Acknowledgements and interests

The research team thank everyone who has contributed to this project for their time and thoughtful inputs. This includes all those members of the PCT interviewed, and everyone on the Working Group. Our thanks go especially to those pharmacists, GPs and patients who participated and to Ian Sandford, not least for his provision of the interim quantitative evaluation data upon which we have drawn.

The School of Pharmacy, University of London, is in receipt of grants from a range of organisations with financial and other interests in pharmacy and health care provision relating to cardiovascular risk management. However, none of the authors receives direct personal income from any such private companies and bodies, or from public agencies with relevant interests.
Key Findings

Overall

The evidence available indicates that the Islington PCT pilot scheme is a successful, cost effective, provision. It places Islington in a robust position to take forward national policy on vascular disease risk assessment service provision in pharmacy and other settings.

The pilot scheme was viewed positively by virtually all the patients and community pharmacists interviewed. GPs’ views were more varied, although a majority of those interviewed acknowledged the potential of this scheme to contribute usefully to public health improvement in Islington. However, a range of criticisms and concerns were recorded and some clarifications and modifications will be required before it the scheme is further rolled out.

Aims of the pilot scheme

There is some confusion as to the fundamental purpose of this pharmacy based service, relating to the distinctions to be made between basic risk assessments and comprehensive, fully validated, vascular disease risk evaluations.

One of the key points to come from this brief evaluation was the lack of clear understanding by many participants and observers as to the purpose of the scheme, and hence the standards and outcomes to be expected. There are uncertainties as its role as a (one stop) risk screening or assessment designed to identify individuals in need of further investigation, as distinct from a service intended to provide each individual user with fully validated vascular disease risk data. Such confusions led to GPs in particular being uncertain of the value of the pilot service for their patients, and local health service users more broadly. This places obstacles in the way of ensuring a smooth patient journey and fully functional local services. Further attention needs to be paid to defining precisely the goals of pharmacy based cardiovascular risk assessments and ensuring that all relevant participants in primary health care provision in Islington have a common understanding of the aims of the service.

---

1 The terms assessment, case finding, screening and evaluation are used differently by different individuals. There is no single ‘correct’ set of definitions, and in this paper screening and assessment both refer to the activities undertaken by pharmacists during the pilot. But some actors in Islington use the term ‘assessment’ to mean the ad hoc testing of part of a population, as opposed to the ‘screening’ of all members of a defined population. A perhaps more important distinction is that made in the text between risk assessment as defined as providing tests indicative of risk but in need of further verification, as opposed to fuller evaluations that can be reasonably regarded as providing definitive information as to an individual’s CVD/vascular disease risk status.

2 The DH has announced that its ‘Health Checks’ programme formally commenced from April 1st 2009. It is intended that approximately two million people per annum aged 40 and over will be screened, and projected that 1,600 heart attacks and strokes will as a result be prevented with a saving of approaching 700 lives each year. The Secretary of State indicated that he expects the programme to be fully operational by 2013, with each PCT being responsible for the details of its local scheme. RPSGB guidance on pharmacy based vascular screening is also now available, although this does not fully resolve the questions raised in the above paragraph.
The relationships between community pharmacists and general medical practitioners and their practice colleagues

Despite positive achievements, the quality of the professional relationships between the GPs and community pharmacists involved in the pilot scheme could be further improved.

We found that one of the main barriers to this service developing further relates to quality of GP-community pharmacist relationships. Despite the fact that many of those interviewed reported the latter to be good, our analysis suggests underlying difficulties. These include a lack of confidence in pharmacists’ skills and professional judgement on the part of some GPs. Their doubts were compounded by limitations in the information that GPs were given about the pilot and an apparent lack of support for practices with regard to ensuring that effective referral processes are in place. We found indications that vascular risk assessment reports were not always being passed on efficiently to or within practices. This creates risks that some patients are being lost to timely follow up.

Following on from the remarks made above about uncertainties as to the aims of the pilot scheme, a significant number of respondents raised questions about the information quality assurances required (and/or the caveats that may need to be recorded) in order to allow GPs responsibly to enter vascular disease risk related information received from community pharmacists into patient records. There in our view needs to be greater confidence amongst stakeholders that the equipment and testing protocols being used are fit for purpose, and clear guidance as to best practice patient record keeping procedures.

GPs were at worst concerned that they might be ‘swamped’ with extra work in return for little extra benefit for patients. On the community pharmacy side there were also concerns about the volumes of paperwork being generated. We concluded that neither set of concerns represents a robust reason to doubt the value of the pilot, but nevertheless that they should be sympathetically and effectively addressed.

Advertising the availability of pharmacy based vascular screening

Marketing of the service to the public and medical stakeholders should be improved.

Respondents’ views indicated that the marketing/advertisement of the service could be strengthened. The data available suggests that despite initial relatively high levels of take up by ‘pharmacy regulars’ maintaining satisfactory levels of subsequent uptake will require more pro-active approaches to attracting suitable service users (and arguably especially men) into pharmacies for ‘screening’. Better public communication might also help to further inform GPs about the service. To date they do not appear to have been adequately informed about/involved in its development and delivery.

Cost effectiveness

The available evidence supports the view that the pilot scheme has offered benefit to the Islington community in a cost effective manner.
Our research was qualitative rather than quantitative. We cannot offer a definitive answer to the question ‘was the Islington pilot scheme cost effective?’, not least because its actual benefits will take a decade or more to materialise. However, while local interviews were taking place we reviewed national level work on the projected cost effectiveness of the vascular disease risk proposals contained in the DH document *Putting Prevention First*. We also had personal individuals involved in this work. They indicated that enhanced screening for vascular disease risks should be capable of offering benefits with a cost of in the order of £3,000 per QALY gained. This is equivalent to c.10 per cent of the current NICE NHS affordability threshold.

Against this background we used a variant of critical incident analysis during interviews with pharmacists to identify instances in which practitioners believed there was a high probability that new or existing ‘cases’ demanding effective treatment had been identified. The observations so made are in our view consistent with the national level work undertaken. We conclude that it can be reasonably be assumed that the benefits generated from the limited investment made in the Islington PCT pharmacy based vascular disease risk assessment pilot have been obtained cost effectively, at least as this term is currently defined by NICE.

### Table 1. The contrasting views of the main stakeholders in the IPCT pharmacy based vascular disease risk assessment pilot.

<table>
<thead>
<tr>
<th></th>
<th>Pharmacists</th>
<th>GPs</th>
<th>Service Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary prevention of CVD is highly desirable</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>Overall awareness of the pilot</td>
<td>+++</td>
<td>++</td>
<td>+/-</td>
</tr>
<tr>
<td>Advertising/marketing of pilot is poor</td>
<td>+</td>
<td>+</td>
<td>+/-</td>
</tr>
<tr>
<td>Pharmacy is an appropriate location</td>
<td>+++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Scheme is reaching target population</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>More men need to access the service</td>
<td>+++</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Confident in results</td>
<td>++</td>
<td>--</td>
<td>+</td>
</tr>
<tr>
<td>Pharmacists are appropriately trained</td>
<td>++</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Referral process is adequate</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Pharmacists are able to communicate risk</td>
<td>++</td>
<td>--</td>
<td>+</td>
</tr>
<tr>
<td>Pharmacy is not ‘stealing’ GP money</td>
<td>--</td>
<td>++</td>
<td>?</td>
</tr>
<tr>
<td>Extra time spent with pharmacist is valuable</td>
<td>+++</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Role of the pharmacist has developed</td>
<td>+++</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Pharmacy offers a relaxed environment</td>
<td>+++</td>
<td>+</td>
<td>+++</td>
</tr>
<tr>
<td>GPs are primarily for acute medical problems</td>
<td>++</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Pharmacy consultation room(s) adequate</td>
<td>+++</td>
<td>+/-</td>
<td>+</td>
</tr>
<tr>
<td>Multiples are no different from independents</td>
<td>++</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>The PCT has been supportive</td>
<td>++</td>
<td>--</td>
<td>?</td>
</tr>
<tr>
<td>Patients require improved leaflets</td>
<td>++</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Testing equipment used is appropriate</td>
<td>+</td>
<td>--</td>
<td>+</td>
</tr>
<tr>
<td>Pharmacists should recall patients annually</td>
<td>++</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

+++ Strong agreement held by most, if not all. ++ Moderately held view by several. +Weakly held view by a few. +/- Mixed views. –weak disagreement. --moderate disagreement. --- Strong disagreement.
## CONTENTS

**ACKNOWLEDGEMENTS** ........................................................................................................... 2

**KEY FINDINGS** ........................................................................................................................... 3

**INTRODUCTION** ..........................................................................................................................9

**METHODS** ................................................................................................................................... 10

**RESULTS** ..................................................................................................................................... 11

**Pharmacists’ responses** .............................................................................................................. 12

Pharmacy Cluster 1 – User demographics ................................................................. 13
Advertising the pilot scheme ................................................................................... 15
  Key Findings – Pharmacy Cluster 1 ........................................................................ 16
  Key Recommendations – Pharmacy Cluster 1 .................................................... 16
Pharmacy Cluster 2. Patient experiences - why go to a pharmacy? ......................... 16
Confidentiality ...................................................................................................................... 17
  Key Findings – Pharmacy Cluster 2 – Why go to a pharmacy? ......................... 17
Pharmacy Cluster 3 - Time (taken) to test .................................................................... 17
Appointments ...................................................................................................................... 18
Second pharmacists ......................................................................................................... 19
Multiple and independent pharmacies .......................................................................... 19
  Key Findings – Pharmacy Cluster 3 – Time to Test ........................................... 20
  Key Recommendations – Pharmacy Cluster 3 – Time to Test ......................... 20
Pharmacy Cluster 4 - GP pharmacy relationships........................................................ 20
Case studies ......................................................................................................................... 21
  Key Findings – Pharmacy Cluster 4 – GP pharmacy relationships .................. 22
  Key Recommendations – Pharmacy Cluster 4 – GP pharmacy relationships ... 22
Pharmacy Cluster 5 - PCT support .................................................................................... 22
Training ................................................................................................................................. 22
Lifestyle Advice ................................................................................................................... 22
Exercise referral .................................................................................................................. 23
Equipment ............................................................................................................................. 23
Finances ................................................................................................................................... 24
Paperwork .............................................................................................................................. 24
  Key Findings – Pharmacy Cluster 5 – PCT support ........................................... 24
  Key Recommendations – Pharmacy Cluster 5 – PCT support ......................... 24
Pharmacy Cluster 6 – Future Improvements ................................................................. 25
  Key Findings – Pharmacy Cluster 6 – Future improvements ......................... 25
  Key Recommendations – Pharmacy Cluster 6 – Future improvements ......... 25

**General Practitioners’ responses** ........................................................................................ 26

GP Cluster 1 - Cardiovascular risk screening ................................................................. 26
What are GPs currently doing? ...................................................................................... 26
GP awareness of scheme ................................................................................................. 26
  Key findings – GP Cluster 1 - CVD risk testing ................................................ 27
  Key Recommendations – GP Cluster 1 - CVD risk testing .............................. 27
GP Cluster 2 Pharmacy Based Testing ................................................................. 27
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriateness of Pharmacy as a location</td>
<td>27</td>
</tr>
<tr>
<td>GP Perception of Patients involved with Scheme</td>
<td>28</td>
</tr>
<tr>
<td>Key Findings – GP Cluster 2 – Pharmacy based testing</td>
<td>29</td>
</tr>
<tr>
<td>Key Recommendations – GP Cluster 2 – Pharmacy based testing</td>
<td>29</td>
</tr>
<tr>
<td>GP Cluster 3 - Confidence in Results</td>
<td>29</td>
</tr>
<tr>
<td>Entry on to Computer Systems</td>
<td>30</td>
</tr>
<tr>
<td>(Pharmacists') Training</td>
<td>30</td>
</tr>
<tr>
<td>Risk calculations</td>
<td>31</td>
</tr>
<tr>
<td>Key findings – GP Cluster 3 - Confidence in results</td>
<td>32</td>
</tr>
<tr>
<td>Key Recommendations – GP Cluster 3 - Confidence in results</td>
<td>32</td>
</tr>
<tr>
<td>GP Cluster 4 - Communication</td>
<td>33</td>
</tr>
<tr>
<td>The referral Process and related paperwork</td>
<td>33</td>
</tr>
<tr>
<td>Pharmacy GP relationships</td>
<td>34</td>
</tr>
<tr>
<td>Key Findings – GP Cluster 4 - Communication</td>
<td>34</td>
</tr>
<tr>
<td>Key Recommendations – GP Cluster 4 - Communication</td>
<td>34</td>
</tr>
<tr>
<td>GP Cluster 5 - Finances</td>
<td>34</td>
</tr>
<tr>
<td>GP work load</td>
<td>35</td>
</tr>
<tr>
<td>Key Findings – GP Cluster 5 - Finances</td>
<td>35</td>
</tr>
<tr>
<td>Key Recommendations – GP Cluster 5 – Finances</td>
<td>35</td>
</tr>
<tr>
<td>Patient/Service User responses</td>
<td>36</td>
</tr>
<tr>
<td>Patient Cluster 1 - Overall views</td>
<td>36</td>
</tr>
<tr>
<td>Time</td>
<td>36</td>
</tr>
<tr>
<td>Advertisement</td>
<td>36</td>
</tr>
<tr>
<td>Key Findings – Patient Cluster 1 – Overall views</td>
<td>36</td>
</tr>
<tr>
<td>Key Recommendations – Patients Cluster 1 – Overall views</td>
<td>36</td>
</tr>
<tr>
<td>Patient Cluster 2 Pharmacy service quality</td>
<td>37</td>
</tr>
<tr>
<td>Going to a pharmacy</td>
<td>37</td>
</tr>
<tr>
<td>Lifestyle advice received</td>
<td>38</td>
</tr>
<tr>
<td>Multiple or independent pharmac?</td>
<td>38</td>
</tr>
<tr>
<td>Key Findings – Patient Cluster 2 – Pharmacy service quality</td>
<td>38</td>
</tr>
<tr>
<td>Key Recommendations – Patients Cluster 2 – Pharmacy service quality</td>
<td>38</td>
</tr>
<tr>
<td>Patient Cluster 3 - Follow up with GPs</td>
<td>38</td>
</tr>
<tr>
<td>Key Findings – Patient Cluster 3 – Follow up with GPs</td>
<td>38</td>
</tr>
<tr>
<td>Patient Cluster 4 - Pharmacy’s role</td>
<td>39</td>
</tr>
<tr>
<td>Key Findings – Patient Cluster 4 – Pharmacy’s role</td>
<td>39</td>
</tr>
<tr>
<td>Key Recommendations – Patient Cluster 4 – Pharmacy’s role</td>
<td>39</td>
</tr>
<tr>
<td>COMBINED ANALYSIS</td>
<td>40</td>
</tr>
<tr>
<td>Pilot purpose and design</td>
<td>43</td>
</tr>
<tr>
<td>Cost effectiveness</td>
<td>46</td>
</tr>
<tr>
<td>CONCLUSION</td>
<td>47</td>
</tr>
<tr>
<td>LIST OF APPENDICES</td>
<td>49</td>
</tr>
<tr>
<td>Appendix A – Flow chart diagram</td>
<td>49</td>
</tr>
<tr>
<td>Appendix B - Map of participating pharmacists and GP surgeries</td>
<td>51</td>
</tr>
</tbody>
</table>
Appendix C - Methodology of study – explanation of pathway. ...................... 52

Appendix D– Semi Structured interview schedule......................................... 53
  Pharmacist ..................................................................................................... 53
  GP .............................................................................................................. 55
  Patients involved in the Scheme................................................................. 57
  Patient not involved in the scheme ............................................................ 58

Appendix E-Time taken to test ......................................................................... 59

Appendix F – GP pharmacy relationships ....................................................... 61

References ........................................................................................................ 65
Introduction

Since the end of the 1950s age standardised death rates from broadly defined vascular disease have fallen in England and Wales by almost two thirds. In the decade 1996-2006 alone the premature mortality rate (defined as the death rate in the population aged under 75) from CHD declined by about 40 per cent. Yet cardiovascular disease remains a major cause of death and major morbidity in the UK. Further, the absolute level of disability and/or ill health caused by conditions such as heart failure and stroke is still increasing, especially in economically and socially deprived areas. (If national estimates are applied to Islington they suggest that CVD costs Islington over £250 million a year. Some £70 million is incurred in direct economic costs and £180 million in social costs, representing a gross burden second only to mental ill health.)

PCTs and active Practice Based Commissioners are therefore investigating enhanced ways of reaching and protecting their populations. Rolling out from spring 2009, they will be required to deliver locally a national programme of extended vascular risk assessment. Department of Health documents have stated that pharmacies should be one provider of these assessments, even though in 2004 only 3 per cent of community pharmacies provided an NHS commissioned cardiovascular risk assessment service. It is against this background of required action that the Islington pilot scheme should be assessed.

At the same time the wider role of community pharmacy is also changing, with the focus of pharmacy becoming more oriented towards providing clinical care as opposed to being confined to dispensing. The intended direction of progress in England is described in the 2008 'Pharmacy White Paper', Pharmacy in England: building on strengths - delivering the future.

It is therefore timely that eleven pharmacies in Islington have via the pilot scheme evaluated in this report received funding to offer an assessment service for cardiovascular risk. (The vascular risk screening process used in Islington is described in appendix A.) As reported in the Pharmaceutical Journal, this six-month initiative was launched in August 2008. Part of its purpose was to ascertain the extent to which community pharmacies offering vascular risk assessments can in a cost effective manner attract groups of people that do not routinely approach GMS services. But it also offers a wide range of additional potential benefits relating to the ongoing development of local pharmacy services as a progressively more integrated and productive element of the overall pattern of primary care provision in the borough. That is why issues such as further improving the quality of GP/pharmacist working relationships were important in this qualitative evaluation.

There are other similar pilots running across the country, including – for instance – the Heart MOT service in Birmingham. This was recently extended following a successful pilot by South Birmingham PCT. The latter identified community pharmacies as a potentially appropriate setting for this type of service provision.

Islington PCT is seeking to use both quantitative and qualitative measures of the pilot scheme’s benefits. This report presents qualitative information derived from interviews with GPs, pharmacists and patients (in each instance a minimum of ten individuals contributed) about their experience and attitudes towards the pilot.
scheme. However, it also draws on a high quality internal Islington PCT report containing quantitative data derived from an analysis covering the period from the 11th August (the start of the pilot) to the 30th November 2008.

The main aims of this evaluation were, in addition to exploring pharmacists’ and GPs’ professional expectations, preferences and concerns to investigate service users’ and other public views about pharmacy based risk assessments. Aspects of the latter explored include the convenience, accessibility and reliability of services delivered and perceived weaknesses of and opportunities for improvement of the pilot scheme.

Methods

Pharmacists, general medical practitioners and members of the public were approached via the PCT and directly by members of the research team. A map detailing the surgeries and pharmacies involved in the pilot is shown at appendix B. It was judged that ethics approval was not required for this service evaluation which was observational and involved no direct patient intervention. All interviewees were given an assurance of confidentiality and no personal clinical information was sought.

To explore perceptions of the pilot service a semi-structured interview protocol (shown at appendix D) was developed for each of the groups.

Pharmacists were recruited from the pharmacies involved in the pilot scheme. They were all interviewed face to face, using the semi-structured protocol. General themes were noted manually at the time of interview. Where consent was given, interviews were also recorded for analysis later.

General practitioners were recruited from the surgeries within the PCT. GPs took part in face to face, focus group and telephone interviews, which in all instances were structured in accordance with the relevant semi-structured protocol. General themes were noted at the time. Where consent was given, interviews were also recorded for later interpretation.

Patients/service users3 were recruited mainly via the pharmacies involved in the scheme. Pharmacists were asked to provide contact details of customers who had been involved in the scheme and had given their consent to being approached later for service evaluation purposes. Face to face and telephone interviews were undertaken, following the relevant semi-structured protocol. (Some contributors were recruited by an alternative route, via responses they gave to a separate patient satisfaction survey.)

All interview records were anonymised and stored appropriately. Broad themes were drawn from the interviews and coded. This ‘cluster’ information was then further refined and more precise themes identified. Within the limits of the time available for this evaluation (which was undertaken during the month of February 2009) the views, perceptions attitudes of members of the three ‘stakeholder’ groups were compared and contrasted in order to reveal agreements and conflicts. The results of

---

3 The terms service users and patients are used synonymously in this report. However, it would be incorrect to regard healthy people to have their vascular disease risks assessed as anything less than autonomous individuals seeking to make informed personal choices.
this local exercise were where possible considered in the light of evidence available in the published literature.

Results

The results of this evaluation are reported here in four sections. The last of these offers a combined analysis. The Figure below offers a diagrammatic representation of the relationships between the key stakeholders and the thematic clusters identified.

Figure 1 - Main Themes from Key Stakeholders
Pharmacists’ responses

The interviews with pharmacists were, as already indicated above, coded and separated into six main thematic clusters. Each cluster was further analysed to identify key themes. Overall, members of this group were very positive about the service, albeit with differing levels of enthusiasm. One pharmacist [PHA7] described the service as ‘genius’. Enthusiastic remarks such as this may be taken to reflect the keen desire of many community pharmacists to make an enhanced contribution to public health improvement, consistent with their underlying belief in their sometimes unused knowledge and competencies.

Most respondents indicated that they had a high up take at the beginning of the service. Then numbers of new participants in the service dropped due to Christmas, a perceived lack of advertising and the competing pressures of other services such as ‘flu’ vaccination. Pharmacists used words such as ‘overwhelmed’ and ‘many people’ to describe the initial uptake to the service, albeit that one said that numbers had then dropped as they had ‘run out of regulars’ [PHA6]. The busier ‘higher foot fall’ pharmacies that offer a wider range of non-healthcare associated products did not say that reducing numbers of new service users was such a problem. Such reports fit with the numerical data from the interim evaluation as shown in Figure 2. This clearly illustrates the initial peak at the start of the service and numbers decreasing as the pilot progressed.

Figure 2 - Pharmacy CVD Risk Assessment uptake of CVD1 Health Questionnaires.

The populations of regular users of each pharmacy eligible for the service are necessarily limited. Busier pharmacies, that offer a wider range of non-healthcare products, serve a larger potential population. More proactive advertisement of vascular risk screening services could help to draw in additional users who might be relatively unlikely to be in regular contact with doctors or pharmacists.
Pharmacy Cluster 1 – User demographics

The pharmacists interviewed said that people with a range of ethnic backgrounds had accessed the pilot service. Yet it was commented that the majority of users were ‘felt’ to be white British. There were subtle differences in local demographics between the pharmacies. The interim quantitative data shown in Figure 3 is in line with pharmacists’ perceptions, although the spread of participants achieved is encouraging and broadly in line with the overall Islington population structure.

Figure 3 - Self reported ethnicity of CVD2 Participants

The use of the pilot vascular risk assessment service by ethnic group has been broadly in line with the local population structure. The service successfully reached a wide range of ‘patients’ although more detailed research would be needed to identify possible variations in factors such as the quality of communication achieved, and/or service uptake levels adjusted by each user group’s potential to benefit.

There was a perception by one pharmacy close to a gym that ‘quite a few working well’ were accessing the service to ‘know their numbers’. Respondents reported several patients who were concerned about their health and who were reassured when they heard their risk assessment. But one pharmacist commented that they had managed to attract a big group of taxi drivers who ‘all drink together’ and that these users were shocked by their results.

The Blood Pressure Association ran a national ‘Know your Numbers®’ week in 2008, during which a quarter of a million people had their blood pressure measured. Community pharmacies were the main provider of these checks. It is apparent that high profile campaigns can encourage people to seek such services. It is possible that intelligently targeted local communications could optimise the proportions of untested at risk individuals to use pharmacy based provisions.

The age structures of risk assessment service user populations varied between the pharmacies involved, although most reported that the majority of users were in the 40-55 range – see Figure 4. Interviewees commented that people of all ages
appeared to value receiving information about factors such as their lipid levels and/or overall risks.

**Figure 4 - Age Distribution of Patients completing CVD1**

There was no upper age limit set in the pilot protocol. Hence some patients accessing the service were outside the validity range of the Framingham risk scoring methodology, which strictly speaking applies only to people up to 75 years old\textsuperscript{10}. This suggests that the criteria for acceptance to the scheme may in future need alteration, although uncertainties as to how to assess cardiovascular risk in older and very old people are widespread and certainly not unique to the Islington PCT scheme evaluated here.

It was recognised by a majority of the pharmacists interviewed that females tended to access the service more than men as they were more likely to enter a pharmacy to purchase non-healthcare associated products. It has been widely reported that males do not access healthcare as readily as females. Some pharmacists said that there were ‘a lot of men’ being ‘dragged in by wives’ to use the service. If this perception is accurate it might in future offer a strategic opportunity for systematically focused attempts to identify more men at raised risk of vascular disease related harm.

**Figure 6 - BMI of patients completing CVD2**

Death rates from stokes amongst English women have historically been amongst the highest recorded in Western Europe. Recognition of the need more proactively to recruit men to this scheme should not be permitted to obscure awareness of the positive value of screening women for vascular disease risks.
Figure 6 illustrates the fact that rather more women than men completing the CVD 2 assessments (see appendix A for scope) in the pilot were categorised as obese.

Pharmacists said they felt that a high proportion of the people they were screening would not visit their GP regularly/frequently. However, the interim data showed that of those assessed 37.8 per cent (n=528) reported having seen their GP in the last month. Only 134 (a little under 10 per cent) had not seen their GP in the last year, of whom 55 were male. It is of note that the pilot scheme was not open to people who were either not registered with a GP, or who were registered with a GP outside Islington. We appreciate the reasons for this limitation but recommend that the PCT should in future consider taking a more inclusive approach.

About 90 per cent of the Islington population using the pilot pharmacy based vascular risk assessment scheme (all users were required to be resident in the borough and registered with a GP) had seen their doctor within the last year. However, this does not necessarily mean that they had all within that time period had their vascular disease risk profiles updated

### Advertising the pilot scheme

There were mixed perceptions amongst pharmacists about the quality of the advertising funded by the PCT. Generally, they found that that the poster used was not sufficient to draw people in. Rather, ‘word of mouth’ was the main driver. This can in part be taken to demonstrate the value of the service to patients. ‘I have had three patients who have been refereed by clients we know who have gone through this test’ [PHA4]

Some pharmacists felt that the PCT poster was unsatisfactory in that, for example, the woman in it does not appear to be over 40 and it is unclear what data people accepting screening will receive. Various other ways of improving the advertising of the service were suggested, including using a range of languages, local media, and displaying leaflets at GP surgeries, local centres and mosques. However, suggestions such as using multiple languages could perhaps lead on to a revealed need for more translators.

A number of the pharmacists we talked to thought it would be helpful to have more advertising of the scheme in GP surgeries, although if a large part of its purpose is to extend screening access to more people who do not see their doctors frequently this view is perhaps questionable. Respondents also said that there appeared to be some confusion amongst patients as to which pharmacies offered the screening service, resulting in a need for signposting by other pharmacists.

Pharmacists perceive the marketing of the scheme to be in need of improvement.
**Key Findings – Pharmacy Cluster 1**

- Pharmacists were risk-assessing people outside the Framingham age ranges.
- People not registered with an Islington GP were not able to use the service offered.
- Pharmacists think this service requires improved advertising to appeal to a range of patients across a variety of locations. They say it should involve several different media and be presented in a variety of minority languages.
- Patients like to ‘know their numbers’.

**Key Recommendations – Pharmacy Cluster 1**

- The age range within which people are eligible for the service may in future need to be revised. It could perhaps embody a ceiling of 75 years, balanced by a lowered entry threshold.
- There is a strong case for improved advertising/marketing in languages and in places appropriate to the target population(s).
- Patient/service user wishes to know more about their health and in particular to ‘know their numbers’ should be appropriately respected. Feedback from pharmacists suggests that the protocol design decision to ‘deny’ apparently low risk individuals access to, for example, cholesterol testing may need to be reconsidered.
- The PCT should consider the potential benefits of in future making the scheme open to all Islington community pharmacy users.

**Pharmacy cluster 2- Patient experiences - why go to a pharmacy?**

The majority of pharmacists said they believed the screening and advisory service provided by them to be of significant benefit and that the patients/service users involved had had positive experiences. When asked why they thought this, the pharmacists questioned said that patients liked the easy access, the more relaxed informal atmosphere of the pharmacy and feeling at ease with the pharmacist. It was said they often have relatively close personal relationships with their customers and that therefore patients ‘do not feel judged’.

The pharmacists generally saw themselves as local people able to offer a friendly service with more time for giving advice than practice or clinic based staff may have. It was said that if they offer a service that people do not want then they will not come back. It was perceived by a few that patients like the speed of the testing they can offer and not having to wait in a hospital for a blood test. Most respondents perceived that they had no waiting time or less waiting time than a GP. One pharmacist, located in a mainly business district, said that most people in his area did not have time to go to GPs, hence they came to him. Easy access was seen as a main driver of the pilot service’s uptake. It was emphasised, for instance, that pharmacies normally have longer opening hours than GPs and are open on Saturdays.

It was felt by pharmacists that ‘patients’ do not like ‘bothering the doctor’. Their perception appears to be that patients are reluctant to go to their GPs unless they
are acutely ill. One pharmacist suggested that the pharmacist is seen as being between a GP and a nurse. It was said that service users consider them as an expert on medicines and they prefer pharmacists to a nurse ‘as they feel we are more qualified and do not feel intimidated by pharmacists’ [PHA9]. Perhaps more revealingly, another pharmacist said that the introduction of the pilot ‘had helped to put pharmacists on a level playing field with health care professionals’. [PHA11]

Confidentiality

All of the pharmacists interviewed were asked about the confidentiality of the service and the availability of private consultation rooms. Respondents commented that confidentiality was not a problem. Only one reported a patient who did not want his results shared with the GP. The pharmacist concerned qualified this by saying this patient had a bad rapport with his GP and ‘did not trust him’. Another mentioned a member of the public who refused to be tested ‘for fear of needles’. But no pharmacists reported that patients felt uncomfortable about having such testing in a pharmacy per se.

Key Findings – Pharmacy Cluster 2 – Why go to a pharmacy?

- Pharmacists generally feel that patients’ value the service because of the friendly and close personal relationships that pharmacists have, the relaxed environment, the lack of waiting time and easy and convenient access.
- Pharmacists reported a belief that patients will go pro-actively to their GPs for acute medical problems, but that they are less likely to attend a GP for risk assessments unless they are specifically called in.
- Participating pharmacists believed that providing a vascular risk ‘screening’ service increases the profile of pharmacists and helps to place them on a level with other health care professionals.
- Pharmacists felt that their consultation space provides adequate confidentiality for patients.

Pharmacy Cluster 3 – Time (taken) to test

The time said to be taken to do the screening tests required in the protocol varied between respondents and was a topic of significant discussion during these interviews. The table shown in appendix E sets out the main views expressed in relation to this issue. Reported testing times ranged from 5 minutes to 45 minutes. The mean appears to be around 30 minutes, depending on the precise circumstances. The majority of this time is not actually spent performing physical testing. It is used for giving and reinforcing healthy lifestyle advice.

The consensus amongst the pharmacists interviewed was that service users/patients like the fact that they spend time explaining personally what they are trying to achieve. One pharmacist said that most patients are monitored by GPs and their input was just an additional bonus. Yet it was generally rather more positively felt that many patients go to their GPs but do not fully understand what the vascular risk related information (‘their numbers’) means. Further explanation, pharmacists believe, helps people understand why they may need to make behavioural changes.
and/or take medicines. ‘Sure nurses and GPs explain, but not in as much detail’ [PHA11].

This vascular risk assessment service is not just a screening tool. Its potential outputs including supporting lifestyle changes and promoting ‘healthy living’.

Those pharmacists who reported spending shorter amounts of time per service user tended to be those working where there was only one pharmacist on site.

Quantitative information about the relationship between time spent and the effectiveness of the behavioural change support offered would be required before any firm conclusion can be drawn. But the research evidence we have gathered is strongly indicative of significant variations in the amount of time spent providing health advice. This may affect the quality and long term outcomes of the service provided to patients.

**Appointments**

There were differing views about how informal or ‘drop in’ the screening sessions should be: the question of whether or not appointments systems should be operated was a particular point of debate. Some pharmacies felt the need to book appointments, while others found that spontaneous testing worked best. There appeared to be a correlation between the number of pharmacists and staff available as to whether appointments were used.

Several respondents felt that the easy access and lack of appointments was one of the main driving factors for recruitment to the service. It was felt by some that patients would come to a pharmacy rather than a GP because ‘they come into to see us and just go for it, they would have to make an appointment [at the GP]’ [PHA3]. Others felt that for this to be classed as a professional service, there would have to be an appointment system ‘like you would do with a doctor or a dentist’. [PHA11].

Busier pharmacies are more likely to require an appointment system to manage their assessment workload alongside their other activities. Quieter ones may normally be better placed to offer a ‘drop in’ service.

Beyond these questions perhaps more important alternatives relate to the design of the screening/risk assessment tests used, and the extent to which pharmacy based testing is intended either simply to provide a rapid, whenever possible ‘one stop’, identification of cases that will require further investigation (ie potential case finding), or a more thorough vascular risk evaluation that might directly trigger medical intervention.

If the latter were required, fasting pharmacy cholesterol and glucose tests coupled with temporarily separated blood pressure readings might reasonably be regarded as vital. In this case all patients using the service might be asked to return for a booked testing session after the initial assessment. This issue is discussed in further detail later in this report – see Table 2 on page xx.
Second pharmacists

There were differing opinions as to the extent to which pharmacies with just one pharmacist can and should offer the scheme. It was argued by one respondent that a ‘single pharmacist on their own will always have quiet times, or have dispensers or other people to look after shop floor’ [PHA1]. Yet a converse perception was that ‘you need a second pharmacist for this, if you are on your own it is very difficult, you would have to do it in a quiet patch, but nowadays we do not have quiet patches’ [PHA4].

The individual who appeared to be less positive about the service commented ‘owners like it [the screening service] as extra money, for me it is extra stress and extra hassle’ [PHA9]. This interviewee felt that employing a second pharmacist would normally be impracticable in smaller pharmacies as it was impossible to know when people are coming in. ‘No owner keeps a second pharmacist on the off chance’ [PHA9]. But it was also suggested that operating an appropriate appointment system would be a way to overcome this problem. Others said ‘[I] need two pharmacists on board, I don’t know how they do it single-handed’ [PHA11] and ‘you need a second pharmacist or a dispenser to help do this’ [PHA4]. It was emphasised by some that patients like service because it is easily accessible and that having two pharmacists allows people to come in for pharmaceutical care at any time.

Pharmacy staff involvement

In many pharmacies only fully qualified pharmacists were involved in the scheme. But in some support staff assisted. One example of this was provided in a pharmacy run by a male community pharmacist who said that with female patients ‘female members of staff do the waist measurement and weight’ [PHA1]. In some pharmacies support staff had been trained to do the first health assessments (CVD1): they were also involved in the recruitment of patients. In others the pharmacist always completed the CVD1. In one setting a trained pre-registration pharmacy student helped by doing blood pressure readings and offering elements of the healthy living advice provided.

In similar schemes provided privately outside Islington pharmacy support staff are trained to complete all of the testing, including taking ‘bloods’. The results are subsequently given to the pharmacist who then offers lifestyle and other appropriate advice to the patient/service users. This may contribute to managing the pharmacists’ time as efficiently as possible.

Multiple and independent pharmacies

Pharmacists were questioned about their opinions regarding the desirability of both large multiples and small independent pharmacies offering such services. Overall it was felt that such service developments ‘could happen in both independent and multiple [pharmacies]. No difference, pharmacists will take it in their stride. No difference’ [PHA7].

It was argued that the ‘as long as the patient experience is a good one, it does not matter if [it’s a] multiple or [an] independent, everyone needs to get the premises
up to scratch [PHA11]. This pharmacist suggested that some pharmacy premises may not be of the required standard for clinical or neo-clinical consultations.

Overall, the respondent pharmacists believed that there need be no major differences between a vascular risk screening service offered in an independent pharmacy and one offered in a pharmacy functioning as part of a large multiple chain.

**Key Findings – Pharmacy Cluster 3 – Time to test**

- The average time taken for a vascular risk screening test in this pilot was about 30 minutes. However, there were significant variations around this reported mean.
- A large proportion of the time taken was spent on lifestyle advice. The amount of time given to discussions with patients also varied between the pharmacies.
- One ‘value adding’ part of this pilot service is lifestyle advice provision, the quality/effectiveness of which may vary between practitioners and pharmacies.
- The initial CVD1 screen can be done on a walk in basis. But the CVD2/3 tests can require pharmacists to be away from the dispensary for extended periods. Managing the resultant workloads may require the use of appointment systems.

**Key Recommendations – Pharmacy Cluster 3 – Time to test**

- The time for conducting tests and providing advice should (subject to varying patient requirements) be standardised to about 30 minutes, and options for assuring appropriate service quality investigated.
- Public and professional interests in the use as both ‘drop in’ and appointments should be further explored, with a view to optimising service design in relation to target user group requirements, practical professional concerns and the fundamental purpose of this form of risk screening.
- The initial CVD1 screen should always be available on a walk in basis. However, the CVD2/3 tests may on occasions more efficiently be delivered via pre-booked appointments.
- The extended use of second pharmacists and/or appropriately trained pharmacy support staff should be investigated by the PCT and relevant guidance and support given.
- Pharmacists share common interests in ensuring their premises are to the required standards for consultation as well as dispensing purposes.

**Pharmacy Cluster 4 - GP pharmacy relationships**

The table in appendix F shows a summary of the pharmacists’ views of the referral process and their perceived relationships with GPs. There are conflicting views on this topic which ranged from a perceived ‘good working relationship’ to there being ‘no feedback at all’.
Many pharmacy respondents perceived that the GPs liked and accepted the service because they had not received feedback from them. In our view constructive relationships are founded on effective communication. It may therefore be considered disturbing that it appears very few pharmacists had themselves actively sought feedback from the GPs, despite claiming to have a good relationship with them.

Notwithstanding this, however, respondent pharmacists said that the referral process requires refinement. They noted that often they had sent off a large number of referral forms but were unaware if these had been received or acted upon. There were cases where these had not been received by GPs despite their being sent.

Most of the pharmacists questioned were aware of cases where patients had been referred to general practice and action had been taken. One pharmacist was eager to point out that ‘we [community pharmacists] have a role as screening, not a doctor, just a pharmacist; they [GPs] will determine what should be done’. [PHA11].

Although pharmacists feel they have a good relationship their local GPs, in many instances further improvements appear possible. The referral process has worked for some patients. However, refinement is required.

**Case studies**

In several cases cited by pharmacist respondents, patients had been assessed and as a result treatment had been initiated. One example related to a diabetic patient who according to the pharmacist had come in for screening and had denied having any pre-existing medical conditions. On testing, her blood sugar was revealed to be high. The pharmacist referred the patient to the GP. It transpired that this individual had previously been prescribed Metformin a year ago and thought this treatment was short term and had cured the diabetes. The GP explained the medication to the patient, who is now on regular Metformin. [PHA3]

Several pharmacists reported that they had identified individuals with raised blood pressure and that subsequently treatment for hypertension had been initiated. In one instance a GP had requested that the pharmacist should continue to monitor a patient’s blood pressure.

Several pharmacists also reported finding high glucose levels in patients now receiving treatment for diabetes. One said that out of 130 patients screened, he had picked up five high risk patients who are now being actively treated. [PHA4] Most pharmacists provided anecdotal information about patients at high risk that would have ‘not normally gone to the GP, especially for screening’. [PHA9] But some were unable to offer success stories e.g. [PHA2a]. This was because they had not requested/received feedback from the GPs. Some said that having a large population of patients meant it was difficult to keep track of their referrals.

The PCT interim quantitative analysis recorded four patients with a random glucose of ≥10mmol/L, of whom two were subsequently found to have significantly raised fasting glucose levels. One hundred and five people were identified with a fasting glucose greater than 5.6mmol/L. In 51 of these cases the figure recorded was greater than 6.1mmol/L.
The Islington pilot cardiovascular risk scheme captured an appreciable number of people at high risk of developing vascular disease and who have subsequently received medical treatment.

**Key Findings – Pharmacy Cluster 4 – GP pharmacy relationships**

- Despite a perceived view of good relationships, there was a disappointing level of feedback/communication between pharmacists and GPs.
- GPs are not consistently receiving all the referral information sent by pharmacists - some is being misplaced. This situation implies that some individuals at raised risk may not have benefited from appropriate treatment.

**Key Recommendations – Pharmacy Cluster 4 – GP pharmacy relationships**

- Pharmacists should seek feedback from GPs and/or their practice colleagues to ensure that all significant referral information has been received and followed up.
- The referral process should be reviewed in order to promote enhanced efficiency and effectiveness.
- Needless information exchanges should be eliminated.

**Pharmacy Cluster 5 - PCT support**

The pharmacists interviewed commonly expressed appreciation for PCT colleagues’ support during the pilot scheme. The only significant criticism relating to PCT staff changing during the pilot period.

**Training**

Overall, the Islington pharmacists involved felt that the training delivered by the PCTs was adequate. Yet they suggested several areas for improvement. One commented ‘I don’t think we were informed enough about lifestyle side of things, a day was not sufficient. But [we] should know a lot already’ [PHA3] while another said that they would have liked to see a role play of a consultation to show its ‘flow’. Others suggested that further training on use of the use of point of care diagnostic devices used would have been welcome.

**Lifestyle Advice**

Several pharmacists felt very strongly about the assessment being more than just a mechanical test and that lifestyle advice provision was an integral part of the scheme. One explained his feeling that ‘you feel great about it [giving health information], you are doing something different than dispensing all day long’ [PHA4].

Several commented on leaflets during the interviews. One felt that initially it was difficult as no ‘handouts’ were provided automatically – they had to be ordered. But he was positive about them once they arrived ‘this is good giving them [patients] something to read and take out’ [PHA4]. Other suggested ‘little leaflets like the ones
used for the waste campaign’ [PHA2a]. Notwithstanding the often disappointing evidence about the value of information leaflets, pharmacists interviewed had the perception that patients value them at the end of assessments.

Most respondents also felt that patients ‘like getting their results’. It was suggested that service users requiring it be given a card with results of their tests and summary advice. Several pharmacists criticised the lack of formal communication of results to patients. However, this area needs to be considered in the light of the debate about the role of these assessments as preliminary risk indicators as against definitive cardiovascular risk evaluations. ‘Patients’ will need to be appropriately warned when tests may need to be confirmed, as in the case of random glucose and cholesterol measurements.

Lifestyle advice forms an integral part of the pharmacy based risk assessment. Private sector cardiovascular risk assessment schemes, such as the ‘health checks’ run by Tesco, give users an advice booklet with space to record ‘their numbers’.

**Exercise referral**

It was felt that the exercise referral system was unsuccessful because of the 2-4 months waiting list. This meant that people were not enrolling at the gym in time for the 12-week review. This problem required attention.

**Equipment**

There were no problems reported with the BP machine used. The only comment from the pharmacists taking part in this evaluation on the weight machine employed was that the target age group are unfamiliar with kilograms and wanted their weight converted to ‘pounds and stones’.

There were mixed sentiments regarding the Cardiocheck PA point of care testing device, with almost all respondents reporting some problems. But most pharmacists reported that the staff at Cardiocheck had been very helpful and that they were doing the QA checks as advised by the company.

There was a test strip recall during the pilot which undermined some pharmacists’ confidence in the devices. Five of those questioned reported problems with the machine not working at low temperatures. This was especially difficult during early morning appointments. Practitioners’ responses described various ingenious strategies for ensuring that the devices were kept warm.

Many also noted that there were people who were receiving the random test only to find that the fasting test result was higher. This is an observation confirmed by the quantitative data available. Although the degree to which this invalidates the data reported as indicative of raised risk should not be exaggerated it does little to reinforce confidence in the accuracy of the point of care devices used.

The PCT interim evaluation data suggests that fasting glucose readings were higher than those reported via the preliminary random glucose tests in 186 of the 440 cases screened during the initial three months. This represented 42.3 per cent of those who had received both tests. One possibility is that not all of those being tested had in fact fasted, but even so it is a surprising number.
**Finances**

On questioning the pharmacists reported that the financial arrangements in place were 'fair'. [PHA3, PHA2a, PHA5, PHA6, PHA7, PHA8, PHA1]. None felt that they had not been reimbursed enough. But some feared that the remuneration given would drop in the future. One said ‘funding is the only barrier, if GPs are happy, patients are happy, it is up to the PCT’ [PHA1]. Others commented that they were more concerned about the pilot being a success in public health improvement terms rather than with their financial returns.

**Paperwork**

It was generally accepted that increased paperwork was inevitable during the pilot. However, it was felt that in future consideration should be given to minimising the amount of time spent completing forms as this is very labour intensive. For each patient there are up to five separate pieces of paperwork involved in the current scheme design. One pharmacist explained ‘I have to take that home. I can’t do it here’ [PHA4]. Entering data onto the spreadsheet and the duplication of the work, was described by most as ‘repetitive’.

There was criticism of the workflow on the spreadsheet not fitting with the form, something that the designers are aware of. One pharmacist specifically mentioned the counting and cross referencing of the CVD1 forms as something labour intensive, and that it was easy to miss something. This may have led to inaccuracies. Despite some criticism regarding changing the paperwork mid pilot, it was said by several that the ‘new style surgery letters’ were significantly better than the original. Other improvements to the forms suggested included adding the last time the patient visited the GP to the monitoring form.

**Key Findings – Pharmacy Cluster 5 – PCT support**

- Pharmacists were grateful to the PCT for its support throughout this pilot.
- Pharmacists generally found their training satisfactory but suggested improvements.
- Pharmacists recommend that service users should receive a copy of their test results.
- The exercise referral system had failed to be effective due to long waiting lists at the gym.
- Most pharmacists experienced problems with the Cardiocheck PA machine, including low temperature warnings and test strip recalls.
- The financial reimbursement to pharmacies from the PCT was regarded as fair.
- The paperwork associated with the pilot has been onerous for the pharmacists involved and may well need to be reduced.

**Key Recommendations – Pharmacy Cluster 5 – PCT support**

- Pharmacists’ capacities effectively to deliver health behaviour change messages and risk related information should be checked at an appropriate stage in the programme’s development and if judged necessary ‘refresher’ courses provided.
- Patients requesting it should be given a copy of their test results and additional options for complementary information provision assessed.
Opportunities for reducing exercise support waiting times should be actively investigated.

Scheme related paperwork to be completed by pharmacists should wherever possible be eliminated or reduced. Many GP surgeries now seek to be ‘paperless’ environments and this approach should arguably, at least to the extent practically possible, be reflected in the PCTs approach to taking this pilot scheme forward.

**Pharmacy Cluster 6 – Future improvements**

Most pharmacist participants in Islington’s cardiovascular risk assessment pilot viewed it positively and believed that ‘something like it’ should be provided nationally. One said it could ‘save money in the NHS in the long term’ [PHA11]. Many commented that they would like to share their experiences with other pharmacists to see if there are ways they can improve the service. It was suggested that pharmacy on the whole should have a ‘more clinical base’ and the ‘White paper changes needs (sic) looking into more’. [PHA8].

Ideas such as (pharmacists) offering the service in non-pharmacy settings were suggested. Potential beneficiaries might in the view of one respondent include ‘house bound or mental health patients’. Another said that ‘there is value of expanding the service; there are some pharmacies that have phlebotomists on site’. [PHA1] Some pharmacists argued that GPs do not have time to monitor service users with a 10% or lower risk, whereas pharmacy could play a large role in continually monitoring these patients. The possibility of recalling some service users for repeat risk assessments at appropriate intervals was also mentioned, although not all respondents appeared to have evidence based attitudes towards this potential route towards increasing pharmacy based activity levels.

**Key Findings – Pharmacy Cluster 6 – Future improvements**

- Respondents believed that the IPCT scheme should be rolled out more widely, with appropriate amendments. Pharmacists were concerned to increase their activity in this field.

**Key Recommendations – Pharmacy Cluster 6 – Future improvements**

- Opportunities for extending pharmacy based delivery of vascular risk assessments in conventional and other settings should be critically evaluated.
**General Practitioners’ responses**

**GP Cluster1 – Cardiovascular risk screening**

The GPs interviewed were aware that cardiovascular disease is a ‘hot topic’ at the Department of Health. They were also aware that there is a large at risk population within Islington and agreed that there is a ‘benefit of working on primary prevention’ [DR3]. One GP said that ‘there has been successful propaganda [about] people dying of heart disease’ [DR7] and that therefore patients are more likely than would otherwise be the case to accept screening for this indication.

**What are GPs currently doing?**

Different practices, and indeed different GPs within the same practice, appear to be adopting varying approaches with regard to identifying people with or at high risk of cardiovascular disease. Some are trying pro-actively identify more patients. However, others said that in effect they are waiting until the OBEROI software is functional. Several complained about the OBEROI software delays, using expressions such as ‘embarrassing’ to describe it.

OBEROI is a software system that should map onto GP practice systems to identify patients who are at a high risk of cardiovascular disease and ought therefore be called for assessment and treatment.

Many practices recall people who are already on their risk registers (such as the hypertension registers most if not all practices maintain) but none reported other systematic practice population screening programmes. Their current strategies appear to rely, much like the pharmacy pilot, on the ad hoc assessment of patients when they present with other complaints.

**GP awareness of scheme**

It was evident that the general awareness of the pilot pharmacy based scheme was, on the part of the GPs interviewed, low. Some of those approached said that they had no knowledge of it at all. Most of the remainder had heard of the scheme but lacked any detailed information. This observation is perhaps unsurprising given the range of work undertaken by GPs and the disparate range of initiatives they may be told about in any given week. But it underlines the nature of the challenges to be overcome in ‘mainstreaming’ such initiatives.

Some GPs were critical of the PCT and claimed to have received no information regarding the scheme. ‘No information about this scheme from the PCT [received while it was being set up] but we have latterly [been informed]’ [DR2]. Others knew of its establishment but asked ‘what are we expected to do?’ [DR3]. This general lack of awareness contributed to associated uncertainties about what the service was trying to achieve and what their role in it should be. One GP summarised the views of many:

‘It is an enormous population, it’s going to take an incredible amount of work, I really do not see a problem with pharmacy being involved in it, but it is about the
pathway, it is about how it all works together, it's about how we get these sheets, they do sort of feel they of come out of the blue and then what do we do with them? We could just put them in the bin, but we do not want to do that, we want to practice good medicine, I sort of feel there should have been something more joined up about it’ [DR3].

**Key findings – GP Cluster 1 – CVD risk testing**

- GPs are aware that cardiovascular screening is now seen as a national priority
- No GPs reported that they were systematically risk assessing their patients not already on their registers other than via ad hoc contacts. In this context, many criticised delays in the delivery of the OBEROI software
- GP awareness of the pharmacy pilot was low: several – fairly or not – were critical of the PCT for failures to provide more information
- GPs lack of awareness of the scheme were associated with uncertainties as to their roles and its strategic objectives

**Key Recommendations – GP Cluster 1 – CVD risk testing**

- The PCT should seek to enhance GP awareness of and attitudes towards the local pharmacy based vascular disease risk assessment services through more effective marketing to this key stakeholder group, and providing appropriate practice support
- Pharmacists involved in such projects should seek actively to engage with GPs to promote better mutual understanding.

**GP Cluster 2 – Pharmacy based testing**

**Appropriateness of pharmacy as a (assessment service) location**

It was generally felt that pharmacy was an appropriate location for vascular disease risk testing:

- ‘Pharmacy is one of the most obvious places’ [DR2].
- ‘I think is a very reasonable place to go, I think you [pharmacists] have to take some of the load of the routine stuff away from here [GPs] and we can start making decisions about what we do here’ [DR7].

None of the GPs interviewed had significant questions about the principle of pharmacists and/or pharmacy staff offering CVD risk tests in pharmacies. But as described below they had reservations about the testing equipment used and pharmacists’ training. One GP argued that services like those offered in the pilot help patients to achieve greater responsibility for their health. ‘I am all for patient responsibility, and going to a pharmacist and getting things done. I am always sending people to Boots to get their cholesterol’ [DR7].
Several GPs commented on the benefits of the relaxed/normal atmosphere of a community pharmacy. ‘I think going to the doctors is more stressful, they are going to the doctor as they are getting bad news’ [DR5]. Another GP was concerned about people having too many contacts with health care professionals, but then said ‘we equally do not have appointments to screen everybody [who may need it]’ [DR3].

GPs accept in principle the advantages of offering vascular risk assessments in pharmacies, but may have fears about pharmacists’ competencies and pharmacy equipment validation.

**GP perceptions of assessment service users**

GPs who had received referrals thought that they were in many instances already following up the patients involved. ‘The feeling I have, the majority are people who already have risk [scores] here, the majority of people do not need it done in the first place. People who need it the most are often the last to avail [themselves] of it’ [DR3]. Although none of those interviewed could spontaneously offer detailed examples of which referred patients they had, or had not, previously seen for a risk assessment, one doctor said that it was ‘obvious’ that there were patients who had been seen recently. Yet it became apparent on further discussion that a significant proportion of referred patients who had seen their GPs recently had not necessarily had their cardiovascular risks assessed.

One GP asked ‘how are people finding out about it? Do they have to be in a pharmacy in the first place, surely you are getting an assured population with the GP? I do not think it is going to target the hardest to reach group who will get the maximum benefit.’ [DR3]. This concern about reaching the target population was held by several others. ‘I think it would be beneficial for the patient. I am very positive about screening. My fear is that we are preaching to the converted and getting the worried well’ [DR7].

Like the pharmacists involved in the pilot, GPs feel that promotion of the scheme requires improvement to appeal to patients who are not already under the care of a GP. One criterion for entry into the pilot was registration with an Islington GP. However, a proportion of registered patients will not have had their CVD risks assessed recently, and some are may have undiagnosed and/or untreated conditions such as diabetes or raised blood pressure.

It appeared, on the basis of this qualitative evaluation, that GPs with less practical experience of scheme referrals were inclined to be more optimistic than others about the patients they were likely to receive. They tended to assume that this service would ‘pick up’ patients who were less likely to access general medical services. ‘If this patient walked in to buy a stick of gum and then was offered the blood test. I think it is a good idea. It is another outlet. It is opportunistic. It is another method to get people screened who would not be screened otherwise’ [DR4]. In support of this more optimistic attitude another doctor said ‘patients on repeat prescriptions... may not be coming in as often as we would like. [Pharmacists are] seeing a population we don’t see regularly.... [I] think pharmacy is an obvious choice’ [DR2].
Key Findings – GP Cluster 2 – Pharmacy based testing

- Many GPs believe that pharmacies are appropriate locations for cardiovascular risk screening
- GPs have concerns about targeting CVD risk assessments, which may they feel attract the ‘worried well’ rather than individuals more likely to have high levels of unidentified risk
- There is some support for opening this scheme to non-registered patients
- GPs felt the promotion of the scheme to patients needed to be improved

Key Recommendations – GP Cluster 2 – Pharmacy based testing

- The PCT should seek to enhance promotion of the scheme’s use with a view to ensuring that is accessed by all potential users, and especially those most likely to benefit
- The PCT should consider opening the scheme to all pharmacy users in Islington

GP Cluster 3 – Confidence in results

Overall, GP respondents had a relatively low confidence and trust in the quality of the test results presented to them. This leads to unwillingness to act on them without further testing. ‘I genuinely question the quality, is it an equivalent service, what does the patient think about this? Are we moving towards the pharmacist being able to prescribe and give lifestyle advice? Or are they just going to diagnose and send people in’ [DR3]. As one GP described, there seems to be a general unease about accepting such data. ‘There is something about third party stuff going onto the record that I feel uncomfortable with’.

Several made comments such as ‘they [pharmacy tests] have got to be as sensitive and specific as the tests we are using’ [DR2]. GPs generally wanted to know the comparative value of finger prick and venous testing. Many questioned point of care testing, with one individual asking ‘why haven’t we got them if they are good?’ [DR2]. There was also concern about how the pharmacists conduct their examinations, reflected in questions like ‘is it a one off blood pressure?’ [DR2]. It was generally assumed pharmacy tests would need to be repeated. Relevant comments included ‘if we were sure they were good tests then we would enter them on the system. But at the moment we feel more comfortable repeating them ourselves’ [DR2].

It was also felt by most doctors taking part that they should not start pharmaceutical treatment without first repeating tests. ‘Even if [we were] sure of the [initial] test, we would generally double test. If we have someone who is high risk, before we start [treatment on] someone we would test’ [DR2]. The validity of such cautious approaches may be questionable, but they represent the reality of the context in which the value of pharmacy based vascular risk assessments need to be judged.

Uncertainties regarding the purpose of the service are associated with GPs questioning the quality of pharmacy based risk testing.


**Entry on to computer systems**

Here again, GPs’ comments included ‘I would use them [pharmacist supplied data] more and code them if I knew they were properly validated and we could use them in audits and reports’ [DR3]. Others said ‘if we were sure they were good tests then we would enter them on the system. But at the moment we feel more comfortable repeating them ourselves’ [DR2] and ‘we enter the results from the hospital as we use the same labs anyway, and we know how the results are validated, whereas unless we are specifically told this is an expressly validated system, these are the criteria, these are the standards that are maintained and no one is accredited to do something unless they have this and this [will not enter pharmacy tests’ [DR4].

Against this it was argued that figures relating to service users’ height, weight and BMIs’ should be accepted because ‘how can you get this wrong?’ [DR7] and some respondents also said they might accept pharmacist recorded BPs. Yet all medical respondents seemed wary of blood results (blood glucose and lipid levels) recorded in pharmacies. Even in the blood pressure context, views were mixed. One doctor said that their response would depend on the results that were already on the practice’s system. ‘If [the patient] has normal readings with us, then I [would] probably not code that [pointing to a high reading]. Is it the best of three? What is the machine like? Was the patient sitting down?’ [DR3]. Others said:

- ‘With the best will in the world we will retake blood pressure, I did not want to enter it, I wanted to check it through with them’ [DR4]; and
- ‘We know a 24 hour tape is best, I would be happy with the pharmacists’ reading, then I would do one of my own, and there [was] a discrepancy, then I would get the nurse to do one……. at least one high, or more than one, then I would do a tape test’ [DR7].

A few of the GPs mentioned concerns relating to recording possibly unreliable data that might affect patients’ insurance options. In one case, a GP went through referrals from a pharmacy and found discrepancies that caused the quality of the pharmacy data to be doubted. Doctors also stressed the need for clinical judgement in relation to initiating treatments. One commented ‘someone might have a high cholesterol but have a good [HD:LDL] ratio, and we are wary about treating numbers. If we were blanket treating everyone, not everyone wants treating. When it all comes down to numbers it makes us feel uncomfortable’ [DR2].

**(Pharmacists’) Training**

Several of the doctors we interviewed questioned the quality of the training that pharmacists had received. Some suggested that pharmacists might not be well placed to communicate risk to patients. ‘We [doctors] are specifically trained on communicating risk, and if they are not trained for this then it is not appropriate. That would be something that would worry me’ [DR2]. Related worries were raised by another GP, who argued that pharmacists need training to ‘manage and minimise… anxiety….. So many people come in getting the wrong message, believing themselves to be quite unwell and at risk of getting a heart attack’ [DR3].
The guidance below is taken from the suggested training for sporadic risk assessment from the Handbook for Vascular Risk Assessment by the National Screening Committee.

Figure 5 - Areas of training for sporadic risk assessment in pharmacy

<table>
<thead>
<tr>
<th>The training should be in the following areas:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Developing and working within Standard Operating Procedures</td>
</tr>
<tr>
<td>☑ Testing (this includes the completion of any training programmes provided by the equipment suppliers to ensure competence in the use of equipment and interpretation of test results)</td>
</tr>
<tr>
<td>☑ Quality assurance arrangements</td>
</tr>
<tr>
<td>☑ Referral criteria and procedure</td>
</tr>
<tr>
<td>☑ Feedback to patients (advice giving explanation of the probability of disease or risk in relation to the test results)</td>
</tr>
<tr>
<td>☑ False negatives (why they can occur)</td>
</tr>
<tr>
<td>☑ Safe handling of sharps</td>
</tr>
<tr>
<td>☑ Record keeping</td>
</tr>
<tr>
<td>☑ Giving consistent lifestyle advice</td>
</tr>
<tr>
<td>☑ Reinforcing the person's desire to take care of themselves</td>
</tr>
<tr>
<td>☑ Medicines management in issues related to vascular risk</td>
</tr>
<tr>
<td>☑ Clinical governance and liability issues</td>
</tr>
<tr>
<td>☑ Insurance</td>
</tr>
</tbody>
</table>

It is evident from this evaluation’s findings that not all of these areas were fully addressed during pharmacists’ training for this scheme. Relevant improvements could in part help to increase GPs’ confidence in the scheme. But at the same time our interpretation is that a proportion of doctors will not recognise the value of pharmacy education unless they also have the opportunity to form a personal relationship with the individual(s) involved.

Some also questioned the competence of pharmacists at giving health related advice. ‘Are they really good at giving the advice?...It [pharmacy] is perfectly friendly, but can you give that serious advice, can you do that over counter in the pharmacy? [DR7]. However, when it was explained to interviewees that patients may spend 30 minutes in a private room with pharmacists, their views tended to change. The GP quoted in this paragraph appeared more positive when it was realised that ‘they are doing it one to one, like we would, except with three times more time’ [DR7].

Risk calculations

GP practices in Islington use varying methods of calculating aggregated vascular disease related risk levels. There were even some GPs from within the same practice who were using different scoring systems. Such phenomena explain why on occasions GPs were on checking finding risk scores at some variance with those reported by pharmacists. (There also appeared to be a degree of confusion amongst some GPs as to the differences between CHD risks, stroke risks and CVD risks.) Such disparities may have also served to discourage medical practitioners from entering information received from community pharmacists into their patient records. There may therefore in future be benefits to be derived from using a standardised approach to vascular risk scoring throughout the PCT.
The risk scoring options available including the ASSIGN score (Assessing cardiovascular risk using SIGN guidelines to ASSIGN preventative treatment), which has been developed to include social deprivation as a risk factor\textsuperscript{11,12}. Another is QRISK\textsuperscript{13}. This is based on data from UK practices contributing to the QRESEARCH Database. The relevant NICE guidance is not as clear as some commentators might wish. However, recent publications from the Department of Health suggest that QRISK\textsuperscript{14} score may be the best tool to use.

There is evidence that conventional CVD risk calculations based on the Framingham data tend to overestimate CVD risk in low prevalence populations and underestimate it in those at highest risk\textsuperscript{15,16,17}. The Department of Health has also indicated that a modified version of the FINDRISC diabetes self-assessment tool could additionally be employed for identifying people at risk of vascular disease\textsuperscript{18,19,20}. This was developed and validated in Finland, but has not been validated in the UK population.

**Key findings – GP Cluster 3 - Confidence in results**

- GPs have little knowledge regarding the validation and accuracy of risk assessment results generated via community pharmacy testing and are therefore reluctant to enter them into patient records.
- GPs frequently questioned the validity of the results provided by pharmacists and routinely retest ‘patients’ before starting treatments for the reduction of vascular disease risks.
- GPs were unsure of pharmacists’ training and believe they may need more extensive competencies in communicating risk information to assessment service users.
- GPs and pharmacists in Islington are using several CVD and allied risk assessment systems.

**Key Recommendations – GP Cluster 3 - Confidence in results**

- GPs should be provided with more information about this pharmacy service in ways which enable them to be more confident about the validity and accuracy of the test results reported to them.
- The IPCT should actively explore new ways of developing further professional trust and respect between GPs and pharmacists with respect to vascular disease management.
- The IPCT should investigate the desirability and viability of introducing a standardised local approach to calculating cardiovascular risk levels in Islington.
**GP Cluster 4 – Communication**

**The referral process and related paperwork**

Most of the GPs who agreed to be interviewed were critical of the referral process, which was generally judged to be variable and inadequate. There have on occasions been uncertainties as to whether or not patients have been referred, and concerns that individuals sometimes present without any prior warning or paperwork having been received. ‘The patient came in with a piece of paper with the number on it, but we did not have anything from the pharmacist directly to us’ [DR2]. ‘I haven’t been phoned about anybody’ said another respondent [DR3] despite their having received forms for several high-risk patients.

Yet against this one GP commented ‘I have no problems with the paperwork, it was one A4 sheet, with just the information, with something around the middle, it wasn’t complex. Some of the MURs have been huge bits of paper and you have a second copy that you can’t really read properly’ [DR6].

One doctor questioned in February had only just received paperwork for patients from October. Amongst this, there was a patient with a highly elevated risk score who had been advised to book an appointment by the pharmacist. This individual had seen the GP to get a prescription for antibiotics for a chest infection in November, but there was no mention in the records of a CVD risk discussion. This led the GP to be critical of the referral process.

It was commonly believed by medical respondents that many at risk service users would not take a pro-active, independent, approach to booking appointments with them after a pharmacy risk assessment. (Nevertheless, one doctor we interviewed said she had had a few patients who had come in reporting they had high blood pressure.) When asked about expanding the pilot service, one GP said ‘the problems will be the logistics, the communications’ [DR7]. This was a view that was echoed by several others.

Another GP explained how the referral process had in her view failed one of her patients, who had apparently been phoned late on a Friday evening. ‘He had his BP [taken], a finger prick blood and then was called that evening by an anxious pharmacist to explain that his risk was 37 per cent. This was a Friday night, this was a phone call. The patient came in on Monday to the walk in clinic and he was very worried about this risk’ [DR2].

This GP was critical of the pharmacist’s knowledge of the risk scoring system and the ability of pharmacists to communicate risk appropriately. The practitioner felt that it was inappropriate to inform the patient of this seemingly high level of threat via a phone call on a Friday, as the patient worried for the whole weekend. (In fact, even a 37 per cent risk of a cardiovascular event over ten years represents a ‘weekend’ event probability of no more than 1 in 5,000.)

In this instance the action said to have been taken by the pharmacist involved might be thought ill-judged. However, the GP concerned also said that the patient had asked why the surgery had ‘not done something already’, which was experienced as ‘embarrassing’. This GP (who was clearly highly committed to good quality care
provision) reported further concerns related to the fact on repeated testing the patient's risk score was found to be 'only' 23 per cent. But this could in part have been a function of the calculus used.

**Pharmacy GP relationships**

It was said by the GPs we talked to that the quality of their relationships with local pharmacists ranged from 'reasonable' to 'very good'. There was some evidence that GPs physically located closest to community pharmacies enjoyed the most positive relationships with pharmacists. However, from our perspective as observers the GP/pharmacist relationship seen during this study tended towards the disappointing, in that there appeared to be only limited communication between the surgeries and the pharmacies involved. It was said that the only communication some GPs had with local pharmacies/pharmacists was when they were telephoned about prescription problems.

One doctor commented at length about this issue. It was argued that better joint working would help significantly to assure the success of projects such that being evaluated here. This GP also commented that joint financial incentives might well help bring the two 'sides' closer together.

**Key Findings – GP Cluster 4 – Communication**

- The current referral process has potentially important weaknesses. It seems that patients with a high assessed level of risk are not always being followed up in a timely way.
- There appear to be opportunities to strengthen further the professional working relationships between community pharmacists and GPs in Islington
- Pharmacists involved in the pilot scheme may not always have communicated about health risks in an optimum manner

**Key Recommendations – GP Cluster 4 – Communication**

- The referral process should be redesigned, in order to as far as possible ensure that relevant messages reach GPs before their patients arrive for consultations
- Pharmacists need to ensure they are able to communicate risk related information to patients without creating counter-productive anxiety.

**GP Cluster 5 – Finances**

In relation to the financing of the pilot scheme, GPs' sensitivities with regard to the possibility that pharmacy might be diverting primary care resources away from general practice were explored. However, the GPs questioned did not think that this is the case. Several questioned were salaried GPs and may therefore have felt they were protected and this was not of concern. Yet others also said that ‘GP money’ would not be threatened by the extension of pharmacy services. One doctor said 'I can not understand how they [might be said to be] stealing [GPs'] money, no matter what happens, the budget for healthcare has got to increase'[DR4].
Medical respondents did however feel that increasing the number of identified at risk patients might impact on their prescribing budgets, ‘This is going to factor into our prescribing….we prescribe stains more and more as we are doing more risk assessment’ [DR3]. Yet some doctors also thought that despite such trends there would be long term cost savings (from prevention) as secondary care has prescribing costs.

Against this relative positive finding, GPs interviewed did have concerns and fears about the ‘locum nature’ of community pharmacy. One said ‘My experience of pharmacies, in general a lot of pharmacies have locums running them all the time, are they are performance managed to do X number of these thing? For the patient it is important to have a consistent and clear message’ [DR3]. This again highlights the relatively low expectations that some GPs have of community pharmacy.

**GP work load**

Several GPs argued that this service would increase their workload, over and above prescribing issues. ‘I do not think they are [stealing our money, but] I think we have been asked to do this without any payment attached to it, I mean even being asked to look through these forms will take a couple of hours, about 20 people on here, I think we are assisting this for nothing’ [DR3].

The alternative expressed viewpoint was that GPs were going to have to do such work anyway. ‘It will create more work for us, but that is the way with primary prevention and risk assessment, there is a push. No matter what way it is done there is going to be more work around it. When I first qualified as a GP [relatively recently] we were talking about identifying these people, it is going to cause such a huge thing. I think it is inevitable, we might moan about it, but it is going to come at us from some angle, I suspect’ [DR6]. Perhaps the most constructive point to draw from such comments is that GPs/GP practices should be helped to establish systems for managing pharmacy referrals as effectively and efficiently as possible.

**Key Findings – GP Cluster 5 – Finances**

- Although GPs may in general be wary of ‘their money’ going to pharmacy there was no indication of such thinking regarding the funding of Islington PCT’s pharmacy based vascular disease risk assessment scheme. At the time of interviewing some respondents anticipated the budget for this sort of service would inevitably increase.
- However, some GPs feel indicated that they felt they were doing extra work associated with this service ‘for nothing’.

**Key Recommendations – GP Cluster 5 – Finances**

- The IPCT should review communication with and the support given to GPs/practices to ensure that doctors and their practice colleagues have a balanced understanding of the benefits of the scheme for their organisations and their patients, and are in a position to manage their workloads efficiently and effectively.
Patient/Service User responses

Patient Cluster 1 – Overall views of the pharmacy based risk assessments service

The overall view of members of the public who had used or been made aware of the Islington pharmacy service were very positive. The terms typically used included ‘very good’, ‘very useful’. They described pharmacists as ‘kind’, ‘friendly’ and ‘helpful’. Perhaps unsurprisingly, there was very little criticism expressed, even when respondents were encouraged to express any possible concerns ‘Bad? I don’t think anything was bad, it was all pretty good. I should be complaining’ [PT2].

Time

The service users agreed with the pharmacists that the testing time was about 25 minutes to half an hour, with most making a prior appointment. No one interviewed appeared to have any objections to making an appointment to see a pharmacist. The respondents in this group liked the fact that they could spend time with pharmacists. ‘I could have a good chat with the pharmacist and ask questions’ [PT1]. Risk assessment service users felt they would not have been able to get the same amount of time with their GP.

Advertisement

‘Patients’ were recruited by a variety of methods. These included advertisements displayed in pharmacies and elsewhere. But for most part service users said that they had responded to word of mouth communications, both from other users and in the form of verbal invitations to participate from pharmacists and pharmacy staff members. ‘I went in to get some cream, and they said why not have a blood test, [I thought] thought why not?’ [PT2].

Key Findings – Patient Cluster 1 – Overall views

- People using the service have very positive attitudes towards it
- Users valued the time spent with pharmacists, which was something they believed they could not get from a GP
- Advertising posters were seen by some patients, but the main uptake driver was pharmacists directly enrolling patients.

Key Recommendations – Patient Cluster 1 – Overall views

- The drivers of service uptake should be reviewed further, and promotional strategies revised to take into account the limited impact of posters as opposed to verbal and other more direct and/or personalised communications.
Patient Cluster 2 – Pharmacy service quality

‘Patients’ were also generally positive about the consultation rooms provided in the participant pharmacies. The descriptors commonly used included ‘very good’, ‘nice private room’, ‘fine’ and ‘very private’. However, some commented about issues such as the consultation door being left open, although this was not necessarily a high priority concern. ‘I didn’t feel I had anything embarrassing to say, but I could have asked her to close the door if I had needed to... It was only staff who would have heard, no customers would have heard’ [PT4]. Similarly, another service user described the pharmacy consulting space used as being ‘untidy’, but this individual qualified this concern by saying that the pharmacy had ‘probably had a busy day’.

Another said ‘It is not such a surgical surrounding. When I go to my doctor’s [consulting room] it is a very white clean clinical room, whereas in the pharmacy ....it doesn’t look like the clinical place. But if a syringe comes out of a closed packet it would not be a problem’ [PT2].

Pharmacists should ensure that their consultation rooms are kept clean and tidy if they wish them to be perceived as offering a clean clinical care environment.

Going to a pharmacy instead of a GP practice

A number of those who had used the service appeared to prefer going a pharmacy rather than a GP practice, for a variety of reasons. These included feeling that their GPs are ‘too busy’ and not liking doctors in general. One explained ‘I am one of these people who hate doctors, I hate going to the doctors surgery’ [PT1]. Another said ‘No, I would never have gone to a GP [for an ad hoc test]’ [PT5]. The same individual commented ‘I would prefer to ask [my pharmacist] about something [like that] than quite a young doctor’ [PT5].

Some service users also appeared to regard pharmacies/pharmacists as being less intimidating or worrying than medical settings/practitioners. ‘If the doctor suggests a blood test you say why what is wrong..... a pharmacist, you say why not?’ [PT2]. The patients interviewed felt that pharmacists were appropriate people to carry out such testing: ‘My pharmacist is excellent, really I have as much faith in my pharmacist as a GP’ [PT3]. Several said that time related matters accounted for their preferring to go to a pharmacy rather than a GP practice. ‘Sometimes GPs are too busy now to talk’ [PT1]. There were also complaints about the availability of GPs: ‘the earliest appointment is about 3 weeks away’ [PT3].

There was an implicit judgment that it would not be right to bother a GP with requests for tests ‘You do not want to bother the GP with things that you think you might have. I had not been near a GP in years’ [PT5]. This respondent was found to have diabetes, and was very grateful to her pharmacist. ‘I could say she saved my life. She really did. Doctors don’t grab you and bring you in’. Another said ‘I wouldn’t have gone to the GP without a specific reason for having it done’ [PT4].
**Lifestyle advice received**

Service users were complimentary about the information received from the pharmacists, using terms such as ‘very commonsensical’, ‘very informative’ ‘lots of information’ and ‘fine’. The ‘patients’ were also given leaflets in most cases, although the value of this was on occasions questioned. One found that she had been given a leaflet relating to diabetes when she did not have this condition.

**Multiple or independent pharmacy?**

One patient who accessed the risk assessment service at an independent pharmacy said that she would not have sought screening from a multiple pharmacy. She explained that she preferred the local service and felt that ‘Boots or Super Drug or one of the big chains’ would not have been appropriate [PT5]. But it was apparent multiple pharmacy users disagree with this view. The conclusion we draw in this context is that the population as a whole appears to require a choice as to different types of community pharmacy service provider.

**Key Findings – Patient Cluster 2 – Pharmacy service quality**

- Patient interviewees said that they ‘did not want to bother GPs with screening test requests’. A proportion appeared to prefer going to pharmacies for risk assessment services because they provide a less anxiogenic or otherwise challenging environment than do GPs’ surgeries.
- Service users positively value the contributions that pharmacists offer them.
- Some patients prefer to use smaller independent pharmacies. Others may prefer to use larger multiple pharmacy service providers.

**Key Recommendations – Patient Cluster 2 – Pharmacy service quality**

- Written information provided to risk assessment service users should be tailored to their needs

**Patient Cluster 3 – Follow up with GPs**

When questioned regarding their follow up appointments with GPs following risk testing in the pharmacy they used, several respondents confirmed that they had sought treatment and been recently prescribed medicines. ‘I am on [cholesterol lowering medication], and my blood pressure is being monitored’ [PT3]. One patient who we interviewed had been diagnosed with type 2 diabetes. Several more said they were planning to go and see their GP, although it was unclear if all these ‘patients’ were actually going to make appointments to discuss their risk assessment results.

**Key Findings – Patient Cluster 3 – Follow up with GPs**

- Some patients had gone on to receive pharmacological treatments prescribed by their GPs following vascular risk assessments conducted by Islington pharmacists. But not those service users found to be at significant risk may elect to consult their GPs
**Key Recommendations – Patient Cluster 3 – Follow up with GPs**

- The IPCT should seek to satisfy itself that adequate effort is being made to ensure that risk assessment service users found to be at high risk are being adequately followed up with a view to appropriate treatment being offered.

**Patient Cluster 4 – Pharmacy’s role**

People in the limited sample of service users we interviewed appeared to believe that the advice giving role of community pharmacists is becoming more important than their traditional dispensing function. To the extent that this observation is valid (it would clearly require quantitative research to confirm such an attitudinal shift) it is indicative of a potentially important change in the social positioning of this professional group.

Those users involved in the scheme were asked if they had any recommendations. One patient said that he ‘would like to see more well man clinics’ [PT2]. This reflected other suggestions made regarding health care for males. But the same respondent also commented regarding the pharmacy environment that ‘what would worry me slightly is that if you made it too more bureaucratic then it wouldn’t be as friendly and relaxed as it is. They don’t make a big fuss’.

**Key Findings – Patients Cluster 4 – Pharmacy’s role**

- Public/NHS service users’ views on pharmacists’ roles may be changing, perhaps because of initiatives such as Islington’s vascular risk assessment scheme.

**Key Recommendations – Patients Cluster 4 – Pharmacy’s role**

- The PCT should monitor changing public expectations of pharmacy, and as appropriate investigate the options available for facilitating further service developments consistent with public health improvement priorities.

**Note: the views of members of the public not directly involved in the pilot scheme**

Several of the individuals questioned in pharmacies had not been directly involved in using the pilot vascular risk assessment scheme, but were nevertheless willing to discuss their general attitudes towards the provision of such a service. Our qualitative findings indicate that most of the population that has not so far experienced such a pharmacy service would be happy to have their height, weight, BMI and blood pressure taken in a pharmacy. There were more mixed views regarding having blood taken, but nevertheless a majority of respondents felt this to be acceptable.

There was, however, some confusion regarding pharmacists’ competencies. One respondent said how much she liked the local pharmacy, but could not understand ‘why the pharmacist knows more that the GP about medicines’. Many of those interviewed appeared to be unaware of the consultation rooms available in pharmacies.
Combined Analysis

The views of the three stakeholder groups were mapped against each other to identify common themes and within these areas of conflict and agreement, as shown in Table 1.

Table 1. The contrasting views of different stakeholder groups

<table>
<thead>
<tr>
<th></th>
<th>Pharmacists</th>
<th>GPs</th>
<th>Service users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary prevention of CVD is highly desirable</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>Overall awareness of the pilot</td>
<td>+++</td>
<td>---</td>
<td>+/-</td>
</tr>
<tr>
<td>Advertising/marketing of pilot is poor</td>
<td>++</td>
<td>+</td>
<td>+/-</td>
</tr>
<tr>
<td>Pharmacy is an appropriate location</td>
<td>+++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Scheme is reaching target population</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>More men need to access the service</td>
<td>+++</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Confident in results</td>
<td>++</td>
<td>--</td>
<td>+</td>
</tr>
<tr>
<td>Pharmacists are appropriately trained</td>
<td>++</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Referral process is adequate</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Pharmacists are able to communicate risk</td>
<td>++</td>
<td>--</td>
<td>+</td>
</tr>
<tr>
<td>Pharmacy is not ‘stealing’ GP money</td>
<td>--</td>
<td>++</td>
<td>?</td>
</tr>
<tr>
<td>Extra time spent with pharmacist is valuable</td>
<td>+++</td>
<td>++</td>
<td>+/+</td>
</tr>
<tr>
<td>Role of the pharmacist has developed</td>
<td>+++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Pharmacy offers a relaxed environment</td>
<td>+++</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>GPs are for acute medical problems</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Pharmacy consultation room(s) adequate</td>
<td>+++</td>
<td>+/-</td>
<td>+</td>
</tr>
<tr>
<td>Multiples are no different from independents</td>
<td>++</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>The PCT has been supportive</td>
<td>++</td>
<td>--</td>
<td>?</td>
</tr>
<tr>
<td>Patients require improved leaflets</td>
<td>++</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Testing equipment used appropriate</td>
<td>+</td>
<td>--</td>
<td>+</td>
</tr>
<tr>
<td>Pharmacists should recall patients annually</td>
<td>++</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

+++ Strong agreement held by most, if not all. ++ Moderately held view by several. +Weakly held view by a few. +/- Mixed views. --weak disagreement. --moderate disagreement. --- Strong disagreement.  ? No or unknown view.

Members of all the key stakeholder groups recognise the important potential of screening for CVD risk factors and the primary prevention of vascular diseases. This pilot was liked by patients and pharmacists. GPs recognised its potential but had more significant reservations relating to the scheme’s specification and standards. Although this service is a pioneering pharmacy development from a forward thinking PCT, the evidence available indicates that it will require a number of modifications before it can be rolled out to maximum effect.

Community pharmacy stakeholders played a central role in not only the delivery but also the specification and development of the pilot. As such it was to be expected that they would have a relatively good understanding and positive attitude towards its functioning.
GPs, by contrast, had a low knowledge of the scheme. They had not been as satisfactorily involved in its development as had the pharmacy partners. While the pharmacists involved praised the PCT for being supportive, the GPs were relatively unhappy about the communications they had received. Likewise, apart from those individuals who had used the scheme, the information available to us indicates that overall public awareness of its availability is at best limited.

Respondents suggested a need for improved advertising. However, this subjective view is not necessarily correct. We do not have definitive evidence that conventional advertising via, for example, posters or leaflets would be effective. It may be necessary to explore other options, such as structured word of mouth/internet campaigns and/or enhanced point of sale and near point of sale communication strategies. It is also of note that all groups emphasised the importance of appealing to men who do not regularly contact the NHS. Interview records additionally indicate mixed views about whether or not the service is attracting the ‘right people’. (These comments to a degree reflected other remarks made about the value of MURs during the course of this research.)

There was general agreement that community pharmacies provide a potentially appropriate location for vascular screening. The concerns general practitioners feel with regard to pharmacists taking a more clinical role were more strongly reflected in their views on the adequacy of the pilot training provisions. Some specific instances were provided of pharmacists apparently communicating risk in a manner which might have unduly disturbed patients. Such concerns were exacerbated by doubts about the accuracy of test results obtained in the participating pharmacies (albeit that these could have been linked to inappropriate expectations of risk assessments as distinct from full cardiovascular risk evaluations) and questions relating to the suitability of some pharmacy consultation facilities. Patients/service users had an intermediate attitude towards this last topic.

Pharmacists thought the GPs would be concerned regarding the fees paid to them in respect of their pilot scheme testing work, and whether or not this might be seen as funding lost to doctors. However, as far as we could ascertain this was not the case. Such observations underline the fact that GP/community pharmacist communications and mutual understanding could be further improved. GPs were in certain instances concerned about increased work load associated with pharmacy based screening but their attitudes towards pharmacy funding were more open minded and supportive than some pharmacists feared.

All parties thought that extra time spent with pharmacists in discussing lifestyle and related health matters is potentially valuable. Notwithstanding GP and to a lesser extent patient caveats regarding the quality of pharmacy based consultation spaces there was support for the view that risk assessments conducted in pharmacies might be experienced as being more relaxed and less formal or judgmental than those taking place in surgeries. There was also general agreement that there needs to be improved information for patients. In particular, service users and a number of professionals stressed the need for better result reporting directly to patients.

The pharmacists all reported some problems with the point of care machines, and a few questioned their appropriateness. Yet on balance the difficulties revealed by the pharmacists’ responses did not appear insuperable. The patients appreciated convenient point of care testing, but against this several GPs were very critical of the testing devices used and argued that they seriously undermined the value of the
pilot arrangements. Our conclusion is that if the risk assessments undertaken in pharmacies are only to be regarded as initial indicators of a possible need for further intervention the current arrangements may be regarded as adequate. But if a measure of for example cholesterol or blood glucose elevation suitable for unqualified entry into a medical record is required then the testing protocol and devices used may need revision. (See below.)

There were differences of opinion in relation to the service being offered in multiple as opposed to independent pharmacies. The pharmacists felt that any pharmacy was appropriate as long as it met the scheme’s basic requirements. Yet some patients commented that they preferred the independent pharmacies as they were quieter and more personal, a view with which the GPs interviewed tended to agree. The latter repeatedly mentioned their need for a personal relationship with a known community pharmacist.

We in part interpreted this as reflecting uncertainties as to the value of a pharmacy qualification per se. That is, doctors anticipate variability in the quality of pharmacy practice. Apparent preferences for smaller ‘more personal’ pharmacies (which on the medical side can be seen as reflecting a perceived requirement for personal relationship based ‘quality control’) need to be understood in the light of the efficiency and sustainability issues raised elsewhere in this evaluation. That is larger organisations with genuinely effective quality management systems may have advantages from a cost effectiveness perspective.

The figure below summarises the key ‘wants and needs’ of each stakeholder group. There are crossovers, many of which are also indicated in Table 1. This information may help the PCT to identify key areas of improvement for this service.

**Figure 6 - Main ‘Wants and Needs’ of the stakeholders**

<table>
<thead>
<tr>
<th>Pharmacy Wants</th>
<th>Pharmacy Needs</th>
<th>GP wants</th>
<th>GP Needs</th>
<th>Patient wants</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Wider criteria for patient entry to the scheme</td>
<td>• Ensure consultation rooms are adequate</td>
<td>• Clarity of meaning of results,</td>
<td>• Asses more patients for cardiovascular risk,</td>
<td>• Scheme to continue,</td>
</tr>
<tr>
<td>• More men taking part in pilot</td>
<td>• Adequate staffing to continue service</td>
<td>• Improved promotion of the scheme,</td>
<td>• Better GP follow up,</td>
<td>• Better GP follow up,</td>
</tr>
<tr>
<td>• Improved promotion of the scheme</td>
<td>• Improved communications with local GPs</td>
<td>• Robust and Reliable results,</td>
<td>• Adequate consultation rooms,</td>
<td>• Adequate consultation rooms,</td>
</tr>
<tr>
<td>• Effective information for patients</td>
<td>• Improve their referral process</td>
<td>• Pathways to show what to do with results</td>
<td>• Results to be taken away</td>
<td></td>
</tr>
</tbody>
</table>
**Pilot purpose and design**

This pilot scheme was developed in Islington ahead of subsequent efforts to produce Department of Health guidance on local vascular disease screening/risk assessment provisions. Its architects deserve congratulation. Yet there are some fundamental questions that need to be answered in relation to the purpose of the assessments undertaken and the extent to which they should seek to offer definitive risk evaluations as distinct from outline assessments that need further confirmation. This is illustrated in Figure 7. Additional questions relate to issues such as whether or not the scheme should include testing of individuals who are not registered with Islington GPs or resident in the borough.

Figure 7 - What is the purpose of the service?

The IPCT scheme was initially designed as a screening tool to highlight ‘patients’ at probable risk. Yet its role has been taken by some, in particular GPs, to be to provide full vascular assessment, of a standard sufficiently robust to be entered without caveat into a medical record. There is a case for both types of approach. The IPCT will in our view need to decide clearly which it wishes to opt for. (Recently the Department of Health appears to be leaning towards pharmacies offering a comprehensive vascular risk assessment which would require fasting blood tests to made, but the situation remains in our view uncertain.)

Additional points to be noted at this stage include:

- emphasis needs to be placed the importance of clear Standard Operating Procedures (SOPs) and effective process pathways. A good example in this area is the Royal Pharmaceutical Society of Great Britain’s guidance with regard to screening for undiagnosed diabetes;  
- accepting individuals who are not registered with a GP could increase the number screened who do not regularly access the NHS; 
- concerns that insufficient effort was being made to ensure that patients undergoing fasting tests had indeed not eaten for the requisite period should not be ignored. We recommend that further attention is given to this area, alongside
that of ensuring that all GPs have a clear explanation regarding testing quality and objectives. (In fact, fasting cholesterol levels may vary in given individuals over a period of only a week. This suggests that in future multiple testing may become regarded as appropriate in any setting\textsuperscript{22});

- the pilot scheme uses a pre-invasive testing question set (CVD1) to eliminate a proportion of its users from having to have potentially unnecessary blood tests. This is consistent with the current Department of Health, which favours employing non-invasive techniques such as the FINDRISC scoring system.\textsuperscript{23} IPCT need to be clear regarding the extent to which the pilot scheme specification is consistent with best practice, and whether or not it is necessary or desirable to be able to offer all those approaching pharmacists involved in the scheme definitive measures of their HDL/LDL and blood sugar levels.

Table 2 shows four possible options relating to the pilot scheme’s future development. It would be beyond the scope of this evaluation to attempt to offer a single recommended way forward. Theoretically, all the different designs outlined have potential strengths and weaknesses. From a clinical perspective option 4 could provide the type of comprehensive testing that many GPs might favour. On the other hand, there is evidence that patients frequently prefer one-stop testing, which minimises the time they need spend on evaluating their risk\textsuperscript{24}. 
<table>
<thead>
<tr>
<th><strong>Option 1 - Continue with current system</strong></th>
<th><strong>Explanation</strong></th>
<th><strong>Advantages</strong></th>
<th><strong>Disadvantages</strong></th>
</tr>
</thead>
</table>
|                                          | The current filtration system of CVD1 – CVD3 (appendix A), continue asking patients to come back for subsequent testing. | • Filtration system  
• Less patients being blood tested  
• More successful screening strategy (?) | • Patients may see pharmacist up to three times before referral. |

<table>
<thead>
<tr>
<th><strong>Option 2 - Test everybody over 40 and not on medications on the spot</strong></th>
<th><strong>Explanation</strong></th>
<th><strong>Advantages</strong></th>
<th><strong>Disadvantages</strong></th>
</tr>
</thead>
</table>
| All patients who are over 40 and not on any other medication are immediately given a random cholesterol and blood glucose test. | • One stop testing  
• All patients are captured  
• Captures ’spontaneous’ patients | • All testing is random only  
• Pharmacy may not be able to do a test immediately  
• More blood testing than option 1. |

<table>
<thead>
<tr>
<th><strong>Option 3 - Hybrid system allowing patient choice</strong></th>
<th><strong>Explanation</strong></th>
<th><strong>Advantages</strong></th>
<th><strong>Disadvantages</strong></th>
</tr>
</thead>
</table>
| Patients are given a choice as to whether or not they accept a random test immediately (and if this is high return for a fasting test later) or wait for a single fasting test at a later date. | • Allows patient choice  
• Still captures spontaneous ’one stop’ patients | • Some results may be random only  
• Some patients will have several contacts |

<table>
<thead>
<tr>
<th><strong>Option 4 - Appointment based system</strong></th>
<th><strong>Explanation</strong></th>
<th><strong>Advantages</strong></th>
<th><strong>Disadvantages</strong></th>
</tr>
</thead>
</table>
| Patients all asked to come back for a fasting cholesterol and glucose test at a later date. | • Modified ’one stop’ testing  
• Easier to time manage pharmacy  
• Bloods are fasting | • Patients may have to return at non convenient times  
• Will not capture ’spontaneous’ users who will not accept a booked appointment  
• Involves more blood testing |
**Cost effectiveness**

The initial budget for this scheme was approximately £57,250. The total cost was in the event in the order of £70,000. We cannot via a qualitative study backed only by an initial quantitative evaluation provide a definitive judgement as to the value for money achieved, in part because in practice patient benefits will take years or decades for their full realisation. Yet it is our opinion that, on the basis of the evidence so far available, this scheme is cost effective. Factors underpinning this conclusion include:

- economic analysis undertaken by the Department of health. Their modelling suggested that screening similar to that piloted in Islington in the pharmacy and other settings would generate benefit consistent with an ICER of £3000 per Quality Adjusted Life Year (QALY). This represents only 10 per cent of the National Institute for Health and Clinical Excellence (NICE) affordability threshold currently in use;

- qualitative survey and interim quantitative data analysis supporting the finding that a number (>10) of undiagnosed cases of type II diabetes, raised blood pressure and hypercholesterolaemia requiring treatment were identified. Although a full cost effectiveness analysis would need to estimate the time to diagnosis that would otherwise have been achieved we feel it reasonable to suggest in aggregate that such observations are likely to lead to a health gain of at least 1 QALY per case. If we were to calculate that only 10 people were identified during the course of the pilot as being at high risk and gaining one QALY as a result of accelerated access to treatment this would still be consistent with an ICER of circa £6000 a QALY;

- from the qualitative work undertaken it is also evident that there were additional benefits generated by the pilot scheme. These include the gains derived from the healthy lifestyle advice given by pharmacist to those accessing the pilot (leading on, for instance, to greater use of smoking cessation services) and the developmental impacts on community pharmacy itself. The latter may pave the way for further primary care efficiency gains.

A final point to make is that national policy will inevitably require Islington to take forward an enhanced vascular risk assessment strategy involving community pharmacy together with other service providers. Given this, the resources spent on the pilot have usefully been deployed. To gain in future full value from this initial investment will require the PCT to utilise to best effect the findings of this and other evaluations.
Conclusion

The evidence gathered during this qualitative evaluation indicates that the Islington PCT pharmacy based vascular risk assessment pilot scheme was a successful, cost effective, initiative. It places Islington in a robust position to take forward national policy on vascular disease risk assessment service provision in pharmacy and other settings.

However, a range of concerns exist, and some clarifications and modifications will be required before it the scheme is further rolled out. In this context our key findings include:

- there has been and may well remain a degree of confusion about the fundamental purpose of this pharmacy based service, and the distinctions to be made between basic risk assessments and comprehensive, fully validated, vascular disease risk evaluations. The PCT should act to remove any such uncertainties by stating precisely the goals of the scheme and the quality/qualities of the data pharmacists should be providing to general medical practitioners;

- the professional relationships between Islington GPs and community pharmacists could be further improved. Despite the fact that many of those interviewed reported the latter to be good, our analysis suggests underlying difficulties. Some GPs lack confidence in pharmacists’ skills and professional judgements. Such doubts were compounded by limitations in the information that GPs were given about the pilot and an apparent lack of support for practices with regard to ensuring that effective referral processes were/are in place. As a result vascular risk assessment reports were not always being passed on efficiently to or within practices. The PCT should act to correct such failings and support continuous improvements in the working relationships between GPs and community pharmacists throughout Islington;

- there in our view needs to be greater confidence amongst all the professional stakeholders involved that the equipment and testing protocols being used are fit for purpose, and clear guidance as to best practice patient record keeping procedures. Some GPs were concerned that they might have to do significant amounts of extra work in return for little extra benefit for their patients and/or themselves. Pharmacists also have concerns about the volumes of paperwork generated during the pilot. Although the extent of such fears and reservations ought not to be overstated, they should be sympathetically and effectively addressed; and

- the marketing of the service to the public (and also medical stakeholders) could and should be improved. Despite high initial levels of take up by ‘pharmacy regulars’, maintaining satisfactory levels of uptake will in future require more pro-active approaches to attracting suitable service users (arguably, especially men) into pharmacies for ‘screening’. Better promotional communication with the public might also help to further inform GPs about the service.
Following on from this last point, we also recommend that the IPCT should consider carefully (and as appropriate consult with members of the public and representatives of service users) the issue of how and to what extent information derived from cardiovascular risk assessments undertaken by pharmacists should be supplied directly by the latter to patients/service users. Our research suggests that a significant proportion of the population already want to 'know their numbers’ in detail, and that in the medium to long term stimulating greater ‘cardiovascular risk literacy’ across the general population may be one of the most significant benefits of initiatives like the NHS Health Checks programme now being established.

Sensitivity to professional needs and desires is of course important. But in the final analysis meeting public requirements and achieving lasting improvements in individual and community health outcomes is the ultimate purpose of all NHS activity.
List of Appendices
Appendix A – Flow chart diagram of Patient Pathway.
Appendix B - Map of participating pharmacists and GP surgeries in Islington.
Appendix C - Methodology of study – An explanation of pathway.
Appendix D - Semi Structured interview schedule
Appendix E - Pharmacists views on testing time
Appendix F – Pharmacists views on GP relationships.
Appendix G – Poster for the Service

Appendix A – Flow chart diagram.
See next page.
Patient walks into pharmacy and fills out the Health Assessment Form CVD1

Patient is over 40 AND is registered with an Islington GP

Explain the pilot to the patient and if they would like to take part; invite back for Cardiovascular Risk assessment

Fill out assessment form CVD2 with patient, and obtain consent to take blood and share information

Measure patient's Height, Weight, Waist circumference, Calculate BMI, Blood Pressure and take random Blood Glucose

NO need for Further Assessment

Eligible patients to proceed to "Further assessment" if
- BMI >= 27
- Waist circumference >=80cm if F, >=94cm if M, >=90cm if S. Asian male
- Current or recent smoker (<5 years)
- South Asian ethnic origin
- Family history of early onset (premature) CVD or diabetes (m < 55yrs), f < 65yrs)
- Random blood glucose above 7 mmol/L
- BP >=140/ >=90 mmHg

NEED for Further Assessment

Ask Patient to return after 2-3 days for fasting glucose and cholesterol and calculate CVD risk

If CVD risk LOW <9%

Offer basic 1st line advice on healthy eating, physical activity, sign-post to stop smoking service or other services as appropriate

If CVD risk MEDIUM 10-19%

Offer 1st line advice on healthy eating, ways to lose weight, sign-post to stop smoking services, advise GP AND ask patient to come back in 12 weeks for reassessment

If CVD risk HIGH >20%

Fill out GP referral letter and ask patient to make an appointment with their GP

If Fasting Blood glucose >5.6 mmol/l offer dietary advice and refer to GP
Appendix B - Map of participating pharmacists and GP surgeries
**Appendix C - Methodology of study – explanation of pathway**

Participating pharmacies were enrolled after fitting the criteria set down by the PCT. This included having a consultation room, a trained pharmacist who was on site for a minimum of 16 hours per week. Pharmacies also had internet access and offered extended opening hours. All pharmacists involved in the program received a full day of training.

Patients were assessed according to the pathway shown in Appendix A. The population chosen for the pilot was patients aged over 40 and registered with a GP in Islington and without pre-existing medical conditions. The cardiovascular screening in this pilot involves calculating the percentage risk of cardiovascular disease over the next 10 years using the University of Edinburgh risk score based Framingham equations\(^25\).

The NICE guidance on lipid modification\(^26\) inline with the NICE Technology Appraisal\(^27\) recommends statin therapy as part of the management strategy for the primary prevention of CVD for adults who have a 20% or greater 10-year risk of developing CVD. This may result in more than half of the men aged over 50 years and 20% of the women over 65 years being considered for lipid lowering therapy. Patients with a risk of over 20% were therefore referred urgently to GPs for review.

Patients completed an initial form (CVD1) which highlighted eligibility for the service. If they met the criteria they were invited to complete the second stage (CVD2) which involved measurement height, weight, BMI, waist circumference, blood pressure and a random glucose. If patients met the set criteria, they were then asked to return for a fasting glucose and cholesterol. (CVD3)

**Criteria for referral to CVD2**
- BMI \(\geq 27\)
- Waist circumference \(\geq 80\text{cm} \text{ if } F, \geq 94\text{cm} \text{ if } M, \geq 90\text{cm} \text{ if S. Asian male}\)
- Current or recent smoker (<5 years)
- South Asian ethnic origin
- Family history of early onset (premature) CVD or diabetes (m < 55yrs), f < 65yrs)
- Random blood glucose above 7 mmol/L
- BP \(\geq 140/ \geq 90\text{mmHg}\)

All of these are criteria derived from NICE guidance relating to cardiovascular risk\(^28\) or diabetes. Their CVD risk was then calculated using the University of Edinburgh Framingham Risk Calculator.

If patients were at a risk of greater than 20% or who had a fasting glucose greater than 5.6 mmol/l they were referred to a GP. Patients with a risk between 10% and 19% were also referred to the GP, but also asked to return after 12 weeks for a follow up. (CVD4)

Once patients have been identified by the criteria above they are sent down several different referral pathways. This ends up in the information being sent to the GP either for follow up or for information.
Appendix D– Semi Structured interview schedules

Pharmacist

My names is James Davies, I work as a researcher for the London School of Pharmacy. I have been asked by Islington PCT to help with our evaluation on Islington’s pharmacy based cardiovascular risk assessments.

I hope that we can have a discussion about a pharmacy based screening service following some general questions. For the benefit of my memory, and with your consent I will record our conversation, however I assure you that anything said will be kept in confidence.

1) What are your personal views on risk assessment for cardiovascular disease?
   a) General views
   b) Positive / negative for public health
   c) Unrealistic target
   d) Role of pharmacists

2) Tell me your experiences of the scheme?
   a) Time
   b) Effectiveness
   c) Costs
   d) Reimbursement
   e) Strengths / weaknesses
   f) Patient type

3) Tell me about offering the service in a pharmacy?
   a) training and information that you received
   b) Lifestyle
   c) Blood testing
   d) Assessing risk / Communicating risk
   e) Informed to answer questions from participants
   f) About the life style changes / referral services/ tests
   g) Confidentiality
   h) Appropriate setting / Facilities
   i) Access to records
   j) Time
   k) Blood testing

4) How do you feel about the use of blood spot testing equipment and the quality of the testing?
   a) Risk for staff
   b) Training
   c) Reliability of results / Confidence in results
   d) Who conducted tests
   e) QA of equipment
5) **How do you think the public found the service?**
   a) Anecdotal interest
   b) Uptake / who recruited (HCA/ P’cist)
   c) Success stories
   d) Evidence for service working
   e) Getting right people

6) **Tell me about GP relations**
   a) GP referral process?
   b) Send them more information?
   c) Send them less information?
   d) Are the GPs acting on this,
   e) GP cooperation

7) **Can the service be improved?**
   a) for pharmacists
   b) for public
   c) for GPs

8) **Continue with this scheme?**
   a) Financial
   b) Problems
   c) Risks
My name is James Davies, I work as a researcher for the London School of Pharmacy. I have been asked by Islington PCT to help with our evaluation on Islington’s pharmacy based Cardiovascular risk assessments.

I hope that we can have a discussion about a pharmacy based screening service following some general questions. For the benefit of my memory, and with your consent I will record our conversation, however I assure you that anything said will be kept in confidence.

1) **GP’s have done a lot of work in the vascular screening area, and the DH is now looking at extending this service on a national level in alternative places to GP surgeries, such as pharmacies. What’s the way forward - how do you feel about this?**
   a) Do you think this is positive for public health?
   b) This is a new area of lower risk targets
   c) Is there value added to doing this
   d) This is getting people not previously seen by GPs
   e) This is a local scheme should it go national

2) **Talking about local Islington CVD scheme, what are your experiences and thoughts about it?**
   a) Has the PCT this well?
   b) Is there value to having a pharmacy based scheme?
   c) Are they supporting you?

3) **Have you had any patients who have used this service, how have they found it, is it beneficial?**
   a) Anecdotal interest / Success stories
   b) Evidence for service working
   c) Getting right people?
   d) Tell me your experience of the scheme?
   e) Do you think this scheme has value?
   f) Will it save you time
   g) Effectiveness /Costs/Reimbursement

4) **In your expert opinion, Are there any strengths or weakness of pharmacy based testing / screening?**
   a) Blood testing / Confidence in results (adding to emis) Reliability of results / Confidence in results
   b) Assessing risk / Communicating risk
   c) Location /Facilities
   d) Training / Advice
   e) Confidentiality
   f) Access to records
5) **Does the service have any areas for improvement?**
   a) What are your views on the GP referral process?
   b) Are the GPs acting on this,
   c) GP cooperation
   d) use of information received from pharmacists?
   e) Patients notes/emis additions

6) **What do you see as the future?**
   a) Financial
   b) Problems
   c) Risks
Patients involved in the Scheme

My names is James Davies, I work as a researcher for the London School of Pharmacy. I have been asked by Islington PCT to help with their evaluation of Islington’s pharmacy based Cardio-vascular risk assessments.

I hope that we can have a discussion about a pharmacy based screening service following some general questions. For the benefit of my memory, and with your consent I will record our conversation, however I assure you that anything said will be kept in confidence.

1) **Tell me about your experiences of the scheme, if any?**
   a) How long did it take?
   b) What did you like
   c) What didn’t you like

2) **Tell me about receiving the service in a pharmacy?**
   a) What information did you received before hand?
   b) What information did you received during the consultations?
   c) How did you hear about the service?
   d) How did you feel about the information received?
   e) Was this the Appropriate setting / Facilities?
   f) How long did it take?

3) **How do you feel about having your blood tested in a pharmacy?**
   a) Is there enough confidentiality?
   b) Is it clean / clinical enough?
   c) Confidence in results?

4) **What is the difference between a pharmacy and a GP?**
   a) Why did you come to Pharmacist over GP?
   b) What was good about it being in a pharmacy?
   c) What was bad about it being in a pharmacy?
   d) What stops you asking your GP for this service?

5) **Tell me about your relationship with your GP?**
   a) Did the GP tell you about the information they received?
   b) What stops you going to your GP?
   c) Did you GP do anything with the results?

6) **How could we improve the service?**

7) **What do you see as the main role of a pharmacist?**
Patient not involved in the scheme

My names is James Davies, I work as a researcher for the London School of Pharmacy. I have been asked by Islington PCT to help with their evaluation of Islington’s pharmacy based Cardio-vascular risk assessments.

I hope that we can have a discussion about a pharmacy based screening service following some general questions. For the benefit of my memory, and with your consent I will record our conversation, however I assure you that anything said will be kept in confidence.

1) **We are looking extending the services that are provided by pharmacists on a wider level. How would you feel about having you blood tested at a pharmacy?**
   a) What would you like
   b) What would you not like
   c) Is there value added to doing this
   d) This is getting people not previously seen by GPs
   e) This is a local scheme should it go national

2) **Did you know that a cardiovascular screening process was taking place in Islington?**
   a) Yes- Then what has been your involvement, what adverts have you seen?
   b) No – Then how would you feel about such a thing.

3) **What do you think are there any strengths or weakness of pharmacy based testing / screening?**
   a) Blood testing / Confidence in results (adding to emis) Reliability of results / Confidence in results
   b) Assessing risk / Communicating risk
   c) Location /Facilities
   d) Training / Advice
   e) Confidentiality
   f) Access to records

4) **What would stop you going to a pharmacy to get a blood test?**
### Appendix E-Time taken to test

Please note these are not all direct quotations, some are summaries of longer conversations.

<table>
<thead>
<tr>
<th>Testing Time</th>
<th>PH1</th>
<th>PHA2a</th>
<th>PHA3</th>
<th>PHA4</th>
<th>PHA5</th>
<th>PHA6</th>
<th>PHA7</th>
<th>PHA8</th>
<th>PHA9</th>
<th>PHA11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Done a few in 10-15 minutes, some 30-45 minutes.</strong></td>
<td><strong>Allocate a 30 minutes time slot, people want to talk.</strong></td>
<td><strong>Consultations are taking about 15-20 minutes or 15 minutes if there is not a lot of chat</strong></td>
<td><strong>Average test is 15-20 minutes, also explaining results so can take up to 20-25 minutes</strong></td>
<td><strong>Minimum 30 minutes up to 45mins.</strong></td>
<td><strong>Initial test 10-15 minutes</strong></td>
<td><strong>Second test about 30 minutes.</strong></td>
<td><strong>Time of each test 15-20 minutes, first consultation longer 30-45,</strong></td>
<td><strong>Doesn’t take too long about 5-10 minutes.</strong></td>
<td><strong>Spending 45 minutes on first assessment to explain what results means 15 minutes in NEVER enough</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Time spent between blood testing and advice</strong></td>
<td><strong>Depends on the patients</strong></td>
<td><strong>Chat and test at the same time, towards the end, you know what you are tailoring,</strong></td>
<td><strong>Blood test talking to them at the same time, if whole [blood] test takes 10 minutes and whole thing 20 minutes, then 15 minutes is talking giving advice</strong></td>
<td><strong>Machine takes 3-4 minutes.</strong> <strong>Blood sample takes 10-15mins,</strong></td>
<td><strong>15 for test, 5 minutes for form filling.</strong> <strong>50/50 counselling and testing.</strong></td>
<td><strong>Counselling is after we have done results, when we call them in.</strong></td>
<td><strong>Test time, 50% is lifestyle, tests are quick.</strong></td>
<td><strong>90% talking, 10% tests</strong></td>
<td><strong>15 – 20 minutes with paper work</strong></td>
<td><strong>Doing [blood] test is no more that 5-7mins,</strong></td>
</tr>
<tr>
<td>Additional Comments</td>
<td>PHA1</td>
<td>PHA2a</td>
<td>PHA3</td>
<td>PHA4</td>
<td>PHA5</td>
<td>PHA6</td>
<td>PHA7</td>
<td>PHA8</td>
<td>PHA9</td>
<td>PHA11</td>
</tr>
<tr>
<td>---------------------</td>
<td>------</td>
<td>-------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>Test time depends on patient</td>
<td>We have a time and set 30 minutes for the service. Generally appointment basis.</td>
<td>Talking about what they eat etc can get a little bit protracted.</td>
<td>Takes more time than people think, not just a test, it includes human interaction that goes with it.</td>
<td>Paperwork takes some time, it would be easier if it was on the spreadsheet, and worksheet.</td>
<td>As we know them, it takes a lot longer as they like to chat to us.</td>
<td>Time spent explaining results of what they mean.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If working well, fine, there is no great need to reinforce.</td>
<td>The obese or slightly obese people take longer.</td>
<td>It involves education, not just over time.</td>
<td>We have PC in consultation room and do it at same time.</td>
<td>Need to give patients lots of details, explain what we are trying to achieve.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient bleeding takes time, cold fingers can take longer.</td>
<td>Building mentality, to get half hour block.</td>
<td>Patients will talk for hours, bear in mind time taken.</td>
<td>Filling form takes time.</td>
<td>Filling form takes time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix F – GP pharmacy relationships

Please note these are not all direct quotations, some are summaries of longer conversations.

<table>
<thead>
<tr>
<th>Referral Process</th>
<th>PHA1</th>
<th>PHA2a</th>
<th>PHA2b</th>
<th>PHA3</th>
<th>PHA4</th>
<th>PHA5</th>
<th>PHA6</th>
<th>PHA7</th>
<th>PHA8</th>
<th>PHA9</th>
<th>PHA11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral process has been done, no problems.</td>
<td>GP referral process has been fine, not had any come back on it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High risk group, letter goes straight to GP and ring.</td>
<td>Just sent the letters.</td>
<td>Referral process needs improving. All goes one-way, you wonder what has happened to the patients, have your recommendations been taken onboard.</td>
<td>Referrals need to be changed, like end of month,. Collate once a months, so the GPs get it all together. Urgent ones should still be direct, but mild to medium ones someone should collect data and send it once a month.</td>
<td>GP attitude could be barrier, we need them to help us, this could be a barrier.</td>
<td>I always refer to doctor if they have any major problems. There is always a doctor support system. I fax it straight away, but I don't know how they follow it up.</td>
<td>Feeding info to Drs has been poor, not being doing it fast enough. I have improved that part now and I do it very quickly.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP Acting on Results</td>
<td>Patients with a negative result [GPs ] have been acting on them, seeing patients with this. Patients are being treated for that result.</td>
<td>Not really know what is going at their end. Not sure if it is working their end.</td>
<td>The ones we have referred have been looked after by the GPs.</td>
<td>They have acted on it. They are acting not ignoring them. As long as the patient went in [to GP] and got treatment that is fine. Concerns should be raised, GPs will probably file it, they will only act if they feel it is worth it.</td>
<td>GP relations quite good, some have been very proactive, asked us to monitor their blood pressure reading in a regular basis, they have confidence in this. No feedback to patients that have been referred.</td>
<td>GP responding to it, don't want to make it complicated - keep it simple as possible.</td>
<td>Most looked after well by the GPs.</td>
<td>Referral system straight away, Local doctors are good.</td>
<td>Clear we have a role as screening, not a doctor, just pharmacist; they will determine what should be done. Local GPs have acted on results positively.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
GP Faith in Test

‘They go out and do further testing, this is not an accurate diagnostic this is just a marker.’ This makes it a red flag.

Important that GPs think that this is valuable and understand what we are doing, if they see the equipment and see results are right, and that we are calibrating the machines.

Patient comes to get the blood pressure measured here, then go to GP and get same results.

One [patient] with high BP, waiting to see if she comes back and if she comes back.

One Doctor phoned up and that he disagreed with our results, and then later that patient went on to have stroke.

GP phoned up and thought form his calculation she was not a high risk, and he thought she wasn’t and disagreed with the pharmacist on the Framingham score. Patient went on to have a stroke.

Wonder if we are not singing from same hymn sheet. They seem to be using different scoring systems.

GPs have been really good about it.

In the Early days GPs asked what is that? what machine they are you using? Especially as picked up a few cases of diabetes.

GP have said not happy, but used it as indication. They do it all again.

Patient went on to repeat tests.

One GP is an issue, who doesn’t believe in acting on high BP.

Think they do recognize the benefit of it, think this will have to be proved statistically.

Everything pharmacists have to do we have to prove that it works. We are working for benefit of patient, Making patient journey comfortable.

Good working relationship with the GPs as been here a long time.

Looking at risk assessment over next 10 years. Drs will look at it quite differently, and we are looking at risk, and how they can change it. [PHA11]
<table>
<thead>
<tr>
<th><strong>GP Service Opinion</strong></th>
<th><strong>Perceived GP Views</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>GP have told us it is a good service. Some GPs think it is for everyone, so have been referring people here for their cholesterol checks rather than going to the hospital.</td>
<td>No adverse comments, but I do not know if GPs are happy are not.</td>
</tr>
<tr>
<td>Quite happy to go on to doctor.</td>
<td>Not had any feedback from doctors,</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>GPs were not informed about this until we told them. They needed someone to tell them about this.</td>
<td>They like the idea. They have not comeback and said it is good GPs around here like the idea, but they haven’t told us. But I wouldn’t expect them to.</td>
</tr>
<tr>
<td>Need to improve GP relations</td>
<td>Not discussed the service with GP. I send the results to them, but I have not had any feedback. 'I suspect GPs will be grateful for this service' 6.36</td>
</tr>
<tr>
<td>Discussed result with doctors. Their experiences were good. GPs said the service is good or patients. Not really informed about what we do for GPs.</td>
<td>I think that it is a relief that they are being tested.</td>
</tr>
<tr>
<td></td>
<td>GPs feel like they are getting something out of it. GP to get them more involved, so don’t feel as if they are isolated. Good idea to involve them more. Splitting the money with GPs would improve relationship...[PHA9] Would think that they would not like it. They feel that pharmacists shouldn’t do it. Nurses don’t like it, feel that it is not our place to do things like that.</td>
</tr>
</tbody>
</table>
Feedback

Do the work and then not see what happens or see if GP want to take it any further.

Relationship with the GP, not had much feedback.

My relations with the GP are great, no feedback from them.

The GPs haven’t made any comments.

GP came to use the service.

No feedback from GPs.

LPCs and LMCs need closer working, to stop fighting.

Pharmacy has a good reputation.

Stealing roles

They may worry about their roles being taken away from them a bit. This is a totally different role for pharmacists.

Think the GPs would feel threatened; we are doing similar services, taking things from them. Fighting for the same patients with Flu vaccines etc.

We are pinching their territory.

Pharmacists are seen as a supply chain, to become a clinician, takes a journey, and we are three quarters there, we need a bit more work and we will be there.

Historically [GPs] had all to themselves.

Now they see benefit they have come onboard.

We are close to the surgeries that’s yearly monitoring scheme is very good, seen more people from further away, starting to have more of a relationship with other surgeries.

‘we don’t step on each others toes’

Think it is their territory; this is what they have traditionally done. Would like us to spend more time on medicines.

We do not want to run on their feet, the service is whether they should do that, rather than that. Some GPs think pharmacists have done so far.

Balance is whether it should be in pharmacy or GP, pharmacy should not become doctors doing this. Medic take over and take care.

Tell doctors that this was the case.
References


3 Personal correspondence from Islington Primary Care Trust.


8 South Birmingham Primary Care trust. *LLOYDS Pharmacy Pilots NHS Heart 'MOTS'* [Accessed February 2009]

   http://www.southbirminghampct.nhs.uk/_news/PressReleaseLocal.asp?TitleID=892


   http://www.bpassoc.org.uk/kyn/pdfs/kynfinalreport08.pdf [Accessed February 2009]


