after which patients are managed through usual GP monitoring. Patients prescribed a NOAC will be offered a follow-up appointment to discuss side effects and all patients will have access to a telephone helpline, which GPs can also access if they have on-going queries. This system based change project will establish a model that can be rapidly spread across the NHS.
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Section C
Question 1: Overall Goals and Objectives

The Oxford Academic Health Science Network (AHSN) proposes to establish a new model of service delivery for the initiation of anticoagulation therapy in primary care. Recognising the recruitment and demand pressures currently facing General Practitioners, we propose a system-based change through an innovative model which harnesses the capacity and specialist expertise available within the Pharmaceutical profession. The Primary Care Anticoagulation Initiation Service (PCAIS) will be delivered by dedicated Specialist Pharmacists who will assess and counsel patients in the primary care setting and prescribe an appropriate anticoagulant. This proposal seeks funding to appoint 1 whole time equivalent (WTE) Specialist Pharmacists and to backfill 0.1 WTE Consultant Pharmacist to oversee training, delivery and evaluation.

Currently the burden of anticoagulation initiation sits with General Practitioners who have varying levels of expertise in prescribing NOACS and who do not always have sufficient time to have a high quality discussion about the benefits and risks of anticoagulation with patients. There is currently a treatment gap in the Oxford AHSN region with circa 25% of high risk patients with AF not receiving anticoagulation therapy.

The overall aim of the project is to reduce the number of AF related strokes in participating CCG areas through increasing the number of patients with known AF who are receiving appropriate anticoagulation therapy. The Primary Care Anticoagulation Initiation Service (PCAIS) will achieve this through:

- Taking the burden of “decision to anticoagulate” away from the rushed setting of the GP consultation and into an environment where there is sufficient time for a structured conversation and shared decision making with the patient.
- Providing a secondary care level of expertise in a GP practice setting.
- Ensuring consistency in prescribing; a team of Specialist Pharmacists working to defined guidelines as opposed to multiple GPs with differing levels of expertise.

As this is a novel model of service delivery this proposal seeks funding to deliver this service in one or more CCGs (total population circa 500,000) for 1 year as a proof of concept to deliver a scalable service model and specification. Following successful delivery of the proof of concept we would plan for the service to be fully commissioned in year 2 with roll out to other CCGs in the Oxford AHSN region. Oxford AHSN would widely share the success of the pilot through the existing AHSN AF network as well as other relevant forums and publications. The AHSN commits to offering all relevant documentation and project methodology as well as mentoring support to other AHSNs or CCGs who would wish to implement the service.

The goals of the project are well aligned to the goal of the Request For Proposals (RFP):

1) Improving the quality of patient care
   - All patients with AF being considered for anticoagulation will receive a consultation with a Specialist Anticoagulation Pharmacist. This consultation will include a full
discussion of risks and benefits of anticoagulation with the patients so that a shared decision can be made.

- By centralising the decision to initiate anticoagulation into one service provider patients across the CCG can expect consistent advice on the risks, benefits, efficacy and suitability of each anticoagulant.
- A high quality consultation and the opportunity to discuss side effects (follow-up after 2 weeks) will be likely to increase patient adherence with the treatment regime which will reduce the risk of AF related stroke.

2) Increasing the rate of uptake of innovation

- The proposal aims to adapt an innovative secondary care based Specialist Pharmacist led model devised by Buckinghamshire Healthcare NHS Trust, for application within the primary care setting; a model that can be used nationally.
- Immediate and future challenges facing GP recruitment require new and innovative approaches to dealing with the shortfall; this proposal draws on the specialist skills of pharmacists to deliver a service traditionally delivered by GPs.
- The project will take a “proof of concept approach” that will enable the rapid creation of a robust and real evidence base. This will be essential for influencing commissioning decisions and ensuring diffusion and spread.
- Oxford AHSN has a highly experienced Clinical Innovation Adoption (CIA) Programme which has a proven track record of introducing, implementing and diffusing innovation into the Oxford AHSN region (Bedfordshire, Milton Keynes, Buckinghamshire, Berkshire & Oxfordshire); the CIA team will lead the implementation of this proposal and onward dissemination within the region.

The bid is being led by the Oxford Academic Health Science Network in collaboration with Buckinghamshire Healthcare NHS Trust. Each organisation is committed to improving quality of care and to harnessing the potential of innovation with organisational goals being well aligned to the goals of the RFP. Table 1 below demonstrates the alignment of organisational goals, with the RFP:
Table 1

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Key objective</th>
<th>Aligned to RFP goal 1: Improving quality of care</th>
<th>Aligned to RFP goal 2: Increasing the rate of uptake of Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford AHSN</td>
<td>1) Patient focus based on regional needs</td>
<td></td>
<td>★</td>
</tr>
<tr>
<td></td>
<td>2) Speed up innovation into practice</td>
<td></td>
<td>★</td>
</tr>
<tr>
<td></td>
<td>3) Partnership and collaboration to deliver improved quality of care</td>
<td></td>
<td>★</td>
</tr>
<tr>
<td></td>
<td>4) Work with industry, SME, entrepreneurs and the NHS to accelerate adoption of innovation for the benefit of patients</td>
<td></td>
<td>★</td>
</tr>
<tr>
<td>Buckinghamshire Healthcare NHS Trust</td>
<td>Reduce mortality</td>
<td>★</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reduce Harm</td>
<td>★</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Great patient experience</td>
<td>★</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Partnership working</td>
<td></td>
<td>★</td>
</tr>
<tr>
<td></td>
<td>Keeping people healthy and well</td>
<td>★</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strengthening out of hospital care</td>
<td>★</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technology and innovation to drive improvement</td>
<td></td>
<td>★</td>
</tr>
</tbody>
</table>

Table 1

The key objectives of this proposal are to:

- Increase the number of high risk patients in AF who are receiving anticoagulation
- Improve the quality of prescribing of anticoagulants
- Reduce the number of patients poorly controlled on warfarin by providing ease of access to expertise in anticoagulant transition
- Improve patient adherence to anticoagulant treatment
- Improve patient access to anticoagulation services
- Improve GP access to high quality advice about anticoagulation

**Question 2: Current assessment of need in target area**

**Part 2a**

Anticoagulation of high risk patients with AF has improved across the Oxford AHSN region in recent years but circa 1 in 4 of these patients are still not receiving anticoagulation. In 2015/16 there were around 250 preventable strokes in the Oxford AHSN region in patients with known AF who were not anticoagulated – costing the health economy over £6 million.

Various work-streams have been undertaken in the region over the past 2 years, aimed at delivering compliance with NICE Clinical Guideline 180. These work-streams have predominantly focused on GP education and on case finding using GRASP-AF and related tools. Whilst this work has been impactful and has resulted in an increase in the number of high risk patients receiving anticoagulation from 67% to 75%, a treatment gap still remains. The treatment gap is proving difficult to address due to the following factors:

- Complexity of oral anticoagulant prescribing
- GP time
A standard GP appointment slot is 10 minutes and primary care capacity is extremely pressurised with the national recruitment challenges faced by primary care being mirrored within the Oxford AHSN region. Prescribing of anticoagulation has traditionally sat with GPs but the introduction of four NOACs to the market, each with specific indications, contraindications, dosing regimens and side effects has greatly increased the complexity of the prescribing decision. Currently, the burden for this decision sits with the GP who has to navigate themselves and the patient through a highly complex area of pharmacology within a standard appointment time slot. Additionally, individual GPs may not have built up enough expertise in prescribing the newer drugs to be able to do so confidently.

There is currently a discrepancy between the service currently being provided to patients and best practice as outlined in NICE CG180. All patients with AF should have the opportunity to have a high quality structured consultation about the risks and benefits of anticoagulation therapy and this is currently not the case.

**Part 2b**

Baseline data are shown in table 2 below. This table gives a projection of the number of patients in 2016/17 who have known AF, a CHA₂DS₂VASC>1 and are not receiving anticoagulation. The projections are based on QoF data and the methodology used is as follows:

- Historical growth in the AF register for each CCG was used to project the size of the AF register in 2016/17
- The denominator (plus exceptions) from AF004 2013/14 QoF was used to give the proportion of patients with CHADS2>1 (note that 2013/14 values give a more accurate indication of numbers of patients with CHADS2>1 as CHADS2 reporting monitoring was not included in the 2014/15 QoF)
- An uplift of 35% was applied to the number of patients projected to have CHADS2>1 to give an estimation of the number of patients with CHA₂DS₂VASC>1²
The historical trend in growth of numbers anticoagulated was used to project the number of patients receiving oral anticoagulation. An estimated stroke risk of 5% per annum was applied to those patients not receiving anticoagulation. It was assumed that 64% of these strokes would be preventable with effective anticoagulation.

Using this methodology, it is estimated that across the Oxford AHSN region in 2016/17 there will be 8363 high risk patients with known AF who are not receiving anticoagulation and that this will result in 262 preventable strokes.

These projections suggest that despite the good work that has been carried out in the region to date, there is still a significant gap in anticoagulation prescribing expertise. This proposal seeks to address this gap.

### Table 2: Baseline projections for anticoagulation and preventable stroke rates

<table>
<thead>
<tr>
<th>Known AF, CHA2DS2VASc&gt;1 and not on OAC</th>
<th>Number of patients not receiving OAC</th>
<th>Number of strokes</th>
<th>Number of preventable strokes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milton Keynes</td>
<td>751</td>
<td>38</td>
<td>24</td>
</tr>
<tr>
<td>Aylesbury Vale</td>
<td>865</td>
<td>42</td>
<td>27</td>
</tr>
<tr>
<td>Chiltern</td>
<td>1157</td>
<td>53</td>
<td>34</td>
</tr>
<tr>
<td>Bracknell and Ascot</td>
<td>439</td>
<td>21</td>
<td>13</td>
</tr>
<tr>
<td>North and West Reading</td>
<td>368</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>Oxfordshire</td>
<td>2791</td>
<td>132</td>
<td>84</td>
</tr>
<tr>
<td>Slough</td>
<td>285</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>South Reading</td>
<td>285</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Wokingham</td>
<td>512</td>
<td>29</td>
<td>18</td>
</tr>
<tr>
<td>WAM</td>
<td>560</td>
<td>31</td>
<td>20</td>
</tr>
<tr>
<td>Newbury and District</td>
<td>371</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8383</strong></td>
<td><strong>412</strong></td>
<td><strong>262</strong></td>
</tr>
</tbody>
</table>

Question 3: Target Audience

**Part 3a**

The key participants in the proposal are:

- 11 CCGs and the GP practices within each CCG area, within the Oxford AHSN region
- Buckinghamshire Healthcare NHS Trust
- Oxford AHSN

The primary audience for this proposal are CCGs and GPs within the Oxford AHSN region. All CCGs within the region are very committed to delivering improvements in AF related stroke; the AHSN is working actively with 9 out of the 11 CCGs on AF related projects and so has good engagement and relationships in place. Reducing the number of AF related strokes is a multifaceted issue, CCGs have recognised this and invested time in delivering projects...
looking at various areas of AF diagnosis and management. CCGs in our area recognise that a treatment gap remains for anticoagulation in AF and are actively seeking advice and assistance in dealing with the challenge.

CCGs have strong reach into GP practices and have well established lines of communication in terms of GP forums and local clinical networks. If required, they will have the ability to incentivise GPs to participate following the proof of concept. CCGs will be able to advise on location of service focusing on areas with greatest need.

Our proposal includes service delivery for a population of up to 500,000 which will enable multiple CCGs to be engaged. Our intention is to make a flexible offer to CCGs, ideally with service delivery across multiple CCGs. We have developed this new model of care following discussions and feedback with GPs and CCGs about the type of service they would wish to have, the recruitment challenges they face in primary care and need for a local service for patients. Through our existing AHSN activities we have a network of interested GPs keen to participate in new and innovative models of care delivery. With strong relationships already in place, with the key elements of our proposal well aligned to stated GP and CCG needs and with key local stakeholders identified and engaged, we have built an 8 week GP and CCG sign up period into our project timelines. Engagement activities so far suggest that at least 3 CCGs will participate.

The key participants in this project who will drive project delivery include:

- Buckinghamshire Healthcare NHS Trust (BHT)
- Oxford Academic Health Science Network

Buckinghamshire Healthcare NHS Trust (BHT) has experience of setting up and successfully delivering a Pharmacist-Led service in secondary care dedicated to initiating anticoagulation. The service is led by Consultant Pharmacist Satinder Bhandal who won the Clinical Pharmacist of the year award from the Royal Pharmaceutical Society for her work in setting up the service. BHT can therefore provide the very specific expertise that is required for project set up and service delivery. Detailed clinical protocols are already in place in secondary care and can be adapted for the primary care setting. A systematic training programme is already in place at BHT and the organisation is recognised as innovative in its use of Pharmacists.

BHT have committed to employing and training the pharmacists for the duration of the proof of concept. Consultant Pharmacist Satinder Bhandal has committed to providing immediate line management and professional support.

Staff recruitment plan:

<table>
<thead>
<tr>
<th>Task</th>
<th>Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job descriptions and adverts created</td>
<td>September 2016</td>
</tr>
<tr>
<td>Advert placed</td>
<td>4th November 2016</td>
</tr>
<tr>
<td>Interviews</td>
<td>25th November</td>
</tr>
<tr>
<td>Staff in post</td>
<td>March 2017</td>
</tr>
</tbody>
</table>
Satinder Bhandal will coordinate the recruitment process. Advertisements will be placed on NHS Jobs and the process will be robust and rigorous, carried out to NHS standard processes. When recruiting to similar posts in the past, BHT have had many high quality applicants.

Oxford AHSN has committed to provide programme oversight and project management support for service set up and evaluation. The AHSN has significant experience of implementing projects in primary care and has a dedicated Clinical Innovation Adoption (CIA) Programme, the aim of which is to enable rapid adoption of innovation in the NHS. The CIA programme is governed by an oversight group chaired by Neil Dardis, Chief Executive Officer of Buckinghamshire Healthcare NHS Trust. Project progress and evaluation will be formally monitored via this group.

The aim is that following the pilot or proof of concept, the service will be formally commissioned with support for business case development and health economics modelling provided to the CCG by the AHSN. The AHSN commits to offering this model as part of their innovation adoption programme regionally and promoting it nationally via the AHSN AF network.

**Part 3b**
The target audience for this proposal are GPs who will play a key role in driving referrals into the service. We know from our GP engagement work that GPs would like to see a Pharmacist-led service in primary care as they believe it would deliver key benefits: 1) creating capacity 2) effective patient treatment 3) help and support for GPs in managing AF patients.

When a secondary care Pharmacist-led service was introduced in Buckinghamshire it was extremely well received by the local GPs.

**Part 3c**
Participating CCGs (and their GP practices) will stand to greatly benefit from the project in terms of:

- Greater levels of anticoagulation among high risk patients resulting in lower levels of AF related stroke
- Reduction in GP workload
- GP education through working alongside specialist pharmacists
- Equitable level of access to anticoagulation for patients
- Telephone helpline for GPs and patients
- Support in evaluating the project and converting proof of concept into a full business case for commissioning

Patients will benefit in terms of:
- Specialist service delivered locally
- High quality structured consultations with adequate time to discuss complex issues
- Specialist Pharmacists skilled in shared decision making techniques
- A helpline to call the service if they have a concern or question
- A follow-up at 2 weeks (for NOAC patients) to discuss any concerns or side effects

Other CCGs within the Oxford AHSN region will benefit from:

- Local best practice example
- Shared project methodology and protocols
- Dedicated adoption and implementation support from the AHSN Clinical Innovation Adoption Team

CCGs nationally will benefit from:

- Best practice example shared through various media and the AHSN AF network
- Shared project methodology and protocols
- Guidance on implementation from the AHSN Clinical Innovation Adoption Team

Question 4: Project design and methods

Part 4a
The new and innovative service will act as a local hub of specialist expertise with all anticoagulation in participating CCGs/localities/clusters being initiated via the PCAIC.

The service will be delivered in large GP practices, close to areas of the greatest need. It is anticipated that the service will be delivered from two locations in each participating CCG. For the life of the proof of concept pilot the service will have its administrative hub at Wycombe Hospital in Buckinghamshire, co-located with the Buckinghamshire Healthcare NHS Trust Secondary Care Anticoagulation Service. The telephone helpline will also be based at Wycombe Hospital.

The service will be led by a Consultant Pharmacist and delivered by dedicated Specialist Pharmacists. GPs will refer via email or fax using a proforma template. Referrals will be accepted for:

- Treatment naïve patients
- Patients who should be considered transition from Warfarin to NOAC due to poor TTR
- Patients who should be considered for an alternative anticoagulant due to unacceptable side effects, new or resolved contraindications
- Patients who have previously declined treatment but are now willing to discuss treatment
The service will see urgent referrals (CHA2DS2-VASC of 5 or more) within 48 hours and all referrals within 10 working days. Patients will be given a 30-minute structured consultation including information about stroke risk and bleeding risks. Shared decision making techniques will be used to ensure that patients are offered the most appropriate anticoagulant for their clinical condition and preference. All Specialist Pharmacists employed within the service will be non-medical prescribers and will issue the first-month prescription. GPs will be sent a letter detailing the drug that has been prescribed and what is required in terms of ongoing monitoring – e.g. blood tests.

Patients initiated on warfarin will be started on warfarin and referred to their usual anticoagulation clinic for on-going monitoring. Patients initiated on a NOAC will have a telephone follow-up after 2-3 weeks where any side-effects, anxieties or concerns will be discussed. A helpline will be available for patients and GPs to discuss any queries or concerns.

**Part 4b**
The project will address the established need (increasing the number of patients with known AF who are receiving appropriate anticoagulation therapy) by providing a mechanism for all patients who may require initiation or transition of their anticoagulant to have a specialist consultation with an expert in anticoagulation prescribing. This will result in:

- All patients having a high quality discussion about anticoagulation
- A higher proportion of patients having anticoagulation prescribed
- A higher quality of prescribing of anticoagulation
- Greater adherence to treatment due to quality of consultation discussion and multiple opportunities to discuss side effects

As a professional group, Pharmacists are expert in drug interactions, indications, contraindications, dosing regimens and adherence. Additionally, all Specialist Pharmacists who will be delivering this service will have received further training in anticoagulation prescribing and will hold a non-medical prescribing qualification. The recruitment and capacity challenges faced by General Practice at a time of rising demand are well documented and the use of Pharmacists as a skilled resource, able to take on some of the work traditionally carried out by General Practitioners has been cited in NHS policy and Royal College documents as a prudent use of resources going forwards.

As noted by the Royal Pharmaceutical society:

- There is significant resource available within the Pharmaceutical workforce
- Pharmacists skills are often under-used
- Pharmacists represent a cost-effective resource relative to GPs
- Patients have reported feeling safe and satisfied with pharmacists in GP practice

Core issues that have been identified locally as requiring for improvement, that are addressed by our innovative model are shown in table 3 below:
We will determine if our target audience is adequately engaged by monitoring activity and seeking patient and GP feedback. Patient satisfaction with the service model and with the outcome of their consultation will be key metrics that will be tracked through the course of the project.

Referral rates into the service will be monitored to ensure that GPs are referring into the service appropriately whilst GP feedback will be sought via a range of means including focus groups and surveys. A detailed communication strategy will be developed that will encompass regular feedback from practices as well as a full post-project evaluation.

As a contingency, should referral rates be slow at the start of the project, despite engagement and communication we would divert some pharmacist resource into ‘case-finding’ to pump-prime referrals into the service.

In developing this proposal, we have carried out a thorough search of literature and best practice case studies. This research has not found any similar services. Oxford AHSN is part of the AHSN AF network through which new innovations in AF are shared and this has not revealed a similar service. The existing Buckinghamshire Healthcare Trust service that we are adapting in this proposal is secondary care based.

Our literature search has found that services that use pharmacists in primary care tend to use them in a case finding capacity\(^7\) – to the best of our knowledge, our proposal is unique in taking Specialist Pharmacists with prescribing capability into a primary care setting.

Buckinghamshire Healthcare NHS Foundation Trust has been delivering a secondary care based Pharmacist-Led NOAC clinic since 2012 and the success of this clinic has demonstrated that Pharmacists can deliver an effective anticoagulation service with high levels of GP and patient satisfaction. Our proposal is to adapt this model and run a proof of

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<table>
<thead>
<tr>
<th>Identified issue</th>
<th>Addressed through specialist expertise</th>
<th>Addressed through reallocation of workload from GPs</th>
<th>Addressed through high quality consultation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation in GP confidence in prescribing NOACs – due to complex prescribing regimes, complex contraindications and narrow therapeutic indices</td>
<td>⭐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variability in GP expertise results in inequity of access to anticoagulants, particularly NOACS</td>
<td>⭐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overestimation of risk of bleeding and risk of falls</td>
<td>⭐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of resource and capacity in General Practice, a standard GP appointment time is inadequate to impart the complex health information required for patients to make an informed decision</td>
<td></td>
<td>⭐</td>
<td></td>
</tr>
<tr>
<td>Variable patient adherence to anticoagulation therapy – evidence shows that the quality of consultation has an impact on adherence to therapy(^6)</td>
<td></td>
<td></td>
<td>⭐</td>
</tr>
</tbody>
</table>

Table 3

Part 4c
We will determine if our target audience is adequately engaged by monitoring activity and seeking patient and GP feedback. Patient satisfaction with the service model and with the outcome of their consultation will be key metrics that will be tracked through the course of the project.

Referral rates into the service will be monitored to ensure that GPs are referring into the service appropriately whilst GP feedback will be sought via a range of means including focus groups and surveys. A detailed communication strategy will be developed that will encompass regular feedback from practices as well as a full post-project evaluation.

As a contingency, should referral rates be slow at the start of the project, despite engagement and communication we would divert some pharmacist resource into ‘case-finding’ to pump-prime referrals into the service.

Part 4d
In developing this proposal, we have carried out a thorough search of literature and best practice case studies. This research has not found any similar services. Oxford AHSN is part of the AHSN AF network through which new innovations in AF are shared and this has not revealed a similar service. The existing Buckinghamshire Healthcare Trust service that we are adapting in this proposal is secondary care based.

Our literature search has found that services that use pharmacists in primary care tend to use them in a case finding capacity\(^7\) – to the best of our knowledge, our proposal is unique in taking Specialist Pharmacists with prescribing capability into a primary care setting.

Part 4e
Buckinghamshire Healthcare NHS Foundation Trust has been delivering a secondary care based Pharmacist-Led NOAC clinic since 2012 and the success of this clinic has demonstrated that Pharmacists can deliver an effective anticoagulation service with high levels of GP and patient satisfaction. Our proposal is to adapt this model and run a proof of
concept trial to provide an evidence base for the delivery of this service in the primary care setting.

Significant efforts are being made across the Oxford AHSN region on AF case finding. Whilst case finding is not specifically included in this proposal the proposed service would be a useful adjunct to a case finding project. Should referrals be slow at the start of the project, in addition to additional communication and engagement activities, Pharmacist resource would be diverted into case finding in order to pump prime the referrals into the service.

**Part 4f**
Our project methodology, audit design and any data collection tools will be made public, free of charge.

**Question 5: Evaluation design**

**Part 5a**
The aim of the project is to increase the proportion of high risk AF patients who are anticoagulated through providing specialist expertise in primary care. The primary method of determining whether the proportion of AF patients who are receiving anticoagulation has increased will be via GRASP-AF which will be run on a 6 monthly basis.

Data collection plans for the project are shown below in table 4:

<table>
<thead>
<tr>
<th>Data set</th>
<th>Source</th>
<th>Frequency of collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number and proportion of high risk patients receiving anticoagulation</td>
<td>GRASP-AF</td>
<td>6-monthly</td>
</tr>
<tr>
<td>Number of patients referred to PCAIC service</td>
<td>Local audit</td>
<td>Monthly</td>
</tr>
<tr>
<td>Reason for referral to PCAIC service (new diagnosis, transition etc.)</td>
<td>Local audit</td>
<td>Monthly</td>
</tr>
<tr>
<td>Outcome of patients referred to service (anticoagulated or not)</td>
<td>Local audit</td>
<td>Monthly</td>
</tr>
<tr>
<td>CHA\textsubscript{2}DS\textsubscript{2}VASc score at time of referral</td>
<td>Local audit</td>
<td>Monthly</td>
</tr>
<tr>
<td>QoF indicator AF007 – number of patients with CHA\textsubscript{2}DS\textsubscript{2}VASc &gt;1 receiving OAC</td>
<td>National publication</td>
<td>Annually in arrears</td>
</tr>
<tr>
<td>Referrer satisfaction</td>
<td>Local survey</td>
<td>After 9 months</td>
</tr>
<tr>
<td>Patient satisfaction</td>
<td>Local survey</td>
<td>After 9 months</td>
</tr>
</tbody>
</table>

*Table 4*

Data collection will be coordinated by the Specialist Pharmacists with evaluation carried out by the Oxford AHSN Clinical Innovation Adoption team. Additional evaluation resource has been built into the proposal to support this.

The majority of the indicators outlined above are directly linked to the project, with the exceptions being QoF indicator AF007 and the GRASP-AF data showing the number and proportion of high risk patients receiving anticoagulation. There are a number of AF improvement projects happening across the region and so would be difficult to directly
assign causality of improvements in these two indicators to this project. We would however expect improvements in these indicators as part of this project. We will therefore carry out a comparison study with of QoF and GRASP-AF improvements between practices involved in the project and control practices. This comparison study when triangulated with the other local data sources outlined in the table above will provide confidence that any improvements in anticoagulation rates are related to our intervention.

Part 5b
Note, that as this proposal does not specifically include case-finding (though is an ideal pipeline through which to funnel patients identified through case finding) we would not expect to tackle the backlog of patients currently not on any anticoagulation. Instead this proposal would focus on new diagnoses and patients requiring a review of their anticoagulation. Therefore, after 12 months we would expect a 5% increase in the proportion of high risk patients who are on appropriate anticoagulation as per NICE CG180.

Part 5c
Oxford AHSN has a dedicated Clinical Innovation Adoption (CIA) Programme which exists to facilitate the rapid adoption of evidence based innovation into the NHS. Led by Tracey Marriott MBA, the CIA team have significant experience in articulating the need for change and in successfully delivering transformation projects. AF is already a priority for the Oxford AHSN and local relationships with key stakeholders are well established. During the pilot phase the CIA team will engage with regional stakeholders to inform them of project progress and start developing plans for onward dissemination into their CCG areas, providing health economics, business case and ultimately implementation support.

The AHSN would also promote the project nationally, writing up case studies for relevant NHS, Industry and charity publications, including the AF Association Healthcare Pioneers and the AHSN Impact Report as well as sharing progress through the AHSN AF network.

Question 6: Detailed work-plan and deliverables schedule
The work-plan in table 6 below shows the key project tasks, deliverables and timescales. Oxford AHSN already has good engagement with CCGs in the region with regards to AF improvement projects. We have already worked with key local GPs to establish that a Pharmacist-Led service based in primary care would be acceptable and we will continue this engagement in our planned forums during September and October 2016.

Post-bid award we would develop detailed proposals for each interested CCG or locality with the aim of formally signing CCGs up to the project in December 2016.

The recruitment process will commence in November 2016 with the aim of having all staff in place by March 2017 to allow sufficient time for training. We do not anticipate any risks to the project from the recruitment process as similar roles have previously attracted a significant number of high quality applicants. However, should there be any lag, staff
currently working at Buckinghamshire Healthcare Trust can be redeployed into the service and backfilled.

Work will commence in December 2016 to agree clinical guidelines, referral guidelines and protocols with the CCGs, in addition to a local communications and engagement plan.

The service will start to be publicised in January 2017 through GP forums and education sessions. GP feedback will be sought on aspects of service delivery.

Databases will be set up in March 2017 and tested with the baseline data.

The service will be formally launched in April 2017 with referrals carefully monitored and promotional activities continuing.

In November 2017 the first 6 months of operation of the project will be quantitatively and qualitatively evaluated with the data used to write a business case for extension of the service in participating CCG areas. It is anticipated that the service will commence on a tariff basis in April 2018 in participating CCGs. Concurrently with business case development, the Oxford AHSN will write the project up as a case study for onward dissemination to CCGs within the AHSN region and nationally.

<table>
<thead>
<tr>
<th>Task</th>
<th>Completion Date</th>
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<tbody>
<tr>
<td>Set up project group</td>
<td>Nov 16</td>
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<tr>
<td>Agree terms of reference for project</td>
<td>Nov 16</td>
</tr>
<tr>
<td>Develop detailed proposals for CCGs</td>
<td>Nov 16</td>
</tr>
<tr>
<td>Develop overall communications and engagement plan</td>
<td>Nov 16</td>
</tr>
<tr>
<td>Adverts placed for Pharmacists and Administrator</td>
<td>Nov 16</td>
</tr>
<tr>
<td>Formally sign CCGs up to the project</td>
<td>Dec 16</td>
</tr>
<tr>
<td>Agree referral guidelines, clinical guidelines and protocols with CCGs</td>
<td>Dec 16</td>
</tr>
<tr>
<td>Agree local communications and engagement plan with CCG</td>
<td>Dec 16</td>
</tr>
<tr>
<td>Interview and appoint Pharmacists and Administrator</td>
<td>Dec 16</td>
</tr>
<tr>
<td>Agree location and accommodation with CCG</td>
<td>Jan 17</td>
</tr>
<tr>
<td>Publicise services with GPs – communications and attendances at GP forums</td>
<td>Jan/Feb 17</td>
</tr>
<tr>
<td>Training package delivered to pharmacists</td>
<td>Mar 2017</td>
</tr>
<tr>
<td>Data collection tools/data bases in place</td>
<td>Mar 2017</td>
</tr>
<tr>
<td>Baseline data collection</td>
<td>Mar 2017</td>
</tr>
<tr>
<td>Service launch</td>
<td>Apr 2017</td>
</tr>
<tr>
<td>Attend GP forums to seek initial feedback on service</td>
<td>May 2017</td>
</tr>
<tr>
<td>Data collection</td>
<td>As per data schedule</td>
</tr>
<tr>
<td>Health economics for business case</td>
<td>Nov 2017</td>
</tr>
<tr>
<td>6-month service evaluation write up</td>
<td>Nov 2017</td>
</tr>
<tr>
<td>Business case for extension of service developed</td>
<td>Dec 2017</td>
</tr>
<tr>
<td>Business case approved</td>
<td>Jan 2018</td>
</tr>
<tr>
<td>Service commencement on tariff basis</td>
<td>Apr 2018</td>
</tr>
</tbody>
</table>

Table 6: Work plan
Section D - References

1. The Kings Fund, Understanding Pressures in General Practice, May 2016
2. Edge et al, How many more patients will we need to anticoagulation using CHA2DS2VASc: A real-life study in British Primary Care. Primary Care Cardiovascular Journal April 2015
6. Pharmacists and general practice: A practical and timely part of solving the primary care workload and workforce crisis. NHS alliance, Royal Pharmaceutical Society, October 2014