

Evaluation of the National Health Service Diabetes Prevention Programme Demonstrator Site in Salford

Report 2: Identifying the roles of community and enhanced GP referral services in the recruitment and retention of people to diabetes prevention programmes in Salford

December 2016
Final version

Sarah Cotterill
Sarah Knowles
John Humphreys
Aneela McAvoy
Caroline O'Donnell
Michael Spence
Nia Coupe
Clara Weisshaar

Page 1 of 53

Contents	Pages
1. Introduction	4-5
2. Research objectives and methods	6-8
3. Qualitative research: Description of the implementation of each referral route and perceived benefits and risks of each	9-26
3.1 Methods	9
3.2 Description of the enhanced GP referral route using TIDieR template	10
3.3 Interview data for the enhanced GP referral route	12
3.4 Description of the community referral route using TIDieR template	17
3.5 Interview data for the community referral route	19
4. Quantitative research: Identification of people with NDH and referrals into Salford IGR Care Call and Exercise for IGR	27-45
4.1 Data presented here	27
4.2 Summary of community activity: risk scores, testing and referral	28
4.3 Unique Improvements	29
4.4 Health Improvement Service	31
4.5 Primary care referrals	35
4.6 Salford IGR Care Call	37
4.7 Salford Community Leisure's 'Exercise for IGR Programme'	40
4.8 Demographic data – Health Improvement Service	42
5. Key lessons	46-48
5.1 Community referral	46
5.2 Primary care	48
6. Appendices	49-52
Appendix 1: The TIDieR (Template for Intervention Description and Replication) Checklist	49
Appendix 2: Referrals to Care Call and Exercise from primary care practices	51
7. References	53

List of tables	Page
Table 1: Breakdown of interview and focus group participants	9
Table 2: Summary of risk scores, testing and referral rates	28
Table 3: UI - diabetes risk scores and referrals to HIS	30
Table 4: How did people hear about the HIS diabetes testing service?	32
Table 5: HIS - diabetes risk scores and HbA1c blood tests	33
Table 6: HIS – blood test results	33
Table 7: HIS – Referrals to Care Call, Exercise and GPs	34
Table 8: Care Call – outcome of referral, by source of referral	38
Table 9: Reasons for referral back to GP	39
Table 10: Exercise for IGR referrals, by source of referral	40
Table 11: Characteristics of people attending HIS, compared to Salford population and NHS Health Checks population	42
Table 12: Risk scores and referrals by ward, compared to deprivation and diabetes prevalence	43

List of figures	Page
Figure 1: Data sources and flowchart of pathway activity	27
Figure 2: UI – flowchart of activity	29
Figure 3: HIS – flowchart of activity	31
Figure 4: Flowchart of referral activity from primary care	35
Figure 5: Care Call – flowchart of activity	37
Figure 6: Exercise – flowchart of activity	40

Section 1 – Introduction

Type 2 diabetes as a health concern

Non-diabetic hyperglycaemia (NDH) is a term which covers terms previously used to describe the decreased ability of the body to regulate glucose effectively, such as impaired glucose regulation (IGR), impaired glucose tolerance (IGT) and impaired fasting glucose (IFG). It accounts for conditions where blood glucose levels are above the normal range but are not high enough for a diagnosis of type 2 diabetes mellitus (T2DM). People with NDH often have no symptoms, but every year 5-10% of those with NDH will go on to develop T2DM if left untreated.

The health implications of T2DM are serious, with poor control (i.e. high blood pressure / low medication adherence) resulting in loss of vision; low mood, depression and anxiety; neuropathy (pain, altered sensation such as burning, itching and tickling, lack of sensitivity), and in severe cases, limb amputation. Further, T2DM carries with it a high risk of developing other cardiovascular health complications¹. T2DM is thought to cost the NHS £10 billion per year², around nine per cent of the total NHS budget. These figures highlight the importance of diabetes prevention as a national public health concern.

The main factors that influence non-diabetic hyperglycaemia are age, genetics, weight and ethnicity. Making changes to lifestyle behaviours which reduce weight, such as increasing physical activity, can decrease the risk of NDH developing into T2DM by 50%^{3,4}. However, the asymptomatic nature of NDH means that people often go undiagnosed and untreated, therefore remaining at a higher risk of developing T2DM.

Healthier You: The NHS Diabetes Prevention Programme (NDPP)

NHS England, Public Health England (PHE) and Diabetes UK initiated a UK national diabetes prevention programme in 2015. During 2015-2016 seven demonstrator sites, including one in Salford, were commissioned to test innovative approaches to programme delivery, with the expectation that the learning from those sites would shape the UK-wide programme. *Healthier You: The National Health Service Diabetes Prevention Programme* (NDPP) commenced during 2016 with a first wave of 27 areas covering 26 million people, half of the population, making up to 20,000 places available for people to receive tailored, personalised help to reduce their risk of T2DM including education on healthy eating and lifestyle, help to lose weight and bespoke physical exercise programmes. This will roll out to the whole country by 2020 with an expected 100,000 places available in the programme each year after.

The local model in Salford comprised two diabetes prevention programmes: a nine-month Salford IGR Care Call telephone service delivered by staff at Salford Royal NHS Foundation Trust, and an eight-week exercise programme delivered by Salford Community Leisure (SCL). People could choose to attend one or both of these services. Salford partners developed a multi-agency approach to engaging and risk assessing members of the public in diabetes prevention services, through a blend of community and primary care referral routes. The community route, provided by Unique Improvements (UI) and the Health Improvement Service (HIS), identified people in community

settings who were at moderate or high risk using the Leicester Diabetes risk score and offered a finger prick point-of-care HbA1c blood test. If the blood test indicated a score within the NDH risk range (42-47 mmol/l), people were offered referral into either or both of the Salford diabetes prevention services. The primary care route included a nurse facilitator who visited practices, searched the electronic records for suitable patients, arranged appointments with patients to discuss their type 2 diabetes risk, and referred suitable people into prevention services. This was in addition to incentives offered to GPs as part of a locally commissioned service for long-term conditions. All GP practices were part of the locally commissioned service, but only some of them took up the offer of additional support from the nurse facilitator.

What will be reported here?

The National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care Greater Manchester (NIHR CLAHRC GM) was commissioned to undertake an evaluation of the Salford demonstrator site. This is the second of three reports forming that evaluation. The first report was completed in July 2016⁵, and designed to describe the Salford IGR Care Call service model and evidence that underpins it. It employed qualitative analysis approaches and a literature review to assess how closely the service model in Salford correlates to academic literature on lifestyle intervention and the NDPP framework.

This report will focus on the community and nurse facilitator routes into the lifestyle support services available through Salford IGR Care Call and SCL. The evidence has been gained through interviews with key informants covering the whole NDH pathway, and through quantitative data provided from each of the agencies on the pathway covering the period up to 31st March 2016. The details of the research objectives and methods for this report are described in the next section.

The final report will be written in early 2017 – focusing on retention of people who entered the lifestyle support services on or before 31st March 2016.

A note regarding terminology in this report

For the purpose of clarity, the following abbreviations will be used:

- the 'Salford IGR Care Call' service will be described as 'Care Call',
- the 'Exercise for IGR programme' provided by SCL will be referred to as 'Exercise',
- the 'enhanced GP referral route' is called 'enhanced primary',
- the term NDH has been used except where IGR/IGT/IFG forms part of a service name,
- the 'National Health Service Diabetes Prevention Programme' is referred to as 'NDPP'

Section 2 – Research objectives and methods

Research objectives

The research objectives for this evaluation were to:

- 1) Identify what role a community referral service can play in recruitment and retention for lifestyle support services for people at risk of diabetes.
- 2) Identify what role an enhanced GP referral service can play in recruitment and retention to lifestyle support services for people at risk of diabetes.
- 3) Describe the implementation of each of the referral routes and compare perceived benefits and risks associated with each.

Research questions

To complete research objectives 1 and 2, four research questions were considered in the quantitative evaluation design:

- i) Within the community referral route, up to 31st March 2016, how many people were:
 - i. approached,
 - ii. offered a risk assessment,
 - iii. in receipt of a complete risk assessment,
 - iv. identified as at risk,
 - v. have a completed HbA1c,
 - vi. referred to Care Call/Exercise/both,
 - vii. are accepted as a suitable referral,
 - viii. enrolled at Care Call/Exercise,
 - ix. signposted to other relevant services?
- ii) Within the primary care referral route, up to 31st March 2016, how many people were:
 - i. identified as meeting the criteria,
 - ii. invited to clinic,
 - iii. recorded as attending a clinic,
 - iv. identified as at risk,
 - v. referred to Care Call/Exercise,
 - vi. recorded as a suitable referral,
 - vii. enrolled at Care Call/Exercise
 - viii. what is the drop out at each stage?
- iii) To what extent does the community referral service find “new” people, who would not attend or be found otherwise (i.e. previously undiagnosed as at risk).
- iv) How does the population profile (at the stage of risk assessment by Health Improvement Service) compare to the Salford population?

For objective 3 the following research questions were addressed by the qualitative research:

- i) How can the community and GP referral services be described, and what are the models approaches or theories that have influenced its development and delivery?

- ii) How have the methods been implemented? What resources/training have been employed, what communication is necessary between organisations at different stages of referral? Were certain components of the referral routes more or less effective than others?
- iii) What is the acceptability of the different referral routes to staff and the perceived acceptability to clients?
- iv) What are the perceived benefits of the different methods? This includes benefits for those involved (e.g. the community champions) as well as benefits for the communities and the service.
- v) What are the risks associated with each method, in terms of barriers or challenges associated with implementation and perceptions of numbers of ineligible people contacted or eligible people missed?
- vi) Which community approaches/activities are particularly successful in engaging with the local Salford population, raising awareness and encouraging people to engage with risk assessments and subsequent behaviour change programmes (if found to have IGR), and which are less successful?

Methods

The following methods were used to gather evidence to answer the research questions:

- 1) Qualitative scoping interviews (semi-structured) and focus groups were conducted with a purposively selected sample of 32 key informants. The sample was identified through liaison with service leads in late 2015, to provide representation from all stages of the pathway. It was designed to include decision makers/service leads as well as frontline workers involved in the delivery (community champions and volunteers, HIS officers and neighbourhood workers, nurse practitioner) and staff working in GP practices.

The purpose of the interviews was to:

- a) Describe each referral route (procedures, materials etc.)
- b) Understand the implementation of the routes and acceptability to staff
- c) Investigate the perceived acceptability to the public
- d) Identify the perceived benefits and risks associated with each route
- e) Develop suggestions for improvement or recommendations if the routes were to be implemented at other sites.

We used the TIDieR⁶ (Template for Intervention Description and Replication) as a framework to describe both the primary and community referral routes, based on the interview data (see Appendix 1). The template has been created to ensure consistent reporting of health interventions.

Interviews were transcribed in full and analysed using a framework analysis.

- 2) Quantitative analysis of the data supplied by sources throughout the pathway to cover the period up to and including 31st March 2016. The data sources included:
 - a) Unique Improvements (UI)

- b) Health Improvement Service (HIS)
- c) Care Call
- d) Salford Community Leisure (Exercise)
- e) Enhanced primary care service.

Anonymised individual level data was provided by UI, HIS Care Call and SCL. Summary activity data was provided on the enhanced primary care service. The four data sets were analysed and reported separately.

Data from the HIS have been used to compare the demographics of people engaged through the demonstrator with those of the Salford population, split by wards.

Section 3 – Qualitative research: Description of the implementation of each referral route and perceived benefits and risks of each

3.1 Methods

Participants

Interviews took place between February and June 2016.

Table 1: Breakdown of interview and focus group participants

HIS	10
Decision makers and service leads	8
Primary care	6
UI	6
Exercise	2
Complete sample size	32

Analysis

We initially planned to conduct a framework analysis, but the coding framework enabled us to move directly from coding to summarising the data whilst still providing a clear audit trail. We therefore performed a thematic analysis of the data. All team members had input into the initial analysis framework, and emergent themes were 'sense checked' with team members. The transcripts were analysed independently by three of the team members. Each transcript was reviewed by two team members and themes compared, with on-going discussion to develop a shared understanding of the data and agreement on core findings. The final presentation of data and interpretation of findings was agreed amongst the whole team.

Themes

- i) Implementation and acceptability to staff
- ii) Perceived benefits
- iii) Perceived risks
- iv) Perceived acceptability to the public
- v) Resources needed to replicate the model elsewhere
- vi) Suggestions for improvement

3.2 Description of the enhanced GP referral route using TIDieR template

Brief name	Facilitated primary care referral into diabetes prevention programmes
Why?	There was no specific theory or model described. The decision to set up the enhanced primary care referral route was made by commissioners to help achieve NDPP targets for recruitment into the local diabetes prevention services, based on the assumption that additional support for GP practices would improve referral rates. A nurse facilitator was employed 0.4FTE to work in practices to increase awareness of the programmes and support GPs identifying and referring patients. Although locally GPs were already incentivised to do this as part of a long-term conditions service, there was additional demand due to being part of the NDPP programme.
What?	<p>Materials:</p> <ol style="list-style-type: none"> 1. FARSITE template – search criteria for practice database: FARSITE is a rapid ‘search and find’ tool, designed by North West eHealth, which allows searches to be run on anonymised population level health record data http://nweh.co.uk/products/farsite. Later searches were done using GP electronic records. 2. Standardised letter sent to eligible patients from the nurse facilitator. 3. Health information leaflet explaining T2DM prevention, risk and interventions. 4. Standardised referral form to refer the patient into the Care Call service. <p>Procedures:</p> <ol style="list-style-type: none"> 1. The FARSITE tool or searches of GP electronic records were used to identify potentially eligible patients from the practice database. Searches were based on HbA1c result(s), age (18-90), excluding a diagnosis of diabetes. This search can be performed by staff within the practice or by the nurse facilitator. 2. The nurse facilitator reviewed the list of potentially eligible patients, to exclude patients who would be unable to engage with the service, based on their patient record (e.g. patients who are deaf, have memory problems, cannot speak English, or who have a terminal illness). 3. The final list was reviewed by a member of the practice staff. Once the list was approved, all patients on the list were invited by letter to attend a clinic with the nurse facilitator. This was done automatically through FARSITE. (Practices without FARSITE access would need to manually send the letters to patients.) 4. At the individual clinic appointment, the nurse facilitator introduced themselves, and discussed the implications of the patient being at risk of diabetes and the importance of lifestyle change. They explained the service offered by Care Call and how it is delivered. If the patient expressed interest, the nurse facilitator completed a referral letter and sent it to Care Call. If not, they were provided with general health advice around diet and exercise. All patients were coded as IGR on the practice database.
Who provided?	The nurse facilitator was (and is recommended to be) from a clinical background, with some prior experience of T2DM prevention work. They must have access to the patient database, and therefore have appropriate governance approvals. They should be familiar with the service being offered and able to explain it fully. They should also be able to provide general health advice to patients who do not opt to be referred into the full service.

How?	<ol style="list-style-type: none"> 1. The search can be conducted at the practice by the nurse facilitator or by practice staff. 2. The consultation was a face-to-face, one-to-one appointment between the patient and the nurse facilitator. Appointments at the same practice were booked on the same day to provide a temporary clinic.
Where?	Conducted at the practice surgery (requires a room).
When and how much?	<ol style="list-style-type: none"> 1. During the research period the search was conducted once per practice. 2. The consultation with the patient was also a one-off. Currently no plans for the nurse facilitator to offer follow-up appointments due to the short-term duration of the post (although follow-up appointments can be completed by the practice themselves as part of routine work).
Tailoring	The criteria used to identify and exclude patients were standardised. There is no formal script for the consultation and it is likely to be tailored to an extent based on the individual.
How well?	No formal assessment of fidelity has been conducted.

3.3 Interview data for the enhanced GP referral route

GPs in Salford were already incentivised to identify patients at risk of diabetes, which is itself a mechanism of enhancing referral, but the following content and the data collected focused on the role of the nurse facilitator specifically, given that this was the novel innovation introduced locally to impact on referral rates as part of NDPP specifically.

i) Implementation and acceptability to staff

The model of providing a trained professional to implement the referrals was viewed as most helpful for the practices, in comparison to providing other types of support.

“The main thing is you’re helping the practice, and that’s what they need. They don’t need money, they don’t need a locum person going in so they can do it because then they’ve got to teach them their job when they come and do something else...” Lead 5

The amount of support provided by the nurse facilitator varied by GP practice. In the early days, practices received the full package of support as described in 3.1. Later on, the nurse facilitator ran searches of GP records and then practices used the searches to organise clinics. Other practices simply received advice on how to undertake referrals. The variation in delivery depended on the willingness of the practice to take up of the offer of help, and the availability of the nurse facilitator, as the role was vacant for a short time during this period. Among those we interviewed from GP practices, it was apparent that those who had received the full package of support from the nurse facilitator had a better understanding of the referral process into Care Call. During interviews with staff from the practices who received only minimal support from the nurse facilitator, the staff referred to relying on forms and protocols from the nurse facilitator, indicating the benefit of the supported service. Information on the number of referrals from the enhanced primary referral route is provided in section 4.5.

ii) Perceived benefits

The enhanced primary care referral route was considered necessary given that services, in practice, struggled to prioritise health prevention due to other demands:

“In general practice, however much it’s promoted, prevention is not a priority, and if you’ve got a waiting room full of people with flu, cancer, chest infections, strokes, and you’ve got one patient that might get diabetes in ten years, obviously the others become a priority...I think practice staff really do not have time to do this.” Lead 5

“It was felt that though GPs were incentivised [to do work around long-term conditions as part of the Long-Term Conditions Locally Commissioned Service] they were perhaps not incentivised at the rate that we need to actually get the increased numbers [into Care Call]; because GPs have got lots of other things to do...GPs are interested in health promotion and disease prevention, but actually they’ve already got a load of stuff to do with people who are already ill.” Primary focus group 1

The enhanced primary care referral route was considered to improve the quality of referrals provided. The nurse facilitator was able to explain the available services in more detail, and this greater preparedness was considered to be linked to higher engagement of patients once referred. This included minimising ineligible referrals, for example, identifying people who instead should be on the diabetic register, which was also valuable information for the practice.

“That was quite useful to let the practice know that they need to be reviewed and put on the diabetic register, and it avoided inappropriate referrals into the service which is something apparently they get quite a lot.” Lead 5

“It actually takes a lot of effort going in and searching through your registers and then inviting all those people in...what we wanted to focus on was good quality referrals...referring people who already knew about their condition and they knew why they were being referred, and they were already committed to engaging and goal setting.” Primary focus group 1

The practices themselves emphasised that the one-to-one time the clinic sessions provided were crucial for encouraging patients to enter the service; both in terms of presenting options in detail and harnessing patient motivation, and something which they would not have time for in routine practice.

“I think we’re very restricted time-wise because of staffing to sit down with patients to impart that information and utilising the services that are setup.” Primary 3

“It’s having the time to tease out that hook, whether it’s weight loss or losing a leg. But you need time to find it. And her having the 20 minutes, she would have had time to find that hook.” Primary focus group 1

Having the nurse facilitator within practices to organise referral also had the benefit of making practices more aware of the Care Call service itself, through building relationships with practice staff.

“It’s certainly built up relationships. I still get emails now from doctors in different practices and practice nurses, so they’re now aware of the service which before they may not have been... So you know there is a need there, and it’s that link between them...they now know that they’ve got somebody to contact if they need the help...it is a nice link with primary care which is really important and needs to be built up, rather than us being two separate things. I think once you’ve got that link they will be more receptive to referring in and the services and helping the patients.” Lead 5

Finally, despite there still being some time and resource costs for practices even with the enhanced referral support, practices recognised the value of preventative work in the long run:

“It’s not any extra work really because if you think it [through] in a logical sense, if we don’t do it now, they are only going to be the diabetes [cases] of the future. So it’s more work in the future, so do it now. It’s there waiting.” Primary 2

iii) Perceived risks

Although the enhanced referral route was introduced to save time for practices who did not have time to perform identification and referral processes for its patients, there were still tasks requiring practice input which could cause delays, for example if practice staff were needed to access the Choose & Book system.

“It’s just an extra job. If you’ve got a busy load and somebody says here’s 19 patients, can you refer them through, it is work, even though the ultimate thing is the patients getting lifestyle [advice] and we’re helping you, to somebody it’s a chore.” Lead 5

This was also evident in the interviews with practices that did not receive full support (due to staff turnover) and reported the complexity of organising referral themselves.

“I put together flowcharts for our surgery about what to do around blood sugar, I adapted the stuff that the nurse facilitator had originally sent me and I did a flowchart for staff on how to refer so I’ve done quite a lot of work... It’s taken months of implementing.” Primary 3

“Sometimes we [referred to Care Call] before but not very often... It was quite hard knowing what they actually wanted on the template.” Primary focus group 1

Practices may also be reluctant to refer if they are responsible for doing this without the nurse facilitator and if the ‘added value’ of Care Call itself is not made clear. One practice focus group indicated that they felt the benefit was from access to specialist nurses, and the advantages of the long-term contact with health advisors (and, consequently the advantage of the facilitated referral to get patients into the Care Call service) may need to be made more explicit.

“I’d refer to our Health Care Assistant [HCA]...they’d get a face-to-face with a HCA. I could understand if I was getting some diabetic input... If it’s just for a chat on the phone then I wouldn’t refer. If it was just to a health care person then I’d do that in-house.” Primary focus group 1

“A lot of [GPs] felt that the education they already gave them [patients] was adequate...so their question was why should we refer in?... But when you then explain how you go into things in great detail [in Care Call] and what we actually do, they could see what’s going on, but until they [GPs] know that and they just hear about this service that’s done by telephone they don’t really understand it.” Lead 5

Finally, it was recognised that the response rate, even with the support of the facilitated referral service, would still vary depending on populations served by the practices.

“I think if you look at the different areas, one Medical Practice, as opposed to another [Medical Practice] which is directly opposite, didn’t get a good response because it has the crowd which are generally not that bothered about improving their health, but the one opposite, even though it’s across the road, has the people who do respond.” Lead 5

iv) Perceived acceptability to the public

The process was seen as acceptable to and valuable for the public. The staff felt that patients also appreciated the clinics being held at their own practice and the one-to-one session available to discuss their options with the nurse facilitator.

“Most of our patients take it up because we emphasise about not becoming diabetic and I think a lot of people have heard about problems with diabetes. I’d say probably 95% of our patients take up the referral.” Primary 3

“They don’t like to travel, they like it close to home. And they like one-to-one, they do not like group sessions... They liked it. They liked having 20 minutes to discuss their diabetes, their condition.” Primary focus group 1

Practices did comment, however, that some patients preferred to try to change their health themselves first.

“More often than not, I found that they’ve said, I’d rather do it myself first and see how it goes with a diet and exercise regime and I think the criteria is to check the HbA1c in six months, but we try more often than not to check it in three. So we don’t mind because it means they are actually becoming more proactive themselves.” Primary 2

v) Resources needed to replicate the model elsewhere

Respondents from GP practices felt that the model could be effectively implemented in other practices. However, placing a nurse facilitator within practices was not without challenges and required tenacity and flexibility on behalf of the nurse facilitator, for example to find space within the practice to perform the work and engage busy practices.

“Most practices don’t have a room so you have to literally fit in with them and find a room or a half day room...I would then chase [them] up, forward that email again saying following on from...so they had another email with my name on, and then I’d pester them every week really, stalk them till I got a reply.” Lead 5

To encourage practices to take part, having someone in a clinical leadership position to champion the study is also required:

“The initial email went from [Clinical Commissioning Group clinician] and the reason for that was each practice saw [her] name, knew it was a colleague so they’d open it. If you’re sending it from somebody they don’t know, like me or CLAHRC, it’s not a priority, it goes to the bottom of the list... So it was a good opener.” Lead 5

It was also emphasised that the person who conducts the referral needs to be clinically trained themselves.

“You need to be a healthcare professional, yeah, because you’ve got to tell them about their IGR and their blood result and what IGR means. You’ve got to interpret the blood results, look at the patient records to see if they’re suitable.” Lead 5

“Having somebody that knew about diabetes...and able to make decisions at a higher level. You need that gravitas of someone who’s clinically trained. The patients respect that more.” Primary focus group 1

It should be noted that this viewpoint contradicts the experience of the community referral teams, who were comfortable with performing screening and blood tests without specific clinical expertise (see section 3.3.iv). However, the primary care facilitation would require professionals to have a clinical background in terms of enabling access to the patient record and conducting clinics in NHS sites. The above quotes also indicate primary care staff themselves perceive that having a primary care background would help encourage patients to attend.

vi) Suggestions for improvement

It was recognised that Care Call had initially struggled with the number of referrals being received. However, the high demand was indicative that it was providing a necessary service that would continue to be utilised if funding was sustained.

“The rates of the referrals they’re getting I can’t understand why they’d want to withdraw something that’s utilised and referred into a lot, as long as people are appropriately referred to places.” Primary 3

There was also a suggestion that group education or update sessions could be run for practices (for example, running a session at the Practice Nurse Forum) to ensure they were aware of any changes to the service and to pool learning and experience about identification and referral.

“I’ve not seen any sessions for practice nurses to go on since they set the new service up. Just see...what other surgeries are doing and other feedback from the people that we’re referring to...like an update this is how we want things doing now because I’ve had to do this just from emailing people and finding the policies so I could write flowcharts for my staff and a guideline that we could use here at the surgery... I think if a surgery hasn’t already set something up they could be like, oh, right, we could do that, oh, this is how you need to go about something.” Primary 3

We have since discovered that NDH update sessions had been organised during the previous year, but the particular practice staff we interviewed appeared to be unaware of them or had not recognised their importance.

3.4 Description of the community referral route using TIDieR template

Brief name	Community referral into diabetes prevention programmes
Why?	There was no specific theory or model described. The decision to employ community identification was a commissioner-led decision based on reducing the burden on primary care services, increasing appropriate referrals into existing NDH services and attempting to increase engagement with the wider Salford population. The two organisations commissioned to deliver the service were explicitly directed to focus on high risk areas and adopt a targeted approach (for example, areas of social deprivation, BME groups). The outreach and engagement methods used were based on the previous experience and training of HIS and UI.
What?	<p>Materials:</p> <ol style="list-style-type: none"> 1. Social marketing materials: these included eye catching materials for use in public (such as t-shirts and foam fingers), social media campaigns, and materials designed to instigate conversations with the public (such as offering free carrier bags at shopping centres) 2. Leicester Diabetes Risk Score⁷: The score identifies people who may be at high risk of diabetes or currently have undiagnosed T2DM using data on age, sex, BMI, ethnicity, family history of diabetes and hypertension. 3. Portable point-of-care blood testing machines for use in the community (Afinion⁸ machines were used in the pilot). 4. Referral form to Care Call service/Exercise for IGR. 5. Referral form to HIS if UI not co-located when a person is identified as potentially eligible. <p>Procedures:</p> <ol style="list-style-type: none"> 1. Members of the public were approached opportunistically and asked to answer selected questions from the Leicester Diabetes Risk Score, described to members of the public as a “lifestyle quiz”. This initial contact could also include height and weight measurements, depending on location and equipment available. Those scoring moderate-to-high (above 16) on the risk score were offered the opportunity to have a point-of-care HbA1c blood test. 2. If staff from the HIS completed the risk score or if they were co-located with UI staff who completed the risk score then the blood test took place immediately. If the HIS staff were not available then the UI team completed a referral form to arrange an appointment with a member of one of the HIS neighbourhood teams. 3. If the blood test shows the person to be eligible (score of 42-47 indicating high risk), they were referred to the Care Call service or Exercise. If they scored 48 or above they were referred to their GP, as this indicates diabetes.

Who provided?	<p>The HIS is part of Salford City Council. It includes eight neighbourhood teams and a workplace advisor. They also have community volunteers and networks of existing community links (for example with local exercise and weight loss groups, Sheltered Housing). All staff have completed level 2 public health training. They also perform NHS Health Checks⁹ and are qualified to perform point-of-care HbA1c blood testing.</p> <p>UI includes both paid and voluntary staff. Volunteers have received training in engaging members of the public. All paid staff and a high number of volunteers have received local “Making Every Contact Count” training, and have training from UI in social marketing and brief advice focused on behaviour change. They have a focus on creative approaches and using local people to help network into communities. Volunteers working on this specific pilot were given training through UI on diabetes awareness and prevention.</p> <p>Both services have experience of community engagement around health prevention and education, and existing networks of volunteers/community champions in the area.</p>
How?	<p>Identification occurred face-to-face through staff members being located in community settings and opportunistically approaching members of the public. This was done both individually and in group settings (for example attending Weight Watchers groups); although the risk scores were completed on an individual basis. The blood testing and referral discussion were also conducted individually.</p>
Where?	<ol style="list-style-type: none"> 1. Public locations for opportunistic identification, for example supermarkets, shopping centres, religious centres such as temples, offices and weight-loss group meetings. 2. Targeted locations, utilising prior community networks of the organisations, for example in sheltered accommodation, religious centres, exercise and weight loss groups. <p>Blood testing and waist circumference measurements were conducted privately if possible, although may be conducted in public.</p>
When and how much?	<p>Individuals were identified and received assessment once each, before being referred to diabetes prevention services. There is currently no recall service.</p>
Tailoring	<p>The questions asked were standardised. The specific process of engaging members of the public was adapted depending on the context and audience but involved opportunistic identification.</p>
How well?	<p>No formal assessment of fidelity was conducted. However, compliance with the risk assessment requirements and completeness of the referral information was assessed in terms of whether the referrals were acceptable to the diabetes prevention services. Referral processes were refined and improved during the study.</p>

3.5 Interview data for the community referral route

i) Implementation and acceptability to staff

The analysis revealed that perceptions of barriers to implementation were key to the acceptability issues for staff, and specifically barriers related to inter-agency working. These covered both issues with passing referrals from UI to HIS, and from HIS to Care Call. However, there was a shared perception that significant progress had been made in resolving process issues during the pilot, and that each organisation had been flexible and responsive in learning to work together.

Initial problems in data sharing were resolved during the course of the study through the proactive efforts of the HIS, UI and Care Call services to address problems with referral (for example referral forms being incomplete). It was evident that all the organisations had made efforts to increase communication and share feedback during the course of the project, which had helped overcome process issues.

“What's been useful is the meetings that we're having with [Care Call management] around this project because we've relayed that information and we've actually had people from Care Call attend and we've been able to [send queries] to them and say, you know, we want the feedback, and things. Steps have been taken to try to overcome all the issues that we've had, all these teething problems.” Community focus group 3

“On a personal level our relationship is good. We can talk about it and be open and frank with them about it, and they're honest about it and they'll come along to meet our staff and say look, I'll hold my hands up, I'm sorry that it's not working out. So we are trying to do our best with it.” Lead focus group 1

However, some tensions appear to have remained during the programme related to the sharing of work and HIS concerns regarding the feasibility of the volunteer model for supporting the work. HIS staff expressed concern that volunteers could not be expected to commit to supporting the programme or that not all were appropriately trained or prepared.

“Volunteers can come and go as they want. They might only want to attend for a couple of hours, whereas a staff member has to stay from 9:00[am] until 5:00[pm]. The volunteers that we've had unfortunately... I think they've struggled a little bit with some of the criteria and people that have been ineligible or, even under the age of 30 they've been sending people on the bus. So I've carried out and completed a form nearly to the end not realising they're actually under the age of 30... I've wasted quite a bit of time I think and resource.” Community focus group 3

UI staff reported that the significant amount of organisational work that was necessary to support volunteers was not always recognised by HIS. However, HIS staff expressed sympathy regarding the amount of support required to organise volunteers to attend sessions, but reported that they would have preferred to use and manage volunteers from their own community networks. This may also have overcome the problem of UI not having available volunteers in all areas covered by HIS.

“I think we would have had better results [more referrals] if...[we’d] carried out that engagement from the beginning and planned it in. We’ve had to sort of start the project knowing that we’re just doing the assessments and not doing the engagement part and then sort of halfway through realised we’re [needing to] go to our groups...now we’re sort of getting an influx of people through.” Community focus group 3

The original intention was for both HIS and UI to conduct all stages of the process independently, but time delays (which prevented UI staff or volunteers from attending necessary training on use of the pinprick test equipment) led to a compromise where UI would instead refer eligible members of the public to HIS for blood testing. Co-location of the two services was seen as a potentially efficient approach, reducing additional opportunities for drop out, as members of the public could be referred directly to HIS at that same time and place. Although not the ideal model, this was seen as drawing on the complementary relative strengths of each service and likely to be feasible given their previous history of working together around NHS health checks.

“...initially, we saw both teams fulfilling both roles, because of the time pressures, it didn’t actually work out that both teams did fulfil both roles and it ended up with Unique doing what they do best, which was the engagement part and Health Improvement Service doing the testing part and one leading to the other, but actually, in those initial stages, our suggestion was that Unique were trained to do the testing, it just became that there were barriers that we had to get through to reach that point and we needed to get them working on it...once you start something and people assume those roles, then it, you know, becomes difficult to take them out of those roles.” Lead 1

There appears to have been a perception within the two services that co-location was the *“the preferred model of delivery”* (Lead 2) by the commissioners of the service, in contrast to the quotation above which demonstrates that commissioners did not consider this the optimal delivery. The aim was to achieve collaboration and pooling of resources and skills, rather than specific co-location, and developing this in the most effective way was part of the remit of the work.

“The first KPI in their spec is to work collaboratively to do a joint delivery plan and they do, they have meetings where I’m not involved where they’re looking at what’s planned and they’re reviewing what’s happened” Lead 1

The emphasis in the interviews on the difficulties of co-location and the perceived duplication of work may reflect each organisation’s preference for a single funding model (whereby either service would be commissioned to complete the work alone and correspondingly receive the full amount of funding, as opposed to dividing funding between the services and consequently each service perceived themselves to be “sharing” the overall funding with another organisation). Service commissioning leads themselves acknowledged that a single organisation would have been easier to manage, but that this would not have helped achieve crucial goals for partnership working which drove the decision to operate a joint-funding model.

“If you’ve one provider...it’s just one lot of management then...[but] we wanted them to work collaboratively, because going forward we want them to work collaboratively on other things...it should be about partnership working, whoever the services are, because the whole thing about public health, it’s not looking at something in a silo, but looking at all the things surrounding it to influence it and therefore you need different services working together to do that.” Lead 1

Co-location was nevertheless evidently a source of tension between the services, rather than achieving the hoped-for merging of skills. It was evident from the interviews that, if the service was re-commissioned, co-location as a model of collaboration for these two organisations should be avoided. For example, each service reported that their skills and potential for engagement in/delivering the work they were undertaking was compromised by the perceived lack of a mandate for them to operate independently and utilise their own networks and individual ways of working. Specifically, HIS felt that their existing strengths in community engagement were not being utilised (and that they needed to rely on these links to work effectively), while UI workers expressed a desire to be able to do the full assessments so they could work more flexibly and work beyond HIS defined areas, as often they did not have volunteers in areas that corresponded with the HIS neighbourhood team locations. The need to co-ordinate clients between two services very early in the pathway also introduced an additional risk of drop out compared to a single organisation both engaging and assessing members of the public. These difficulties were partly attributed to the lack of lead-in time on the project which would have enabled HIS and UI to co-ordinate plans more effectively. However, they also reflect the difficulties of inter-agency working, especially in a context of shared funding.

“In the early days it had teething issues but it doesn’t surprise me because you have a staff team to get involved in a process which has only been developed several weeks beforehand. In the early days I think there were a few teething issues but they’ve been smoothed out and my understanding is everyone’s singing from the same hymn sheet.” Lead 1

“When we’re working together it’s really important that we know what they want but it’s also very important for them to tell us what they want because we’ll have worked with six other [HIS] teams across the city that might do it different. So going forward we can make...we know what to look out for now but it has been a lot of learning.” Community focus group 1

“I think communication and an understanding of people’s roles, and an understanding of how people fit in, into the whole process, I think that was our kind of key.” Lead 2

This was also expressed by participants from within the organisations as a desire for more explicit steering input from the service leads to help overcome these difficulties, although, as described earlier, the two organisations had specifically been commissioned to achieve partnership working and they had a prior history of doing this successfully. The leads acknowledged, however, that achieving this had been particularly difficult in this case.

“They’re trying to hit that target in a very tight timeframe... it’s even been difficult, I think, for those two providers [who have worked together previously], mostly because of the intensity and capacity, you know, all having to get going really quick.” Lead 1

Both HIS and UI felt that there had not been enough steering input at the planning stages of the pilot, while commissioners and leads reported involving all stakeholders in planning. This contrast of views likely reflects the shortened time for planning in the early stages of the pilot, which was not commensurate to the complexity of the hoped-for collaboration. The situation was exacerbated by tensions due to the challenges of implementing an innovative community referral process, leading to a desire from the services for more explicit steering support. Such problems reflect the complexity of supporting multi-agency working, particularly against a backdrop of funding cuts

The lack of lead-in time meant that there were elements of the service which were disjointed. For example, it was apparent that each agency on the pathway had begun to collect and record data relating to their own work early on in the process. However, the data was not properly integrated between agencies on the pathway. Work was done retrospectively to address this but required considerable resource to achieve it, and resulted in only partial resolution of this issue.

“At the very early days those relationships weren’t there...I think not every stakeholder was aware of and involved in the planning and discussion of the actual pilot in Salford. [I] personally didn’t get my head round Care Call until much later into the pilot... We got there eventually.” Lead 2

The two organisations did make considerable effort to improve their collaborative working over the course of the project. The local NDPP Steering Group recognised the need for closer operational working between all partners, and a specific NDPP operational group meeting was established (first meeting 18/01/2016). The operational group meeting certainly appeared to serve its purpose, as leads from each agency demonstrated an increasing willingness to support each other in a more collaborative approach as boundaries were broken down. The uncertain, continuous and perhaps evolutionary development of the ‘demonstrator’ site remit and requirements, as part of the wider national context resulted in the Steering Group often having to adapt and make decisions within a changing environment. Consequently it could be argued that the perceived lack of communication and short lead times, are not a result of the limited involvement of the Steering Group, it was because this message, direction and development of the service(s) was constantly being developed by the national NDPP team which is inherent of the ‘demonstrator’ status of the service.

ii) Perceived benefits

There was strong consensus across all participants that community referral was essential for reaching beyond typical populations of patients registered with GPs (or who are registered but do not respond to invitations to health checks and other screening), and particularly for reaching out to more vulnerable or neglected populations. This is also covered in section 4 (from page 27), reporting the analysis of service data.

“I think the biggest advantage is because we know where the vulnerable people are, we know where the hard to reach people are, the people that don’t always go to their

GP or to the hospital or see a medical professional. For example, we go to the Windsor Centre for the homeless.” Community focus group 3

“We’ve done lots of work where we’ve tried to get into the poorest parts of the city because they’re the people who are going to be suffering lowest health inequality, so we’ve made a big effort to get into the Jewish community, the BME communities...you’re accessing people who maybe haven’t accessed primary care in the last few years and haven’t got results there waiting on a GP system.” Lead 4

The social marketing methods employed were also perceived by respondents to be more engaging than typical health messages and it was suggested that they helped in raising broader community awareness.

“I think all of the promotional material that they had, that was a really positive thing, because obviously it’s there, it’s in your face all the time. And it was quirky rather than oh, here’s the standard...there’s a doctor on the front of the leaflet with a stethoscope.” Community focus group 2

“I think the marketing has worked really well, so we’ve put the ‘kNOw diabetes’ on to the ‘way2wellbeing’¹⁰ website at the start of the year and there was a dramatic increase in the number of visits to the ‘way2wellbeing’ website and the majority of them were through the ‘kNOw diabetes’ page, so not only did it generate hits to the ‘kNOw diabetes’ page, but it generated traffic to the other pages within the ‘way2wellbeing’ site.” Lead 3

“We’ve thought about things like social marketing campaigns and that’s been useful...that’s been helpful because it on some level preps the community. It’s visible. Even if somebody hasn’t stopped and taken note, it’s background noise if you like.” Lead 1

iii) Perceived risks

The main perceived risk of the community referral method, which again was consistent across all interviews, concerned the volume of contacts required to achieve the necessary number of referrals, given the low conversion rate into eligible referrals. The services were actively attempting to manage this through both increasing the overall numbers identified, by targeting areas with significant ‘footfall’, and also targeting specific populations or groups which were more likely to generate eligible referrals.

“I did think we would have hundreds of people, but in fact you haven’t. And when sometimes... You think God, oh, they’ll easily hit the target and you tot the score up and they don’t. So it is quite hard to find them. I thought we’ll easily find people. But no, unless you’re targeting those specific areas of different ethnicities and older people, I think we’ve struggled. So to me I would probably use a targeted approach if it carried on.” Community 3

The quote above demonstrates that the urgent need to increase referrals may have led to a focus on areas of high footfall which obscured the requested focus on high risk areas through a targeted approach.

Participants also felt that even if the conversion rate was low, there was a greater impact occurring around educating people who were on the threshold and in raising public awareness.

“We have to see an awful lot of people and test an awful lot of people to get 6% referred. But in a way, I suppose, that’s a good thing because then we’re finding that one person out of your 17 people was on the way to getting diabetes, but then for the other 16 they’ve all had interventions on healthy eating...we give them really good in-depth diet advice and telling them to do more exercise...it’s still a good thing to do because you can still single out those special clients that need that little bit more help.” Community focus group 3

“The community team are starting way before [a primary care sample], they’re just talking to ordinary people in the street that then have to have a risk score done, and then not all of those will have high-moderate, and then not all of them will have NDH; so they’re starting way up-line...it’s more about raising awareness in the community and almost kind of trying to put in some prevention before people get NDH.” Primary focus group 1

iv) Perceived acceptability to members of the public

The fact that community workers were not clinical staff was not perceived to be an issue, as it was rarely brought up by members of the public. This view contrasts with those provided by primary care staff who were interviewed (see section 3.2.v). The link of HIS with NHS Health Checks was also thought to add some reassurance for members of the public that the teams were qualified to discuss health issues, as it was perceived that GPs had approved them as service providers.

“I think for the NHS diabetes checks, because we’re saying it’s a pilot programme, it’s done by Public Health and NHS England, they accept that quality standard that goes along with the NHS.” Lead 4

Community workers in both HIS and UI felt that members of the public were more comfortable being approached by non-clinicians, as being approached by peers or non-clinicians was less intimidating, and the workers and volunteers had more time to discuss the process with them. The fact that results could be provided immediately was also perceived to be appealing.

“They absolutely love it. They see it as innovative. They see it as different...it’s not as formal as being in a GP practice [and]...we make people feel at ease...A lot of the reason people don’t access GP surgeries is they don’t want to go into that medical clinical environment.” Lead 4

“Because people are more likely...disclosing something to me that they might not necessarily think to make an appointment and go and see a GP, or speak to a practice

nurse about. I think it, kind of, allows somebody to get some good quality information and have somebody who would just say to them, quite warmly, you know what, just get that checked out, just get it checked out and put your mind at rest. And that's what the volunteers are able to do." Lead 2

The topic of diabetes prevention was considered to be an issue that fitted well with a community strategy.

"Quite [a lot] of people have got relatives with diabetes so they know how important it is to be tested. A lot of them didn't know how to go about being tested. So yeah, a lot of them are doing it...they're glad that they've been asked. I actually think trying to catch people and engage with people around the subject of diabetes is a lot easier than just going out and doing a general health stand." Community focus group 3

There was some frustration among those we interviewed that, during the period of the study, there were delays between being referred and people being seen by Care Call. The delays were due to there being insufficient capacity within the Diabetes Team to conduct 'Action Planning Calls' with the expanded number of referrals. Soon after the completion of the research interviews, the responsibility for the 'Action Planning Calls' was transferred to health advisors within Care Call, and additional staff were recruited.

v) Resources needed to replicate the model elsewhere

To deliver the community referral model elsewhere, two resources in particular were emphasised. Firstly, having organisations with rich contextual knowledge of the community and established relationships. Secondly, staff with some experience of NHS assessments, as having undertaken NHS Health Checks meant that HIS staff were comfortable with performing the assessments and already had the necessary training and governance arrangements (which limited the ability of UI to perform the full assessments themselves.)

"I think that is vitally important in the planning, that we're neighbourhood based, we know our areas, we know the people that live in the areas and we can target the right people." Community focus group 3

"Know your community I think more than anything, you've got to know the people, either know your community in general or even if you just know a couple of people, like we said, we've been to groups, if you're quite friendly with a group leader and they can get the rest of that group onside." Community focus group 4

"The staff are very experienced to do that because we've obviously historically been doing the NHS Health Checks...We're aware of services that are available and staff feel confident to be able to signpost people to the right sort of places." Community focus group 3

The challenges of referring opportunistically from an open community setting into closed clinical systems and to staff who are used to having access to NHS records should also be acknowledged and prepared for if the model is to be adopted elsewhere, as identifying people outside of typical clinical settings may require compromises in the level of data that can be provided.

[Clinical services] don't understand what it's like when you go out with these people or in these communities and they're not accessing any sort of primary care, a lot of the time they don't know their postcode, there's language barriers, there's literacy barriers, and they expect them to know their NHS number. When you're coming from that closed system and you're not out there dealing with the public...that was a completely unrealistic thing to expect. Lead focus group 1

However, this was seen by some as demonstrable evidence that the community approach enabled access to hard-to-reach groups outside of the boundaries of those people more likely to access clinical services themselves.

"Care Call initially responded saying that it was a real difficulty that the patients didn't have their NHS number and for some they just couldn't find their NHS number. I felt that was a reflection that we were getting the right people, because it shows that it's people who perhaps aren't even aware who their GP is." Lead 3

vi) Suggestions for improvement

It was suggested that a recall system, making available the option of being retested by HIS at a later date, could be useful, especially for people who scored just under the risk threshold. This may increase identification into Care Call for those who later score above threshold, or may be helpful to identify if the general health advice given had made an impact.

HIS felt that investment in an electronic referral system for referring into Care Call (and SCL) would be worthwhile. An electronic recording system could minimise the potential for errors, encourage consistency of reporting, increase the speed of referral and potentially enable greater integration of clinical systems.

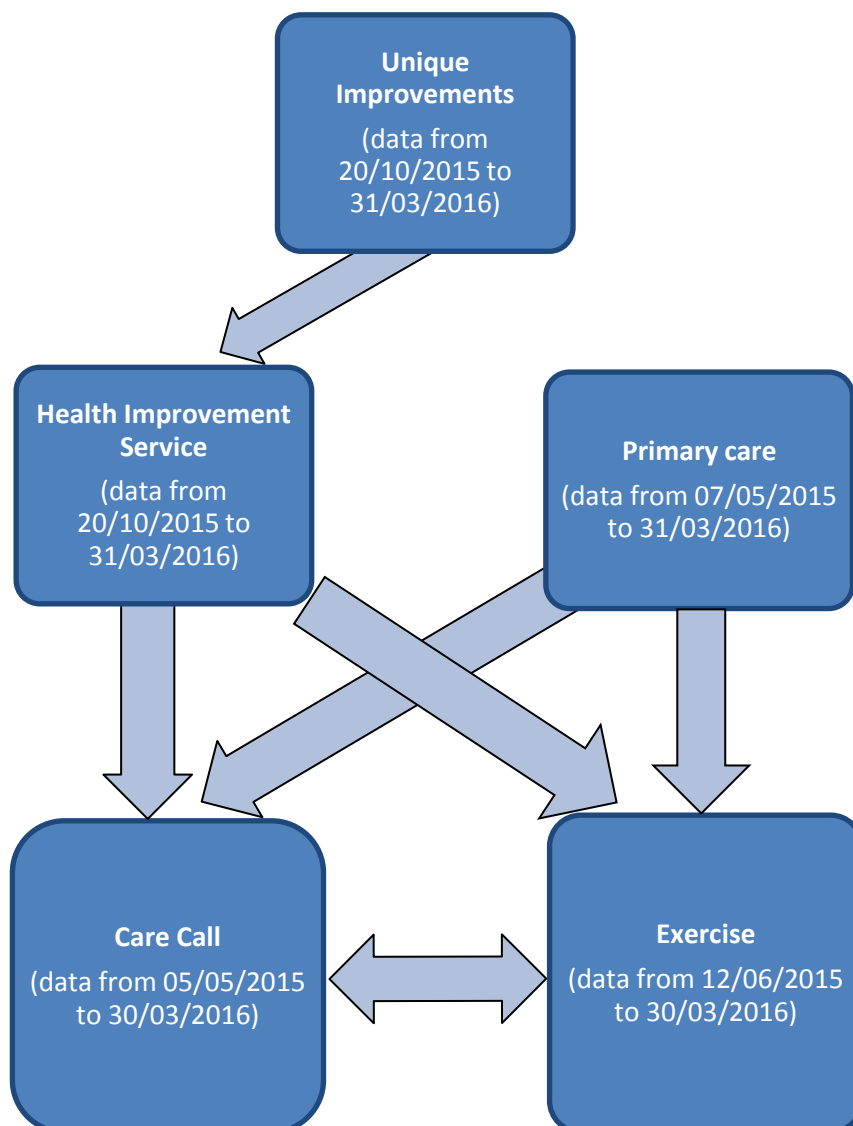
"We're almost doing these on an industrial scale now, which is great, and it's a really worthwhile piece of work for everybody...but we're working on a really archaic system. We make it as efficient as we can, but using pen and paper is just old." Lead focus group 1

Section 4 – Quantitative research: Identification of people with NDH and referrals into Salford IGR Care Call and Exercise for IGR

4.1 Data presented here

This report is based on individual level data that has been collected by each agency on the NDH pathway and passed to the research team in anonymised format.

Figure 1: Data sources and flowchart of pathway activity



4.2 Summary of community activity: risk scores, testing and referral

During the recruitment campaign, staff and volunteers from UI and HIS worked alongside one another, often in joint initiatives and at the same venues. We therefore expect that there will be double counting: some people who were approached by HIS will already have been approached by UI, and some people will have had risk scores done by both organisations. We have no way of estimating the extent of the double counting. So, we summarise the numbers seen by both organisations using a range, with the lower number being the total if there was complete double counting, and the higher number being the total if there was no double counting (table 2).

Table 2: Summary of risk scores, testing and referral rates

Action	UI	HIS	Combined
Approached	892	Not known	Not known
Diabetes risk score done	214	1,162	1,162 to 1,376
HbA1c test done	n/a	746	746
• Normal		657	657 (88%)
• NDH		71	71 (10%)
• Diabetes		18	18 (2%)
Referrals:			
• Care Call	n/a	40	40 (5%)
• Exercise	n/a	24	24 (3%)
• both	n/a	2	2 (<1%)
• GP	n/a	16	16 (2%)

(% of tests done)

Approached: UI approached 892 people. We don't have a record of how many people were approached by HIS.

Diabetes risk score: The combined number who received a diabetes score was between 1,162 and 1,376.

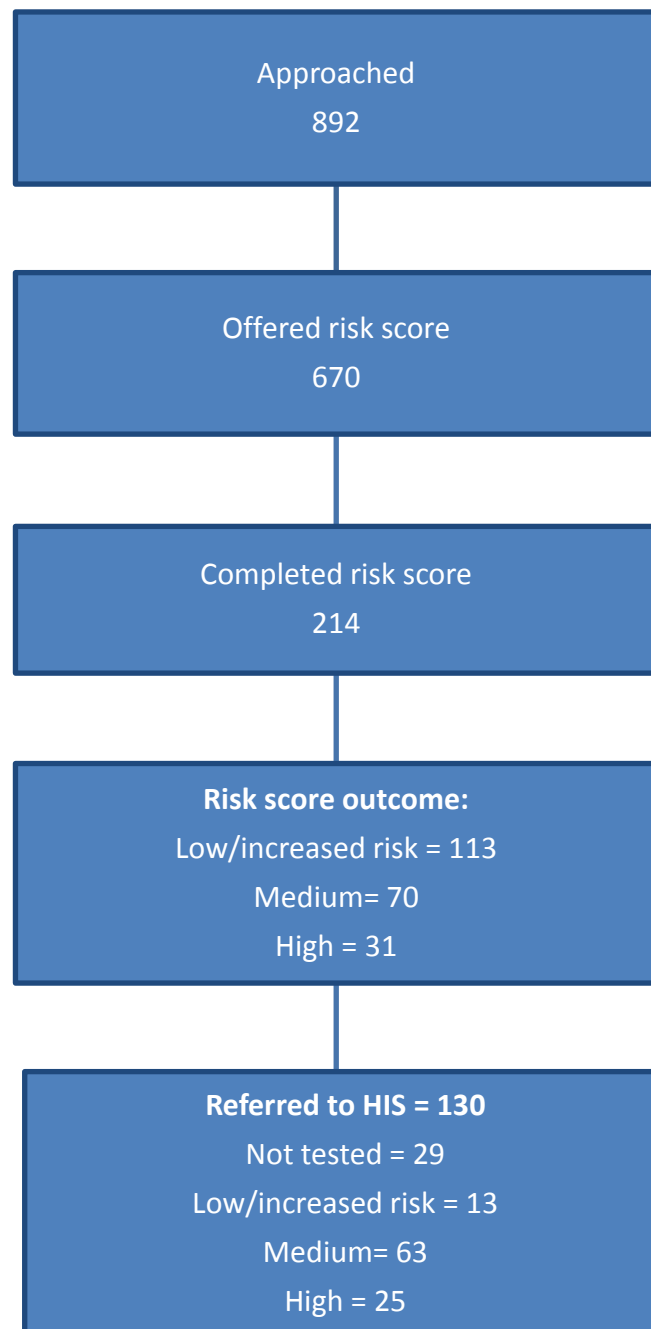
HbA1c test: The combined number who received an HbA1c test was 746, which is between 54% and 64% of those who completed a diabetes risk score.

HbA1c test results: The number of people with an HbA1c results indicating NDH was 71, which is between 5% and 6% of those who completed a diabetes risk score.

Referrals to diabetes prevention programme: The combined number of people who were referred to a diabetes prevention programme (Care Call, Exercise or both) is 66, which is between 5% and 6% of those who completed a diabetes risk score.

4.3 Unique Improvements

Figure 2: UI – flowchart of activity



Diabetes risk scores

Staff and volunteers from UI spoke to 892 people in Salford as part of the 'Give Diabetes the Finger' initiative. They offered a diabetes risk score⁷ to 670 people (75% of those they spoke to), and of these, 214 people took up the offer of completing a risk score (32% of those they spoke to).

The diabetes risk score has four categories: low risk, increased risk, medium risk, and high risk of developing T2DM. Both medium and high risk scores indicate that further investigation is warranted. Among the 214 people who completed the risk score (see figure 2):

- 113 (53%) scored low/increased risk;
- 70 (33%) scored medium;
- 31 (14%) high.

In total, 101 people (47%) scored medium or high, suggesting that they should be referred to HIS for a blood test.

Referrals to Health Improvement Service

UI referred 130 people to HIS for further information and investigation. Of these 130 (see also table 3):

- 29 (22%) had not had a risk score undertaken;
- 13 (10%) were low or increased risk;
- 88 (68%) were medium or high risk.

It is unclear from the data why people without a risk score or with a low risk score were referred to HIS, but the two teams were often co-located, so it may be the case that people were referred to HIS in order to find out more about diabetes, rather than simply to have a blood test.

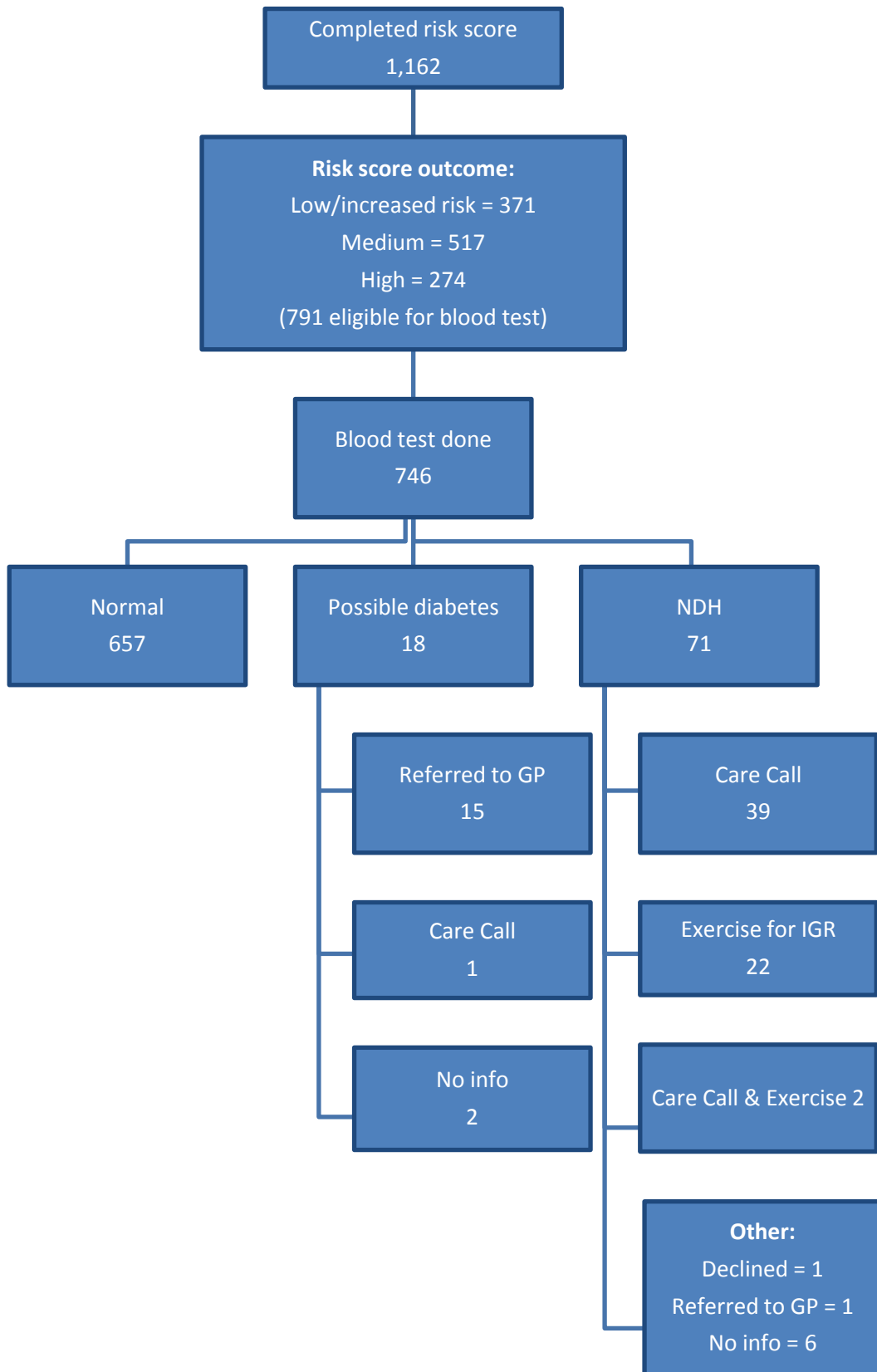
Referrals were made for 90% of those who were at medium risk and 81% of those at high risk.

Table 3: UI - diabetes risk scores and referrals to HIS

Diabetes risk score category	Number with risk score (% of total)	Number referred to HIS (% of those with risk score)
No risk score done	456 (68%)	29 (6%)
Low/increased risk	113 (17%)	13 (12%)
Medium risk	70 (10%)	63 (90%)
High risk	31 (5%)	25 (81%)
Total	n = 670	n = 130 (19%)

4.4 Health Improvement Service

Figure 3: HIS – flowchart of activity



Diabetes risk scores

Staff from HIS recorded contact with 1,163 people, and completed a diabetes risk score for 1,162 of them. The number of people they approached is likely greater than this number, but data on approaches were not collected until January 2016: an internal report from HIS estimates the number approached as 6,427 between October 2015 and May 2016.¹¹ HIS staff recorded how people had heard about the diabetes testing service, as shown in table 4. Most people were recorded as having heard about the service from HIS (82%) or other local authority sources (2%). Only 39 (3%) were recorded as being referred by Unique Improvements. The two services were often co-located, which would likely dilute the distinction between the two organisations for a member of public. From all the information provided to clients on first contact, an organisational name is easily overlooked or forgotten. It is likely that more people were first seen by UI, but without being recorded.

Table 4: How did people hear about the HIS diabetes testing service?

How people heard about the diabetes testing service	Number (% of total)
HIS	957 (82%)
UI	39 (3%)
Salford City Council	26 (2%)
Other	6 (1%)
Missing	135 (12%)
Overall total	n = 1,163

Among the 1,162 people for whom the HIS completed a diabetes risk score, 371 (32%) scored low/increased risk, 517 (44%) scored medium and 274 (24%) high. In total, 791 people (68%) scored medium or high, suggesting that they should be offered a blood test (table 5 and figure 3).

Blood tests

Blood tests were completed for 746 people. Of these:

- 740 (99%) were for people who had scored medium or high in a risk score
- 6 tests (1%) were for people at low/increased risk.

Blood tests were completed for 90% of those who were at medium risk and 99% of those at high risk (table 5). There were 51 people with a risk score of medium or high that were not given a blood test: no reasons for this are included in the data. Possible reasons include: some people may have got lost in the system between having a UI score and attending for a HIS blood test, others may have declined to take the test, or there may be errors in data recording.

Table 5: HIS - diabetes risk scores and HbA1c blood tests

Diabetes risk score category	Number with risk score (% of total)	Number given blood tests (% of those with risk score)
No risk score done	1 (0%)	0 (0%)
Low/increased risk	371 (32%)	6 (2%)
Medium risk	517 (44%)	468 (90%)
High risk	274 (24%)	272 (99%)
Total	n = 1,163	n = 746 (64%)

Blood test results

A comparison of diabetes risk score categories and the outcomes of the blood tests are presented in table 6. Overall, of the 746 people who had blood tests done by HIS, 657 (88%) had normal blood results, 71 (10%) had blood results indicating NDH, and 18 (2%) had results indicating diabetes.

Among people whose risk score indicated a medium risk, blood tests identified that:

- 35 (7%) had NDH
- 8 (2%) had suspected diabetes.

Among those whose risk score indicated a high risk, blood tests identified that:

- 36 (13%) had NDH and
- 10 (4%) had suspected diabetes.

As expected, among those whose risk score was low, all six had normal blood tests.

Table 6: HIS – blood test results

Diabetes risk score category	Normal (% of those in risk category)	NDH (% of those in risk category)	Diabetes (% of those in risk category)
Low/increased risk (n = 6)	6 (100%)	0 (0%)	0 (0%)
Medium risk (n = 468)	425 (91%)	35 (7%)	8 (2%)
High risk (n = 272)	226 (83%)	36 (13%)	10 (4%)
Total n = 746	657 (88%)	71 (10%)	18 (2%)

Referrals for treatment and support

Overall, HIS referred people as follows (see table 7):

- 40 to Care Call,
- 24 to Exercise,
- 2 to both, and
- 54 to their GP.

Among the 71 people diagnosed with NDH, 63 (89%) were referred into one or more of the diabetes prevention programmes (39 to Care Call, 22 to Exercise and two to both services), as shown in table 7. Among the 18 people whose blood test suggested T2DM, 15 (83%) were referred to the GP and one (6%) to Care Call. Among the 657 people with normal HbA1c results, as expected, none were referred to diabetes prevention services. There are 32 (5%) people with normal results who were referred to their GP: we have no information on the reasons for this, but we assume it may be related to other health concerns. Among the 408 people for whom no HbA1c test was recorded, two (<1%) were referred to Exercise and 6 (1%) to their GP.

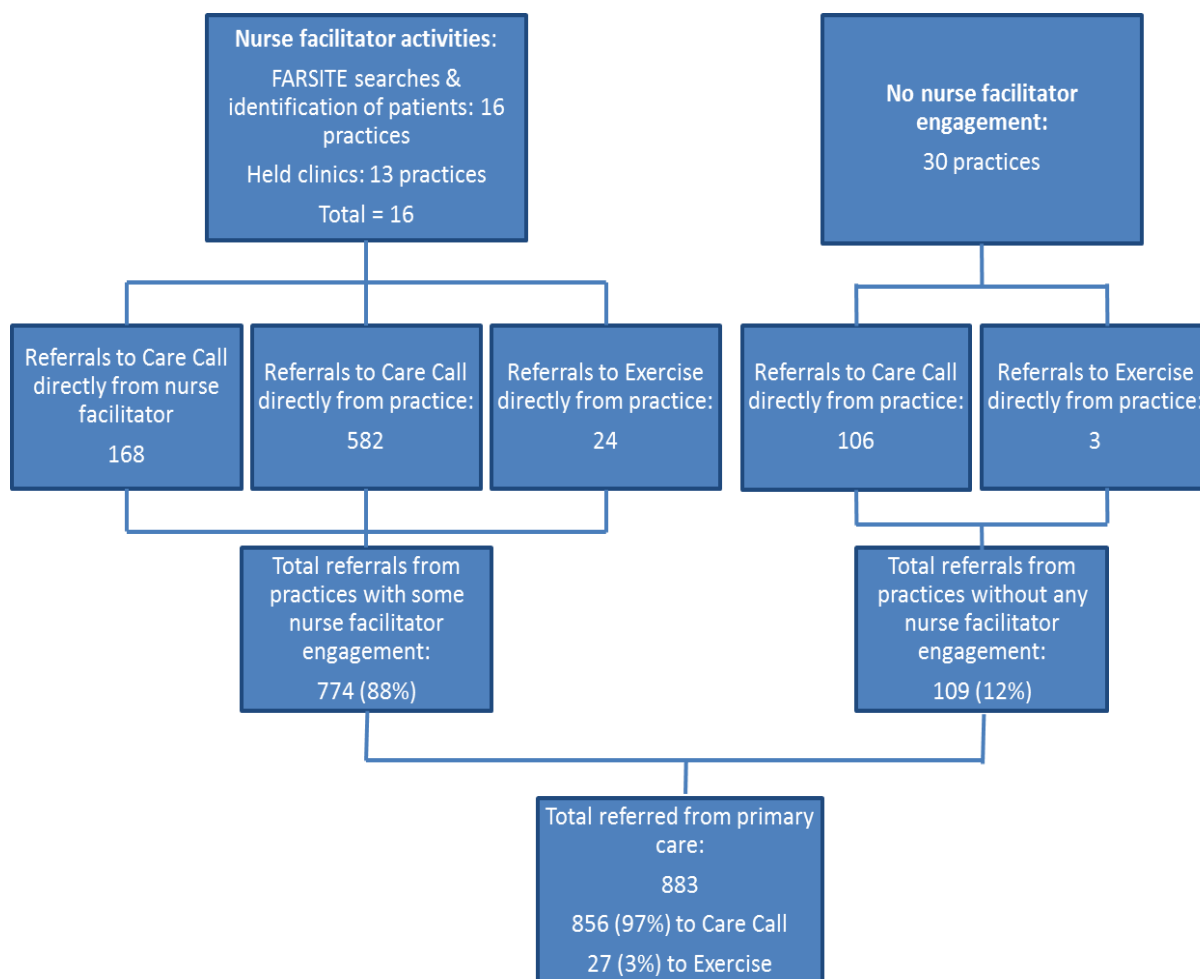
Table 7: HIS – Referrals to Care Call, Exercise and GPs

HbA1c blood test result (746 tests)	Care Call*	Exercise*	Care Call and Exercise*	GP	Declined	Not referred
NDH (n=71)	39	22	2	1	1	6
Diabetes (n=18)	1	0	0	15	0	2
Normal (n=657)	0	0	0	32	0	625
No test (n=408)	0	2	0	6	0	408
Total n=1,162	40	24	2	54	1	1,041

* In addition to these referrals from HIS, Care Call made referrals to Exercise – see table 10 and figure 6.

4.5 Primary care referrals

Figure 4: Flowchart of referral activity from primary care



As part of the enhanced referral service in primary care, a nurse facilitator was employed 0.4FTE to engage with primary care practices in NHS Salford CCG. Initial contact was established by hand delivery of information about NDH to every practice in Salford. Subsequently, those practices who responded were offered support from a nurse facilitator. The nurse facilitator talked to the practice about the diabetes prevention services, ran searches of practice registers to identify potentially eligible patients, checked eligibility against practice records and arranged clinic appointments to discuss referral to Care Call. How much of this support each practice received varied depending on the response of the practice and availability of the nurse facilitator, as the role was vacant for a short time during this period (see 3.2 for a fuller description of the support offered as part of the enhanced primary care referral route).

A nurse facilitator was successful in engaging 16 (35%) of the 46 practices. Searches to identify potentially eligible patients were run by the nurse facilitator in all 16 practices, and 13 out of those 16 also received dedicated clinic time where patients were invited into a clinic at which the nurse facilitator discussed referral to Care Call, as shown in figure 4.

In total 883 people were referred from primary care into the two diabetes prevention services. Of these 883 referrals from the primary care route, 774 (88%) came from practices where there had been some engagement with the nurse facilitator. The majority of the referrals, 606 (78%), were made directly into Care Call or Exercise by the practice staff, following searches or clinic support. 168 (22%) of referrals to Care Call were made by the nurse facilitator. No patients were referred straight to Exercise by the nurse facilitator.

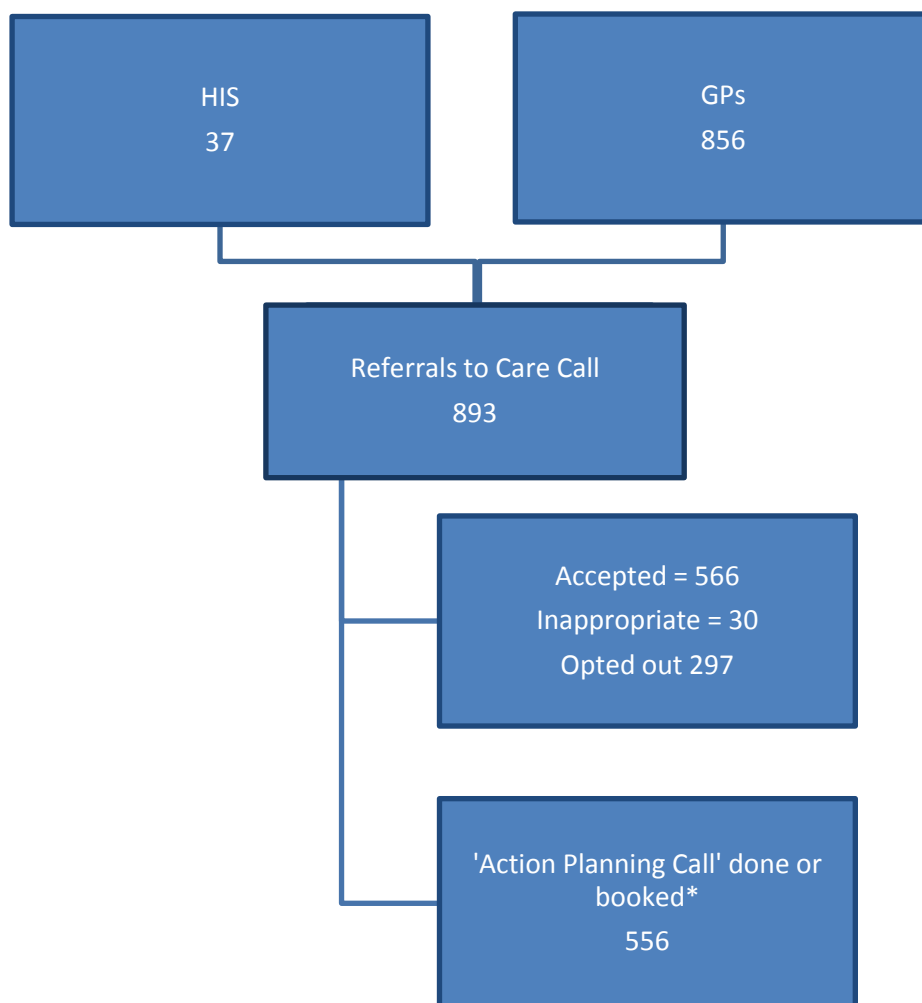
Of the 883 referrals overall, 856 (97%) were referred into Care Call, and 27 (3%) referred into Exercise.

The indication from this data is that the most productive route of referral into the Care Call and Exercise programmes is through direct referral from the practices themselves. However, this productivity is heavily influenced by practice engagement with the nurse facilitator.

A breakdown of the referral data by practice is available in Appendix 2.

4.6 Salford IGR Care Call

Figure 5: Care Call – flowchart of activity^{† #}



Notes:

[†]The Care Call data set covers a longer period than the HIS and UI data. For the first six months of the period covered, HIS had not started making referrals.

[#] The number of referrals received by Care Call varies slightly from the numbers reported in earlier sections as being referred in from HIS (39). This may be due to slightly different reporting periods, or to data errors.

*This includes 421 completed 'Action Planning Calls' and 135 booked for future dates

Source of Referrals

During the intervention period, 5th May 2015 to 30th March 2016, a total of 893 people were referred into Care Call. Care Call received referrals as follows (see table 8):

- 37 (4%) referrals from HIS,
- 856 (96%) from GPs.

Table 8: Care Call – outcome of referral, by source of referral

Source of referral	Number of referrals to Care Call (% of all referrals)	Referral outcome ⁺		'Action Planning Call' arranged or planned* (% of referrals)
HIS	37 (4%)	Accepted	16 (43%)	13 (35%)
		Inappropriate referral	2 (5%)	
		Opt out	19 (51%)	
Primary care referrals	856 (96%)	Accepted	550 (64%)	543 (63%)
		Inappropriate referral	28 (3%)	
		Opt out	278 (32%)	
All referrals	893	Accepted	566 (64%)	556 (62%)
		Inappropriate referral	30 (3%)	
		Opt out	297 (33%)	

*The total of 556 includes 421 completed 'Action Planning Calls' and 135 booked for future dates

Referral back to the GP

There was a high rate of referral back to the GP, over a third of all referrals. People were referred back at various stages along the Care Call pathway. Among the 302 who were referred back to their GP (table 9), the reasons they were referred were:

- 165 (55%) opted out,
- 106 (35%) could not be contacted or did not attend,
- 19 (6%) were inappropriate referrals (e.g. referral of someone with diabetes),
- 11 (4%) were not suitable because they could not take part in the programme (e.g. someone who could not speak English or was not able to commit for the full nine months of the programme).

It appears that everyone in these categories was referred back to their GP, including those who had been referred by HIS. A feedback loop to HIS was not included as part of the pathway, because HIS only have one off contact with clients.

Table 9: Reasons for referral back to GP

Reason	Number
Opt out	165
Cannot contact/did not attend	106
Inappropriate referral	19
Not suitable	11
Blank	1
Total	302

‘Action Planning Calls’

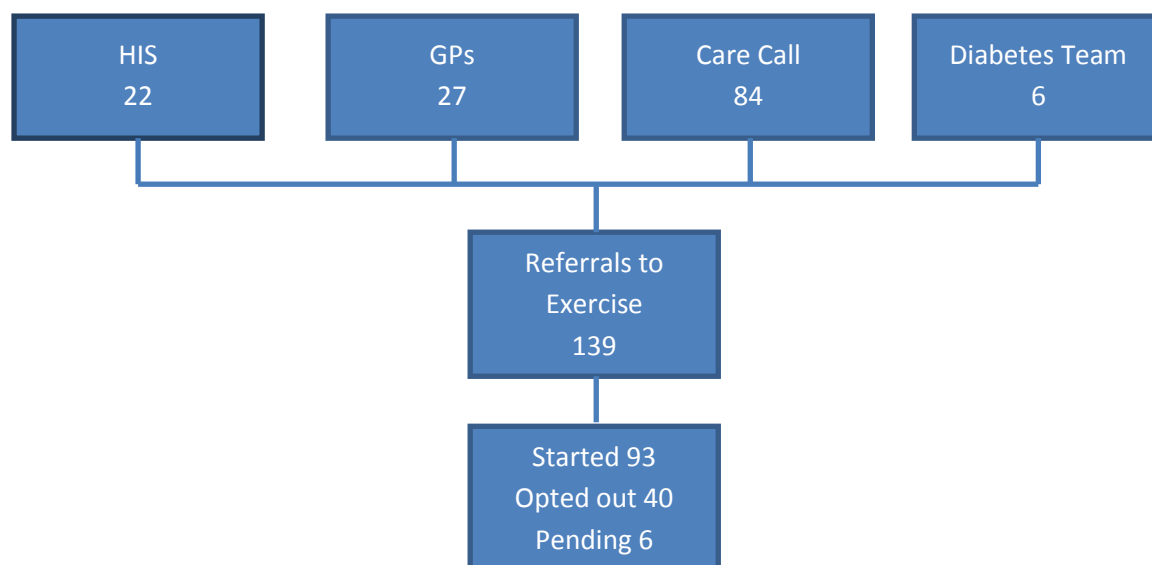
After a preliminary call to explain the service and ensure the person wants to proceed, an ‘Action Planning Call’ was arranged. The ‘Action Planning Call’, undertaken by the Community Diabetes team at SRFT, was a 30-40 minute telephone call with a diabetes nurse or dietician. The call includes: going through the diagnosis of NDH and what it means; discussion of recent blood test results and risk factors; encouraging the client to identify things in their lifestyle that they might want to change; developing goals and an action plan⁵. [Soon after the research data collection period, the responsibility for the ‘Action Planning Calls’ moved from the Community Diabetes Team to Care Call, which now provides the complete pathway].

‘Action Planning Calls’ had been completed or booked in for 556 (98%) of the 566 clients who were referred into Care Call. Of these 556 ‘Action Planning Calls’, 421 (76%) were dated prior to April 1st (when the data were supplied) and 135 booked in after. We assume from this that, out of 566 accepted clients:

- 421 (74%) ‘Action Planning Calls’ completed,
- 135 (24%) booked appointments,
- 10 (2%) awaiting appointments.

4.7 Salford Community Leisure's 'Exercise for IGR Programme'

Figure 6: Exercise – flowchart of activity[#]



[#] The number of referrals received by Exercise corresponds exactly with the referrals in the data from HIS (22) and GP practices (27).

Referrals

During the intervention period, 12th June 2015 to 30th March 2016, a total of 139 people were referred to Exercise. Referrals to Exercise were made from the HIS and from GP practices. In addition, referrals were made from Care Call. In table 10, we present referrals broken down by source. Exercise received referrals:

- 22 (16%) from the HIS,
- 27 (19%) from GP practices,
- 84 (60%) from Care Call, and
- 6 (4%) from the Diabetes Team.

Table 10: Exercise for IGR referrals, by source of referral

Source of the referral	Referrals to Exercise (% of all referrals)	Referral outcome (% of those referred)	
HIS	22 (16%)	Started Exercise	11 (50%)
		Opted out	10 (45%)
		Pending	1 (5%)
Primary care referrals	27 (20%)	Started Exercise	20 (74%)
		Opted out	4 (15%)

		Pending	3 (11%)
Care Call	84 (60%)	Started Exercise Opted out Pending	56 (67%) 26 (31%) 2 (2%)
Diabetes Team	6 (4%)	Started Exercise Opted out Pending	6 (100%) 0 0
All referrals	139	Started Exercise Opted out Pending	93 (67%) 40 (29%) 6 (4%)

Outcome of the referrals

Of the 139 referrals made to Exercise (table 10):

- 93 (67%) started with the service,
- 40 (29%) did not start,
- 6 (4%) were pending.

Among the 40 who did not start, seven said they were undertaking an alternative activity, ten were not interested or had insufficient time to attend, and 23 were not contactable or did not attend the first session.

4.8 Demographic data – Health Improvement Service

a) Individual characteristics

The HIS dataset includes demographic data, and we report this in table 11, comparing those with a risk score done by HIS and with those referred into the service. We can also compare with the population of Salford and the national population who completed NHS Health Checks.

The research team did not have access to demographic data on the clients referred by GPs, so we are unable to say whether the community route has targeted a different population to that seen in GP surgeries.

Table 11: Characteristics of people attending HIS, compared to Salford population and NHS Health Checks population

	HIS clients with a completed risk score	HIS clients referred to Care Call or Exercise	Salford population aged 30+ [#]	Health Check population*
Age group				
30-49	350 (31%)	10 (15%)	48%	(40-49) 34%
50-59	210 (19%)	11 (17%)	20%	(50-59) 32%
60-69	273 (24%)	14 (22%)	15%	(60-74) 34%
70 and over	305 (27%)	30 (46%)	17%	
	(n= 1,138)	(n= 65)	(n=144,475)	
Gender				
Male	408 (35%)	21 (32%)	51%	48%
Female	745 (65%)	45 (68%)	49%	52%
	(n= 1,162)	(n= 66)		
Ethnicity				
White	1,060 (93%)	53 (84%)	90%	86%
Other	76 (7%)	10 (16%)	10%	14%
	(n= 1,136)	(n= 63)		
	n= 1,162	n= 66		n= 214,295

*Population who completed NHS Health Checks¹¹

[#] Only includes the Salford population aged 30+. The total Salford population is 245,614. Source: Office for National Statistics population data 2015, supplied by Salford City Council Strategic Intelligence Manager

Age

In England and Wales the risk of T2DM rises with age¹². Compared to the Salford population (table 11) the risk scores were more likely to be completed with people in the older age groups, broadly similar to the age range of the NHS Health Checks, as might be expected if older people were being targeted. Referrals into Care Call were far higher among older people, with almost half of referrals (46%) aged over 70. This suggests it was fruitful to target the risk scores more towards older people.

Gender

Slightly more men than women in the UK have been diagnosed with diabetes: of those with a diagnosis of diabetes, 56% are men and 44% are women¹². Both the risk scores and the referrals show a large imbalance of women, who made up 65% of all risk scores and 68% of all referrals. This suggests it might be fruitful to target the risk scores more towards men.

Ethnicity

In the UK, people from South Asian and Black communities are between two and four times more likely to develop T2DM than people who are White¹². Of the population who completed risk scores, 7% were from a Black and Minority Ethnic (BME) background, which is lower than the proportion of BME in the Salford population (10%) (table 11). Among the referrals, the proportion of BME was higher (16%), as might be expected when some ethnic minorities are at higher risk of T2DM. This suggests that the risk scores were not sufficiently targeted towards ethnic minorities and that increased targeting in the future is likely to be fruitful.

b) Ward characteristics

The HIS data set includes information about the ward where people live, and we report this in table 12, comparing the number of risk scores completed per ward with the numbers referred into the service per ward. We can also compare with ward-level rank of Index of Multiple Deprivation¹³ and diabetes prevalence¹⁴.

Table 12: Risk scores and referrals by ward, compared to deprivation and diabetes prevalence[#]

Wards	Risk scores completed		Referred by Community		Conversion rate of risk score to referral	IMD rank [†]	Diabetes prevalence [‡]
	Count	Percent	Count	Percent	Percent	Rank	Percent
Irlam	148	12.7%	10	15.2%	6.8%	13	6.21%
Cadishead	147	12.7%	6	9.1%	4.1%	16	7.04%
Boothstown and Ellenbrook	75	6.5%	2	3.0%	2.7%	19	5.06%
Langworthy	74	6.4%	8	12.1%	10.8%	1	5.17%
Worsley	69	5.9%	1	1.5%	1.4%	20	5.69%
Winton	54	4.6%	4	6.1%	7.4%	6	7.21%

Swinton North	52	4.5%	2	3.0%	3.8%	12	6.4%
Barton	51	4.4%	5	7.6%	9.8%	5	5.40%
Eccles	50	4.3%	4	6.1%	8.0%	15	5.67%
Claremont	44	3.8%	3	4.5%	6.8%	18	4.39%
Pendlebury	43	3.7%	2	3.0%	4.7%	11	7.89%
Swinton South	40	3.4%	4	6.1%	10.0%	14	6.23%
Walkden South	38	3.3%	2	3.0%	5.3%	17	6.97%
Kersal	38	3.3%	1	1.5%	2.6%	9	5.32%
Ordsall	34	2.9%	2	3.0%	5.9%	10	3.97%
Walkden North	30	2.6%	2	3.0%	6.7%	7	6.46%
Little Hulton	30	2.6%	1	1.5%	3.3%	3	7.46%
Broughton	28	2.4%	3	4.5%	10.7%	2	6.44%
Weaste & Seedley	24	2.1%	1	1.5%	4.2%	8	6.19%
Irwell Riverside	21	1.8%	0	0%	0.0%	4	0%
Out of area~	48	4.2%	2	3%	4.2%		
Unknown~	24	2.1%	1	1.5%	4.2%		
Total	1,162	100.0%	66	100.0%			

Table ordered in descending order of the number of completed risk scores.

† Index of Multiple Deprivation. All 20 Salford wards are scored from 1 to 20, with 1 indicating most deprived and 20 least deprived¹³.

‡ Diabetes prevalence in Salford in people aged 17 and over¹⁴.

~ 25 (52%) of those who live out of area and 20 (83%) of those whose residency was unknown were registered with a Salford MP, and so were eligible for the diabetes prevention services in Salford.

Coverage of wards by the community campaign

Activity was undertaken in all Salford wards, indicating that the community campaign took place right across the city. However, there is a large variation in the number of completed risk scores. The highest number of risk scores was undertaken in Irlam and Cadishead, and between them those two wards account for a quarter of all the risk scores.

Deprivation

Deprivation is strongly associated with high levels of obesity, physical inactivity, poor diet, smoking and poor blood pressure control, all of which are linked to a high risk of developing T2DM. Targeting of risk scores to areas with the highest levels of deprivation is likely to be a fruitful way of identifying those at risk of T2DM¹².

The number of risk scores completed per ward is actually lower in the most deprived areas, compared to the more affluent areas: in the five most deprived wards (Langworthy 74, Broughton 28, Little Hulton 30, Irwell Riverside 21, Barton 51) the mean number of risk scores is 41 per ward, compared to a mean of 75 per ward in the five most affluent wards (Worsley 69, Boothstown and Ellenbrook 75, Claremont 18, Walkden South 17, Cadishead 147).

Referrals, as expected, tend to be highest in areas of high risk score completion rates. It is notable that in Langworthy, which is the most deprived Salford ward, and also one with a high number of risk scores completed, the conversion rate into referrals is high (8 out of 74 (10%)) as compared to the least deprived ward of Worsley (1 out of 69 (1.4%)).

It is important to note that we don't have data on the number of approaches made per ward: it is possible that engagement activity was actually focussed more evenly across the wards, or even targeted towards deprived wards, and staff found it more challenging to persuade people to complete risk scores. Despite this, the results suggest that further targeting of the most deprived wards could be considered.

Diabetes prevalence

Salford has a high rate of T2DM¹⁴: 15 out of 19 wards have a diabetes prevalence that exceeds the English prevalence rate of 5% (table 12). T2DM prevalence varies across the city, ranging from 4.39% in Barton to 7.89% in Pendlebury. Of the five areas with a prevalence of over 7% (Cadishead, Winton, Pendlebury, Walkden South and Little Hulton), only Cadishead saw very high levels of HIS risk score completion.

The results suggest that further targeting of the areas of high diabetes prevalence could be considered. However, as already highlighted, it is possible that engagement activity is already targeted on those wards, and staff have found difficulty in persuading people to complete the risk scores.

In the absence of any comparable data on the characteristics of people tested and referred from primary care, it is not possible to come to any conclusions on whether the targeting of the community risk assessments and referrals was any different from those in primary care. We cannot say whether the community teams reached a different group of people or not.

Section 5 – Key lessons

5.1 Community referral

Collaboration

Joint working between organisations was experienced as the most problematic aspect of the programme, but considerable improvements were made in terms of co-ordination and data sharing due to efforts of the services to increase communication between them. Initial problems in data sharing were also resolved during the course of the study. Staff from multiple organisations demonstrated flexibility and a willingness to adapt. The lack of lead-in time negatively impacted on efforts to organise collaboration, but these issues are also in part attributable to the nature of the pilot as a ‘demonstrator’ site and reflect both the delays and the changing demands associated with that status.

The community organisations had previously effectively worked together around NHS Health Checks, but the challenge of recruitment for the NDPP and the particular tensions of sharing funding across different models (specifically, a volunteer working model compared to a salaried staff service) appear to have made partnership work in this pilot more problematic. Consequently there was an expressed need for more explicit direction from the Steering Group to navigate these issues. These two organisations had been commissioned specifically to achieve collaboration and develop partnership working between them. The Operational Group was a useful forum, both for co-ordination of services, and as a source of information for service providers about the NDPP pathfinder activity. If it had been in place earlier, it could have contributed to better planning and organisation.

The decision to operate with a model of co-location due to time limitations, where engagement was conducted by UI and the assessments conducted by HIS may have had the unintended consequence of each service feeling unable to fully capitalise on their own skills. It is possible that UI and HIS may operate more effectively if each is able to perform independently (with engagement and then assessment conducted by each service), as originally intended when the service was commissioned. This would allow for each organisation to focus on areas and communities where they have established links and would avoid tensions around different models of working. Key informant interviews revealed that originally it had been intended for each service to conduct the full process themselves. The findings of the present study suggest that revisiting this original model may be beneficial and that UI would be open to overcoming these barriers. It was also recognised that this would provide more opportunities for the volunteers themselves to develop skills.

Reach

As part of the ‘Give Diabetes the Finger’ campaign, diabetes risk scores were completed with between 1,162 and 1,376 people in Salford, and of these, 746 people (54 to 64% of risk scores) went on to have a HbA1c blood test. There were 71 people whose blood test result indicated they had NDH, and 66 were referred into one of the two diabetes prevention programmes.

From the interviews, there was a shared perception from all respondents that the community route reaches people the primary care route would not usually pick up and may be especially helpful for reaching disadvantaged groups.

The people with whom the community campaign completed diabetes risk scores were a broad cross-section of age groups, with a slightly lower level of BME than the Salford population, and with a large imbalance of women. It would be fruitful in the future to introduce more targeting to older people, men and ethnic minorities. The analysis of the service data indicates that activity was undertaken in all Salford wards, right across the city, but with large variation in activity between the wards. The results suggest that further targeting on the areas of high deprivation and high T2DM prevalence should be considered. However, it is possible that engagement activity was actually focused more evenly across the wards, or even targeted on deprived wards, and staff found it more challenging to persuade people to complete risk scores. The qualitative data showed that at a commissioning level there had been an explicit expressed preference for targeting high risk areas. In practice HIS and UI reported focusing on volume of contacts (areas with high footfall) and also understandably drew on their existing community links, but this may have obscured the focus on areas with high deprivation. The additional pressure of limited time may have contributed to this, but the services themselves reported recognising over the course of the pilot that more focused targeting had a higher conversion rate (number of eligible contacts). This demonstrates that a targeted approach should be explicitly encouraged again in future community efforts.

The respondents nevertheless referenced wider impact in terms of increasing awareness and the potential preventative impact of providing health information to those on the border of the risk threshold. Members of the public were consistently reported to respond positively to the opportunistic methods. The fact this was part of a national campaign, endorsed by the NHS was seen as important.

Experience

To replicate the community model elsewhere, sites need organisations with significant community knowledge and experience, and also ideally some clinically-relevant experience (for example, having conducted NHS Health Checks), although both HIS and UI emphasised the benefits of non-clinical staff conducting the initial approaches. There needs to be awareness that receiving referrals through the community can be a challenge for clinical services, for example, as members of the public will typically not know their NHS number.

5.2 Primary care

Referral to Care Call

The enhanced primary care referral route was considered necessary given that GP surgeries, in practice, struggled to prioritise health prevention due to other demands. GP surgeries may still struggle to engage with the enhanced primary care referral route if they are not convinced it will save time or if they are unclear about the benefits of referral. Explicit messages from clinical leaders may be useful here to reassure practices about the support available and clarify the advantages of the system. In particular, interviews with practice staff suggested that they saw the benefit of Care Call, over their own interventions, to be the input from specialist diabetes nurses. Changes to Care Call, whereby the intervention is delivered solely by health advisors may mean the value is less obvious to practice staff and needs to be made clearer.

To replicate the enhanced primary care referral service elsewhere, the nurse facilitator needs to have a clinical background in order to implement the route, as well as tenacity and support from local leaders to persist in contacting practices and gaining access. Having a clinical background was perceived to give the professional more credibility in the eyes of primary care staff, which they felt would also apply to patients. Providing the clinic sessions within the patients' own practices was also emphasised as key to patient acceptability.

After clients have been referred to Care Call, there is a high rate of referrals back to GPs. Most of the people who are sent back to their GPs are those who are not interested or opt out. Steps that could be considered to improve the number of successful referrals include:

- Extension of the nurse facilitator role to all GP practices;
- Reduce the waiting time for starting with Care Call (steps are already in place to address this);
- Ensure that all GP practices are clear about what Care Call can offer, the process of referral and the information that is required;
- Consider an electronic referral process (an e-referral system is currently in development).

Limitations

Not all of the primary care staff interviewed had experienced the full facilitated service, and consequently we have limited data on the acceptability of the model from staff themselves. However, the interviews with all staff indicated the complexity of referral and the challenge of limited time and staffing resource to refer, which support the need for the facilitated service, and there was consensus regarding the benefits of the facilitated service to practices both from key informants and those who experienced the service.

Section 6 – Appendices

Appendix 1: The TIDieR (Template for Intervention Description and Replication) Checklist



Information to include when describing an intervention and the location of the information

Item number	Item
1.	BRIEF NAME Provide the name or a phrase that describes the intervention.
2.	WHY Describe any rationale, theory, or goal of the elements essential to the intervention.
3.	WHAT Materials: Describe any physical or informational materials used in the intervention, including those provided to participants or used in intervention delivery or in training of intervention providers. Provide information on where the materials can be accessed (e.g. online appendix, URL).
4.	Procedures: Describe each of the procedures, activities, and/or processes used in the intervention, including any enabling or support activities.
5.	WHO PROVIDED For each category of intervention provider (e.g. psychologist, nursing assistant), describe their expertise, background and any specific training given.
6.	HOW Describe the modes of delivery (e.g. face-to-face or by some other mechanism, such as internet or telephone) of the intervention and whether it was provided individually or in a group.
7.	WHERE Describe the type(s) of location(s) where the intervention occurred, including any necessary infrastructure or relevant features.
8.	WHEN and HOW MUCH Describe the number of times the intervention was delivered and over what period of

	time including the number of sessions, their schedule, and their duration, intensity or dose.
9.	TAILORING If the intervention was planned to be personalised, titrated or adapted, then describe what, why, when, and how.
10.	MODIFICATIONS If the intervention was modified during the course of the study, describe the changes (what, why, when, and how).
11.	HOW WELL Planned: If intervention adherence or fidelity was assessed, describe how and by whom, and if any strategies were used to maintain or improve fidelity, describe them.
12.	Actual: If intervention adherence or fidelity was assessed, describe the extent to which the intervention was delivered as planned.

Appendix 2: Referrals to Care Call and Exercise from primary care practices

Practice	Practices where nurse facilitator completed record searches	Practices where nurse facilitator completed clinics	Referrals direct from Nurse Facilitator (Care Call)	Referrals direct from practice (Care Call)	Referrals direct from practice (SCL)	Total referrals from practice
Practice 1	N	N	0	3	0	3
Practice 2	N	N	0	5	0	5
Practice 3	Y	Y	2	32	0	34
Practice 4	Y	Y	0	8	1	9
Practice 5	N	N	0	0	1	1
Practice 6	N	N	0	0	0	0
Practice 7	N	N	0	7	0	7
Practice 8	N	N	0	7	0	7
Practice 9	Y	N	0	14	0	14
Practice 10	N	N	0	3	0	3
Practice 11	N	N	0	0	0	0
Practice 12	N	N	0	12	0	12
Practice 13	Y	Y	3	63	1	67
Practice 14	N	N	0	0	0	0
Practice 15	N	N	0	0	0	0
Practice 16	N	N	0	1	0	1
Practice 17	N	N	0	0	0	0
Practice 18	N	N	0	0	0	0
Practice 19	N	N	0	0	0	0
Practice 20	N	N	0	0	0	0
Practice 21	Y	Y	18	38	2	58
Practice 22	Y	Y	11	3	0	14
Practice 23	Y	N	0	111	0	111
Practice 24	N	N	0	0	0	0
Practice 25	N	N	0	18	0	18
Practice 26	N	N	0	5	0	5
Practice 27	Y	Y	13	34	3	50
Practice 28	N	N	0	0	0	0
Practice 29	Y	N	0	26	1	27
Practice 30	N	N	0	6	0	6
Practice 31	N	N	0	0	0	0

Practice 32	Y	Y	10	26	5	41
Practice 33	N	N	0	1	0	1
Practice 34	N	N	0	9	1	10
Practice 35	Y	Y	15	5	0	20
Practice 36						
Practice 37						
Practice 38	Y	Y	14	18	0	32
Practice 39	N	N	0	2	1	3
Practice 40	Y	Y	28	46	6	80
Practice 41	N	N	0	5	0	5
Practice 42	Y	Y	17	26	3	46
Practice 43	Y	Y	21	105	1	127
Practice 44	N	N	0	1	0	1
Practice 45	N	N	0	21	0	21
Practice 46	Y	Y	16	27	1	44
TOTALS	16	13	168	688	27	883

Section 7 – References

- ¹ NHS England, National Diabetes Prevention Programme.
<https://www.england.nhs.uk/ourwork/qual-clin-lead/diabetes-prevention/>
- ² Diabetes UK. The cost of diabetes report. 2014.
- ³ Yates T. et al. The role of physical activity in the management of impaired glucose tolerance: a systematic review. *Diabetologia*, 2007. 50(6): p. 1116-1126
- ⁴ Hamman, RF. et al. Effect of weight loss with lifestyle intervention on risk of diabetes. *Diabetes Care*, 2006. 29(9): p. 2102-2107
- ⁵ Cotterill S et al. Evaluation of the National Health Service Diabetes Prevention Programme Demonstrator Site in Salford – Report 1: Understanding the Salford IGR Care Call Service Model. 2016. <http://clahrc-gm.nihr.ac.uk/our-work/exploiting-technologies/national-diabetes-prevention-programme/> [accessed on 16/12/2016]
- ⁶ Hoffmann TC, Glasziou PP, Boutron I. et al. Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide. *The BMJ*. 2014; 7
- ⁷ Gray, L. J., Taub, N. A., Khunti, K., Gardiner, E., Hiles, S., Webb, D. R., Srinivasan, B. T. and Davies, M. J. (2010), The Leicester Risk Assessment score for detecting undiagnosed Type 2 diabetes and impaired glucose regulation for use in a multiethnic UK setting. *Diabetic Medicine*, 27: 887–895. doi: 10.1111/j.1464-5491.2010.03037.x
- ⁸ <http://www.alere.com/en/home.html> [accessed on 19/07/2016]
- ⁹ Robson, J., Dostal, I., Sheikh, A., Eldridge, S., Madurasinghe, V., Griffiths, C., . . . Hippisley-Cox, J. (2016). The NHS Health Check in England: an evaluation of the first 4 years. *BMJ Open*, 6(1). doi: 10.1136/bmjopen-2015-008840
- ¹⁰ way2wellbeing. <https://www.way2wellbeing.org.uk/> [accessed on 19/07/2016]
- ¹¹ SHC and HIS Joint Provider Report 2 – 31 May 2016. Presented to Salford NDPP Steering Group meeting 30 June 2016
- ¹² Diabetes UK: Facts and Stats. November 2015.
https://www.diabetes.org.uk/Documents/Position%20statements/Diabetes%20UK%20Facts%20and%20Stats_Dec%202015.pdf
- ¹³ Salford City Council (2015)
https://www.salford.gov.uk/media/388062/index_of_multiple_deprivation_report_2015.pdf
[accessed on 7th July 2016].
- ¹⁴ Health and Social Care Information Centre. Quality and Outcomes Framework 2014/15.
<http://www.hscic.gov.uk/catalogue/PUB18887> [accessed on 07/07/2016].