# You and Type 2 at Home Pathway Evaluation

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# Acknowledgements

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# 1. Executive summary

#### Overview

The You and Type 2 at Home pathway used remote monitoring and testing technologies to allow people with diabetes to complete their annual diabetes review at home. The key biomedical data was collected by delivering a blood pressure machine, finger stick blood testing kit and urine testing kit to peoples' homes. People then completed the rest of their annual diabetes review as per the You and Type 2 pathway. This is a pathway where people with diabetes are provided with their test results and then complete a care plan with a healthcare professional following the Year of Care methodology.

The pathway was offered by two GP practices in South London. The main aims of the evaluation were to determine the profile of people who engaged with this pathway, and the acceptability and experience of the pathway to both people with diabetes and staff. Factors for improving the model and promoting successful implementation were also explored.

#### **Key findings**

Service users and staff felt this pathway would be suited to people with diabetes who are either working, digitally capable, younger, have household support to complete the tests, have non-complex diabetes, or a combination of these attributes. They thought it would be less suited to the very elderly, those who are less digitally capable, have complex health needs or are socially isolated.

Acceptability of the pathway to people with diabetes varied. Urine tests had the highest completion rate (69%), followed by HbA1c (27%) and blood pressure (24%). Some people declined the pathway at initial offer. Preference for face-to-face care or concerns around using digital technologies were indicated as reasons for decline. Service user interviews and survey responses found that the tests and pathway were acceptable to some people with diabetes. They identified the convenience of completing tests remotely, and the reduced risk of contracting COVID-19 when completing their annual review as key motivating factors for participation. Suggestions on how to increase the acceptability of the tests for other people with diabetes included in-person demonstrations, more needles, and larger vials for the fingerstick blood test.

Staff found the pathway acceptable, and it was successfully implemented at both GP practices. Acceptability was largely linked to the support of a pathway co-ordinator who implemented and ran the pathway, and the support of the project manager. These were necessary for the successful implementation of a new pathway at a time of increasing primary care pressures. Staff saw the pathway as an opportunity to reduce the pressure on primary care and were supportive of it being provided as an option to people with type 2 diabetes.

#### Conclusion

This pathway provides an alternative to primary care practices for completing face-to-face annual diabetes reviews. Whist it an acceptable to some people with type 2 diabetes, it may not be acceptable to all people (e.g. older adults, those at risk of digital exclusion, and people complex health needs and/or or socially isolated). If successfully implemented, this pathway could allow for GP practices to continue offering annual diabetes reviews to the whole type 2 diabetes practice population, with a greater amount of capacity to provide further support to people with more complex needs.

#### Recommendations

- For certain individuals remote monitoring and testing for diabetes care provides a valued alternative to face-to-face care. Remote monitoring programmes should continue to be commissioned to provide this alternative care pathway. Commissioners should be mindful of not widening health inequalities when commissioning this complimentary testing pathway.
- When commissioning a remote pathway such as You and Type 2 at Home, it is beneficial to commission a co-ordinator to provide capacity to practices to successfully implement and manage the new pathway. The co-ordinator's role is to support practice staff with the implementation of the new pathway, support with admin related to the pathway such as the delivery of test kits, and to follow up directly with pathway users for onboarding and follow up support.
- When commissioning a remote pathway such as You and Type 2 at Home, it is beneficial to commission a project manager to facilitate the adoption and implementation of the new pathway with all stakeholders. The project manager's role is to manage and co-ordinate the project stakeholders, work with the practice(s) to adopt the new pathway, and ensure correct information governance, commissioning and contracting processes are followed.

- When planning to implement a pathway with multiple providers it is necessary to schedule sufficient time to complete contracting and information governance requirements.
- Commissioning such a pathway at population level would enable economies of scale. This
  would reduce the cost per person, and make the intervention more scalable.
- When designing future evaluations for remote monitoring pathways, mechanisms to capture the number of, and reasons for service user decline should be designed into operational delivery.
- Further study is advised into remote monitoring for diabetes intervention follow-up, as this was identified as a potential future development, however, it was not tested in this pilot.

# Background

#### Overview of the innovation

Over 3 million people in England are diagnosed with Type 2 Diabetes<sup>1</sup>. Compared to people without diabetes, people with Type 2 Diabetes are nearly 2.5 times more likely to have a heart attack, heart failure or stroke<sup>2</sup>. Effective management of blood glucose levels and lifestyle factors such as good diet and exercise can help reduce an individual's risk of developing the complications of diabetes.

The You and Type 2 pathway aims to support people living with diabetes to manage their diabetes effectively. It is a care and support planning pathway for people living with type 2 diabetes in South London. It is based on the Year of Care model and through combining innovative digital technologies it provides each person with their own easily accessible personal plan of care, education and support<sup>3</sup>. It is a structured pathway to support GPs to complete annual diabetes reviews and was funded by the NHS Test Bed Programme<sup>4</sup>.

During the peak of the COVID-19 pandemic, primary care were advised by NHS England and NHS Improvement to prioritise the response to COVID-19 over some aspects of routine care, including annual reviews unless they could be "viably conducted remotely and/or in exceptional cases in person or by home visit"<sup>5</sup>. A key part of completing the annual diabetes review is completing the 8 care processes<sup>6</sup>. This requires the completion of blood, urine, and blood pressure tests for 5 of the 8 care processes. In the standard You and Type 2 pathway these were completed in person. The You and Type 2 at Home pathway utilised remote monitoring and testing technologies to provide a fully remote alternative to the standard You and Type 2 pathway. Figure 1 shows the pathway in detail.

The remote pathway completed 7 of the 8 care processes. Service users received a blood pressure machine, finger stick blood testing kit, and urine testing kit through the post. The finger stick blood test was provided by Thriva, the urine testing kit via Healthy.io, and an Omron M<sub>3</sub> Blood Pressure Machine was provided for service users to keep (see figure 2). These 3 tests provided the key biomedical data for 5 of the 8 care processes. Service users completed these 3 tests at home and uploaded the urine results via the Healthy.io app, and posted the blood vials to Thriva for testing. BMI and smoking status were ascertained by the co-ordinator in advance of the care planning session, and completed 2 more of the 8 care processes.

Figure 1: You and Type 2 Face-to-Face and At Home Pathway Call from pathway Text by pathway co-No Complete standard ordinator with link co-ordinator with You and Type 2 to pathway offer to try the @ face-to-face Annual Review Due introduction video Home pathway nathway Yes Co-ordinator sends Co-ordinator Co-ordinator link to You and Type 2 at Home arranges postage of Test kit delivered to contacts participant website -contains to inform them of tests within 1 week participant's home delivery date of initial call video instructions 屎 Co-ordinator calls Participant Participant receives participant to book Co-ordinator checkcompletes tests. personalised video care planning in call 2 days after Uploads urine appointment with with results. kit delivered. results on the app Practice also НСР Co-ordinator asks participant for BP, Participant Participant retains height, weight and completes care access to care plan smoking status via planning and diabetes phone/text before appointment either resources via the care planning in person or over smartphone app. the phone with HCP.

Figure 2: At Home Testing Kit Contents



The only care process not directly addressed by the at Home pathway was the foot check. This was considered at the development stage of the project, and input was sought from podiatry specialists on how to complete this remotely. Ultimately it was felt that this was something that could not be delivered effectively remotely, however service users were still directed to better footcare awareness resources.

This pilot had multiple waves. The first wave was conducted on a small scale with one GP practice in South East London. This practice was the practice of HIN Diabetes clinical director Dr Neel Basudev, and the pilot was used for initial proof of concept. This first wave pilot is not the focus of this evaluation. Feedback, however, was sought from Dr Basudev for the evaluation, as his practice's experiences were important to the development of the wave 2 pilot.

Wave 2 involved 2 GP practices in South West London. This wave is the focus for this evaluation. The characteristics of the different practices and way the project was delivered at each practice is summarised in table 1 below.

Table 1: Practice Characteristics

Practice	Wave	Test Kit Delivery Mechanism	Specific Pathway Co-ordinator	Total T2D Population	Pathway Adoption Date
Practice 1	1	Tests delivered individually by post	No – co-ordination by usual admin team	N/A	N/A
Practice 2	2	Tests delivered in 1 box via post	Yes – Post funded by project team	720 people	October 2021
Practice 3	2	Tests delivered in 1 box via post	Yes – Post funded by project team	1,250 people	January 2022

The wave 2 practices offered all people that were due an annual review the opportunity to take part in the You & Type 2 At Home pathway. Exclusions were applied upon recruitment to the pathway for the following groups of people:

- Those with "high risk foot" as coded on EMIS
- Those who had multiple long term conditions and were not appropriate for just a diabetes review

- Those who did not have access to a smart phone
- Those who had already had an HbA1C, urine albumin to creatinine ratio or blood pressure reading completed within the last 3 months.

#### **Project Aims**

The main aims of this project were to:

- Design and implement a fully remote end-to-end pathway for You & Type 2;
- Identify the type of person who would engage with this pathway;
- Determine service user and staff acceptability and experience of this pathway to inform future models of care.

#### Evaluation purpose and design

This evaluation uses a mixed methods design to answer the evaluation objectives. The evaluation focuses on two GP practices in South West London that have implemented the You and Type 2 at Home pathway. The evaluation seeks to identify key learnings on the use of remote monitoring technologies in primary care to complete annual diabetes reviews. Table 2 outlines the evaluation objectives and methods.

Data collection methods included extracts from the information systems (EMIS) of the two participating GP practices, a service user survey and interviews of service users and staff:

**Service user survey** – an online survey was sent to 144 people who had consented to take part in the You and Type 2 at Home pathway. Twenty-one people completed the survey (response rate 15%) and a full demographic description can be found in appendix 1.

**Service user and staff interviews** - semi-structured interviews were conduct with 4 people living with diabetes who engaged with the pathway and 7 staff members involved with the development or delivery of the pathway. The service user interviews were people who expressed an interest in a follow up interview after completing the survey. The staff members interviewed included NHS practice staff, NHS project delivery staff, and staff from Thriva and Healthy.io. These interviews were conducted between the 13<sup>th</sup> April and 13<sup>th</sup> May 2022 and were thematically analysed. The interview schedules can be found in Appendices 2-5.

**EMIS data extraction** – A search template was sent to each of the wave 2 practices containing demographic and clinical data domains on the people who participated in the survey. This search was then run through EMIS, and the resulting data was sent to the HIN for analysis.

Table 2: Evaluation Objectives and Methodology

Evaluation Objective	Measure(s) / metrics	Datasource/
		methodsof
		collection
Determine the profile of service	Socio-demographic characteristics of	EMIS search from
users that engage with the	service users (1) invited and accepted (2)	participating
You & Type 2 remote pathway	invited and declined.	practices
	Characteristics to include:	
	1. Age	
	2. Gender	
	3. Ethnicity	
	4. Measure of deprivation (IMD)	
	5. Comorbidities	
	6. Main spoken language	
Explore service user experience	Service user experience and	Online service user
and acceptability of the You &	perception of completing their	questionnaire
Type 2 remote pathway	diabetes annual review remotely,	
	including acceptability of tests and	Service user
	pathway.	interviews
Explore staff experience	Staff experience and perceptions of	Staff interviews
and acceptability of the	adopting and implementing the You	
You & Type 2 remote	and Type 2 at home pathway	
pathway		
Understand how the	Staff and service user suggestions on	Online service user
model can be improved	improvements for the You and Type 2	questionnaire
	at home pathway	
		Staff and service
		user interviews
Understand what factors	Staff and service user insights on benefits	Staff and service
affect the	and challenges to You and Type 2at	user interviews
implementation of the	home pathway adoption.	
model to inform future		
spread and adoption		

# 3. Findings

The findings are structured in accordance with the order of the evaluation objectives listed in table 1. They begin with describing the profile of the people living with diabetes who engaged with the pathway, before moving onto the acceptability and experience of the pathway, before finally identifying improvements for the model and considerations for future implementation.

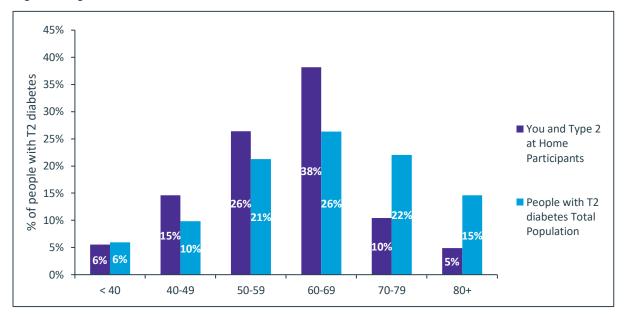
#### 3.1 Determine the service user profile You & Type 2 at Home

#### 3.1.1 Service User Demographic

Overall, the age profile of the You and Type 2 at Home pathway service users was younger than the total type 2 population at the participating practices (Figure 3). Deprivation and ethnic profiles of the groups were similar (Figure 4 and 5).

The You and Type 2 at Home pathway was offered to all people with type 2 diabetes at the participating practices as they became due for their annual diabetes review, other than those who met the exclusion criteria listed in Section 2. Unfortunately, the total number of people offered the pathway was not routinely recorded during the project implementation and could not be retrospectively captured. Of the people offered the pathway, 144 chose to participate in the You & Type 2 at Home pathway. Of the 144 people who agreed to take part in the You and Type 2 at Home pathway, 59% were male and 41% were female. Most of the people who participated were aged between 50 – 69 years, with the most common age group being 60 – 69 years. People who participated in the You and Type 2 at Home pathway were on average younger than the total population of people with type 2 diabetes at the two participating practices (see figure 3). However, as the number and demographics of people who declined the pathway was not recorded, significance testing was not possible.

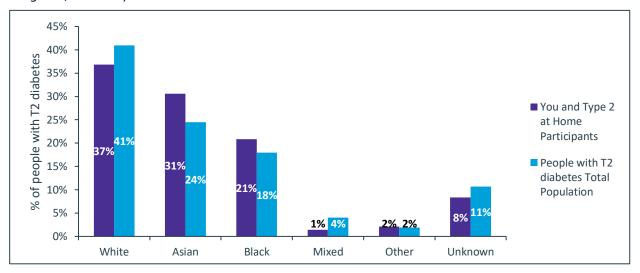
Figure 3: Age distribution of service users



Data was provided on the ethnicity of the type 2 diabetes population at each participating GP practice. Ethnicity was not coded consistently for all people and assumptions were applied in order to categorise people. For instance, many people had a country of origin recorded and not ethnicity. Assumptions were made based on this country, e.g. classifying people listed as from an Asian country as ethnically Asian. Therefore, these findings need to interpreted with caution due to the potential degree of error.

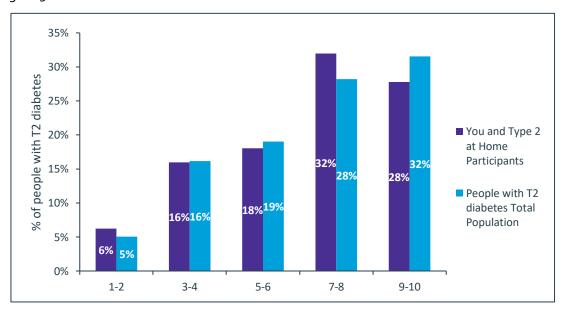
The majority (55%) of service users were from minority ethnic backgrounds, although the largest single ethnic group was white (37%). The proportion of people from a minority ethnic background agreeing to participate in the pathway was higher than the overall proportion of people with type 2 diabetes registered at the two practices (see figure 4). Although, as the number and demographics of people who declined the pathway was not recorded, significance testing was not possible. Most service users also had English listed as their main spoken language (51%). Twelve percent had a different language specified as their main spoken language and 38% did not have a main language specified on their GP record.

Figure 4: Ethnicity of service users



Service users were from less deprived backgrounds, with 60% of service users having an Index of Multiple Deprivation (IMD) deprivation decile of 7 or higher. Index of Multiple Deprivation scores are assigned to small geographies of approximately 1,500 people or 650 households living in the same neighbourhood, this score is then ranked and split into deciles with decile 1 being the most deprived 10% of neighbourhoods nationally and decile 10 being the least deprived 10% of neighbourhoods nationally. An IMD score of 7+ indicates that the pilot service users were not from deprived areas. The deprivation profile of service users was similar to the overall deprivation levels of the total type 2 population at the two practices (see figure 5)

Figure 5: IMD Score of Service users



None of the service users were registered as having a learning disability, or dementia. Thirteen service users (5%) were recorded as having a cardio-vascular disease diagnosis, and 33 (13%) had a diagnosed mental health condition. Both of these proportions are slightly lower than the overall percentage of people living with type 2 diabetes at the practices diagnosed with these conditions (see figure 6). However, as the number and demographics of people who declined the pathway was not recorded, significance testing was not possible.

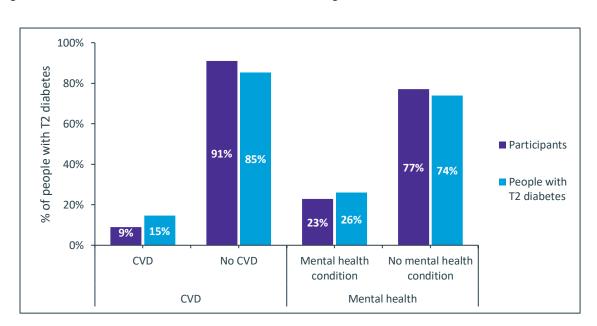
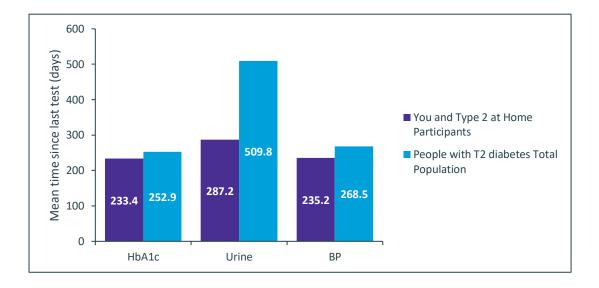


Figure 6: Cardiovascular Disease and Mental Health Diagnosis

#### 3.1.2 Previous tests

Overall service users of the You and Type 2 at Home pathway appeared more engaged with their care than the overall type 2 population at participating practices. Three quarters (74%) of service users had completed all three tests (HbA1c, urine and blood pressure) within the past year. This was a much higher proportion compared with the overall type 2 population registered at the participating practices (48%). Mean length of time since last HbA1c or blood pressure test was similar between the service user participant group and the overall population. The mean length of time since last urine test, was however, was nearly twice as far in the past in the overall population (529.5 days) than the service user participant group (287.2 days) (see figure 7).

Figure 7: Mean Time since Last Test



There was no substantial difference observed in the mean HbA1c result for the most recent test conducted for the service user participant group (60 mmol/mol) and the total type 2 population at the practices (59 mmol/mol).

#### 3.1.3 Summary of service user characteristics

A summary of the service user characteristics is listed in table 3 below.

Table 3: You and Type 2 at Home Service User Characteristics

Gender	Age	Ethnicity
59% male 41% female	Majority aged 50 – 69	All main ethnic groups represented including people from Asian and Black backgrounds
O <sub>k</sub>	AGE	

Deprivation Status	Service users were from less deprived neighbourhoods. This reflected the overall population registered at the participating GP practices.
Other Diagnoses	Slightly lower rates of CVD and mental health condition diagnoses in service users than overall T2 population at practices <sup>1</sup> .
Diabetes Care Engagement	Service users mostly well engaged with diabetes care, with three quarters having completed all three tests within previous year.
Diabetes Management	Mean HbA1c result 6ommol/mol. Similar to overall type 2 population mean (59mmol/mol)

<sup>&</sup>lt;sup>1</sup> Unknown if significantly different as significance testing not possible.

#### 3.1.4 Reasons for non-participation

Of the people who declined the You and Type 2 at Home pathway, 119 provided a reason for declining. These are summarised in figure 8. The most common reason for declining was a preference for a face-to-face, or usual, appointment (30%). Given that this project was implemented during the COVID-19 pandemic, it is uncertain whether this preference was a direct response to remote monitoring care or influenced by the movement away from face-to-face care where possible during the pandemic. The second most common reason for declining was a lack of access to or ability to use technology such as a smartphone (24%). Others did not feel comfortable or able to do the tests and home (13%) and some found the process too complicated or confusing (13%).

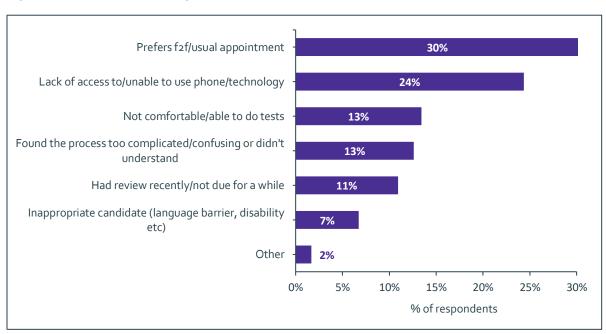


Figure 8: Reasons for declining

3.2 Explore the experience and acceptability of the You & Type 2 at Home pathway for people living with diabetes

#### 3.2.1 Tests

The most completed test by service users was the urine test (69%), followed by HbA1c (27%) and then Blood Pressure (24%) (see figure 9). Blood pressure results were reported over the phone to the GP or co-ordinator at the care planning meeting. It is therefore likely that the test completion rate underrepresents the true number of people that completed a blood pressure test. Blood

pressure and HbA1c completion rates were provided by the GP practices, and the urine completion rates were provided by Healthy.io.

At the point of analysis 23% of service users had booked an annual review appointment with their GP (see figure 9). It is worth noting that there is often a delay between people completing their tests and booking a review appointment. Therefore, this proportion may increase further.

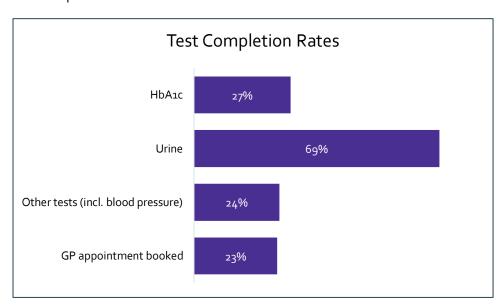


Figure 9: Test Completion Rates

Interviewed service users all shared that they found the blood pressure test straightforward to complete at home. Several had used blood pressure monitors at home before, and those who had not still found them easy to use. In particular, some liked the fact that the blood pressure machine was able to store their historic readings, and also had a toggle so that it could track the data of two separate users.

The urine test was also reported as straightforward to complete and interviewees said they would be willing to complete this test at home again. Some interviewees noted that they liked being able to see the results so quickly. One interviewee, however, did have an issue with the quality of their urine sample, and so was booked in for a traditional urine test by their GP.

Interview participants found the blood test more difficult. The blood tests provided were finger stick blood tests and nearly all interviews discussed feeling afraid or apprehensive before completing the

test. All interviewees attempted the test. They found completing the test challenging, with the most common difficulty being extracting enough blood to fill the vials. Despite attempting the test, one service user was ultimately unsuccessful in extracting sufficient blood and rang his practice to book a blood test instead.

Although apprehensive before taking the test, and finding it challenging to get enough blood to complete the test, most interviewees felt that they would use this type of blood test again in future. One interviewee expressed how although she did not enjoy pricking her fingers with needles, because she had to do this regularly for glucose monitoring she felt more comfortable trying the finger stick blood test.

"I hate pricking myself. I'm scared of needles but often did it anyway. I didn't find that part of it any worse than normal. So that was fine." Pathway Participant

#### 3.2.2 Instructions and Technology

Instructions for each of the tests were provided both in the box and digital formats for the blood and urine tests. For the blood test there was a video clip on the You and Type 2 At Home website which took service users through the stages of the blood test and included tips on how to increase circulation to ease blood collection. For the urine tests service users were guided through the testing process via an app, which they followed along in real-time to complete the test.

Most survey respondents found the blood test instructions easy to follow (12 respondents) compared with 5 who found them difficult to follow (see figure 10). Interviewees who watched the video instructions for the blood test found it helpful. Some reported watching the video multiple times, including watching it and pausing at the steps as they completed the test. Interviewees liked how the video gave information in a practical way, one stated that she found it reassuring following her initial apprehension about the completing the blood test. Some interviewees reported, however, that they struggled to access the website which hindered them from re-watching the videos. Others also appeared to not have found the specific blood test instructional video at all.

The majority of survey respondents found the urine test instructions easy to follow (12

respondents), with 3 finding them difficult to follow. Interviewees reported finding the urine test instructions on the app easy to follow and they felt they guided them through the process at an appropriate pace. Overall, survey respondents found the process of using the app as either easy (13) or neither easy nor difficult (2) (see figure 10).

All survey respondents found the instructions for completing the blood pressure test as either easy (15) or neither easy nor difficult (2) (see figure 10). This ease of use was echoed by interview participants.

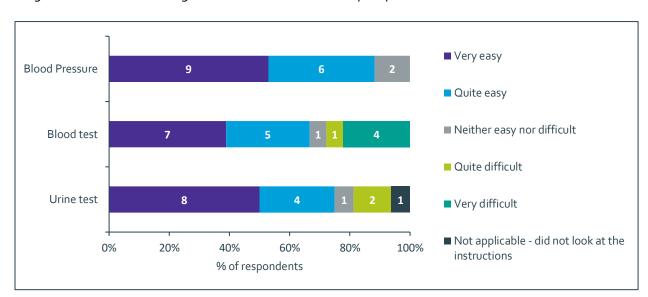
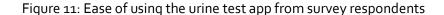
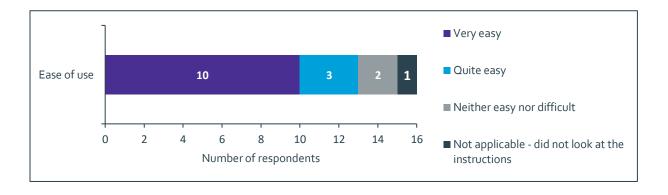


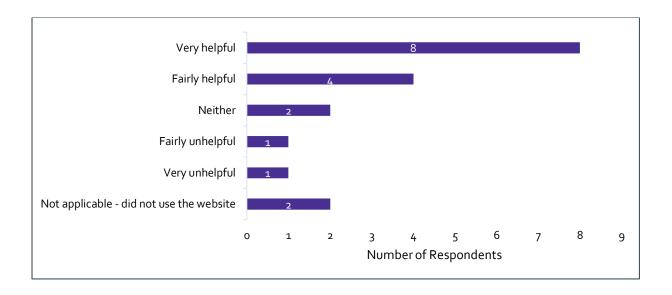
Figure 10: Ease of following test instructions from survey respondents





Overall, most of the survey respondents found the You and Type 2 website useful in providing guidance around completing the tests. Twelve found the website either helpful or very helpful, 2 were indifferent and 2 found it unhelpful (see figure 12).

Figure 12: Usefulness of You and Type 2 website in providing guidance around completing tests from survey respondents



#### 3.2.3 Practice and Co-ordinator Input

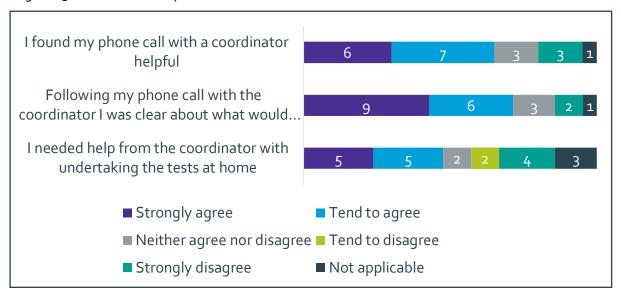
Service user feedback on interactions with the co-ordinators was overwhelmingly positive. Of the 20 survey respondents, 13 found the co-ordinator helpful and 15 felt clear about what would happen when their test kit arrived (see Figure 13). Interviewees appreciated how knowledgeable they were on the pathway, and the way they patiently talked them through their concerns, and helped them access the website links and app download. Several of the interviewees called the co-ordinators multiple times for support while using the pathway. Ten survey respondents reported that they needed help from the co-ordinator while undertaking their test at home.

Survey respondents described the co-ordinators as 'polite' and 'helpful'. Others explained that the coordinators had explained clearly the tests they would be receiving.

"It was great. She was really nice on the phone and explained what tests I would be receiving." Survey Respondent They also reported that the coordinator had a nice manner when convincing them to take part in the pathway.

"Amazing coordinator. Well presented and used her skills without annoying me to convince me to do the test." Survey Respondent

Figure 13: View on Pathway Co-ordinator



Not all service users had positive feedback about the co-ordinators. One survey respondent reported not feeling like they had a choice in taking part in the pilot.

"Although polite, it was not explained why she was calling. I was not told about changes with home test kits being sent – no offer of choice given." – Survey Respondent

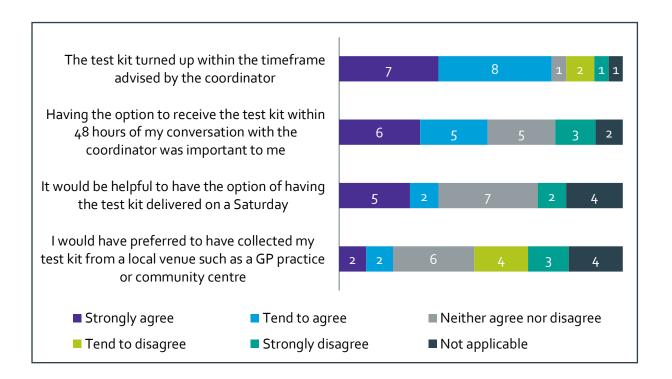
Lack of whole practice awareness about the pathway was also reported. One interviewee recalled that when they rang the practice reception for support the receptionist was unaware of the pathway. This caused some confusion and resulted in the service user being booked in for in person tests at the practice. The co-ordinators also reported that this had happened with a handful of service users, in one case resulting in the service user thinking they were taking part in a scam. They felt the issue was because the pathway only had a small cohort and so not all staff at the practice

had been informed of the project. If this pathway were to be a standard option then all practice staff would need to be aware of how to appropriately direct the caller.

#### 3.2.4 Test Kit Logistics

Survey respondents reported that the test kits arrived within the timeframe advised by the coordinator (see figure 14). Eleven of the 20 respondents felt that it was important to them to receive their test kit within 48 hours of the conversation with the co-ordinator. Only 4 would have preferred to collect their kit in person from a practice or community centre, and there was no strong preference on being able to receive the kit on a Saturday. Seven neither agreed or disagreed, 7 agreed and 6 disagreed.

Figure 14: Views on Test Kit Logistics



#### 3.2.5 Benefits of using at Home Pathway

Service users felt that completing the tests at home brought them some benefits. The most identified benefit by interviewees was the convenience of completing the tests at home.

Completing the test at home avoided having to book and attend multiple appointments at their GP practice to complete their annual review. Most interviewees felt that this convenience meant the

intervention would be well suited to people who were working.

Two of the interviewees found the intervention particularly convenient due to the nature of their jobs. One was a live in carer and the other a security guard. They described these shift working roles as often incompatible with GP appointment hours. They were both eager to use At Home pathway for their next annual review.

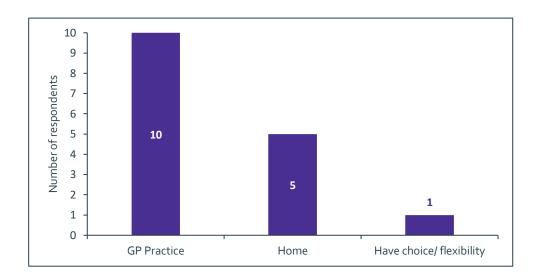
Conversely, another working interviewee did not find the convenience sufficient motivation for them to use the pathway again. Although working, they were a civil servant who was able to work flexibly and from home. They did not find booking and attending several GP appointments overly taxing and said they would prefer to have their next annual review in person if provided the option.

Interviewees also shared that fear of COVID-19 and the challenges in obtaining routine care GP appointments encouraged them to take part in the At Home pathway. One described how due to the lockdowns they were nervous to go to the GP practice in case they caught COVID-19. Another explained that they were overdue their annual review when approached about the At Home pathway. They wanted their tests to be completed and so chose to use the pathway as it appeared to be the only option at the time. They stated that had they been offered an in person review at the time they would have preferred this.

#### 3.2.6 Future Usage

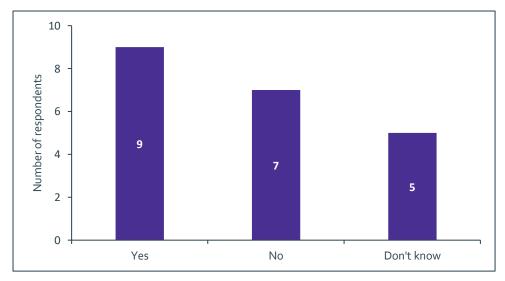
Although benefits were identified in using the You and Type 2 at Home pathway, most survey respondents would prefer to complete their next diabetes annual review in person. Of the 16 respondents, 10 would prefer to do their review at the GP practice, compared with 5 who would prefer to do the review at home (see figure 15). It is unclear, however, what affect COVID-19 may have had on the preference for face-to-face care. This pilot was run at a time where most primary care was still being remotely, and so responses may reflect overall desire for face-to-face care, rather than exclusively in relation to diabetes annual reviews.

Figure 15: Preferred setting for future diabetes annual reviews from survey respondents



When asked if they would want to complete their blood, urine and blood pressure tests at home in advance of their annual review, 9 said they would be interested in taking them at home, 7 were not and 5 were unsure (see figure 16).

Figure 16: Interest in taking test at home ahead of annual diabetes review appointment from survey respondents



3.3 Explore staff experience and acceptability of the You & Type 2 remote pathway

#### 3.3.1 Collaboration

Staff identified the collaborative working environment of the project as important for the successful

delivery of this project. This was felt on all sides of the project, with both NHS and non-NHS staff reporting excellent communication across stakeholders, and a "willingness" from all sides to keep the project moving. The open communication channels and regular meetings allowed problems to be addressed swiftly and effectively.

"I found [NHS staff] to be very collaborative. Very good at communicating, which meant that, you know, all the, all the little issues that crept up were dealt with very quickly. They were very open to suggestions from our side, very open to talk things through and come up with a collaborative solution and designs that could work for both of us. They were never imposing. Very patient." [Thriva Staff Member]

"There was huge responsibility on a coordinator to fulfil all of the requirements, but I think Thriva and Healthy.io made it easy for them by being so connected and responsive to their... queries and their emails" [NHS Project Delivery Staff Member]

"What was really good was that there was never a point where it felt like we weren't in the loop on what was going on."

Healthy.io Staff Member

#### 3.3.2 Roles

In terms of the overall pathway development and implementation, two roles were identified as vital for project success: having a dedicated project manager, and co-ordinators based within practices. Project management was seen as important as this was a complex pathway containing both NHS and non-NHS organisations. The project manager helped the project maintain momentum and provided leadership and direction. This was particularly important given the delays to the project timeline due to contracting complications. They also opened the communication pathways which have already been identified as significant for project success.

The role of the co-ordinators was seen as crucial for the successful delivery of the pathway. The wave 1 pilot identified that there was a significant amount of administrative follow up required by

the practice to onboard, support and follow up with the service users. Having specific co-ordinators for the pathway was seen as vital by wave 2 staff. This was because they ensured there was sufficient staff capacity within the practice to implement the pathway. They also meant there was a capacity within the practice to attend the project planning meetings, and the co-ordinator could act as a point of continuity for wider practice staff on the development of the project.

Another benefit to having co-ordinators embedded at practice level was that this allowed them to build relationships with the service users, which led in particular to high urine test completion rates.

"...by embedding someone in general practice who has the time to generate a relationship with their own population and...with a bit of training, they're able to...do quite significant bits of the of what the practice needs with the right tools." [NHS Project Staff Member]

"[The urine completion results are] around 10 to 15% more than we would see...across our [other] CCG projects...I think this is really reflective of the work that [the co-ordinators] did to...really prime those patients." [Healthy.io Staff Member]

#### 3.3.3 Flexibility

The flexible approach of most the organisations involved was identified as an important factor in the success of the project. Thriva and Healthy.io in particular were praised for their flexibility and adaptability.

"From day one, all of them have been really happy to try their absolute best to amend their companies' pathways to suit the needs of this project." NHS Project Delivery Staff Member

This extended to relinquishing some control over the delivery, storage, onboarding, and unboxing of their products. Whilst this caused some anxiety within the technology providers, it was this relinquishing of control that allowed for the creation of the one-box product that was used in the wave 2 pilot.

Flexibility was also present in the commissioning process, which allowed for the initial innovation

and creativity to occur.

"[This is] a good example of where some ability to be flexible within the system has produced...interesting results. The fact that we were able to have a discussion with NHS England at the start and say: "Look, this is what we'd like to do, we think it'd be...interesting and...relevant to what's going on with COVID" and we were supported to do that...I think that was...a great example of kind of...practical...commissioning." [NHS Project Delivery Staff Member]

#### 3.3.4 Contracting and Information Governance

Unfortunately, not all members of the project were able to flexible. The contracting and information governance (IG) requirements of South West London CCG to implement the pathway had limited flexibility, and this created the largest barrier to timely pathway implementation.

There were several challenges to the development and the implementation of the pathway linked to contracting and IG processes. Whilst time had been allocated to this in the project plan, the challenges were larger than predicted, and resulted in this part of the project taking three months longer than planned for.

There were several reasons identified by staff for why the contracting and IG stage of the project took longer than expected:

- Setting up a three-partner pathway contained more challenges than initially thought;
- Amending the You and Type 2 Data Protection Impact Assessment (DPIA) to include the At
   Home pathway was more complex than writing a DPIA from scratch;
- Thriva and Healthy.io were not known to be on any of the commissioning frameworks used by SWL CCG, nor had they previously been contracted by them;
- Contract terms were to be set early in the development process, this caused challenges
  when trying to iterate on the process e.g. when Thriva took on the distribution of the
  Healthy.io kits as part of the one-box approach;
- SWL CCG and Thriva both had standard contracts they used for commissioning. These contracts were not initially compatible with each other;
- Some unfamiliarity from non-NHS organisations on dealing with NHS contracts and ways of working.

Staff members felt that these delays could not have been avoided. NHS commissioning is part of a bureaucratic system, and as such all parties felt that more time should have been allocated to this

stage of the project.

#### 3.3.5 Staff Acceptability of At Home Pathway

Acceptability of the at home pathway varied between staff groups. The NHS Project Delivery Staff and Non-NHS Staff found the pathway acceptable and successful. This was because people with diabetes were able to access a remote monitoring pathway to complete their diabetes annual review at home, and 144 people opted to use the pathway. It was acknowledged that this pathway would not suit everybody, however, staff still felt there was a need for the pathway, and that having this pathway could support primary care with capacity constraints.

"My sense is that this kind of intervention works for about 20% of people...the idea is that you find the 20% that it works for and find a way of making it into a longer term really sustainable solution for those people. This frees up practice resource potentially to use on the 80%."

NHS Project Delivery Staff Member

Thriva and Healthy.io found the pathway acceptable. Both described being part of the project as "exciting" as it gave them the opportunity to further develop their products and apply them in new situations. The Clinical Operations Lead for Thriva, a GP by background, also explained how it was exciting to be part of innovative change within the NHS through the development of this pathway:

"I am really excited to see...NHS projects taking on new innovative ways to engage patients, particularly patients with chronic disease. You kind of [know] once they get through the honeymoon phase, [they] lose a bit of motivation to stay engaged with their illness and...lose a bit of motivation to make some of the lifestyle changes necessary to improve their health. It's really cool to see an innovative way where we have...a multi partnership solution where patients can do it at home...it's nice that we're opening up options for people to...engage more in their health." [Thriva Staff Member]

The co-ordinators had a more mixed opinion of the pathway. They expressed concern about the appropriateness of the pathway for elderly people living with diabetes, in addition to those with multiple long-term conditions, or who were socially isolated. They did also share that some of those who had used the services had loved it, with convenience often highlighted as why. Overall they felt that it would be good to have a remote pathway as an option for people to complete their annual

diabetes checks.

#### 3.4 Understand how the model can be improved

Both service users and staff had suggestions for how the You and Type 2 At Home service could be improved. These are contained in the table below.

Suggestion	Source	Rationale
The tests should have an	Service User	14 out of the 20 survey respondents agreed (6) or
in-person demonstration.		strongly agreed (8) that it would have been
		helpful to have someone show them how to do
		the tests in person before attempting at home.
More lances should be	Service User	Service users expressed concern that by having
included in the blood test		only three, if you were unable to extract
kit.		sufficient blood with two lances you were likely
		to give up trying the third.
The blood tests should	Service User	"They [the paper instructions] were a bit helpful,
have had an in person or		but you know [it] is one thing is to read something,
demonstration video. <sup>2</sup>		the other thing is to practicalise [sic] what you
		read." [Service User]
The blood vials should be	Service User	"The tubes are small compared to my fingers so
larger.		spilled blood outside it." [Service User]
The urine app download	Service User	Several service users did not realise the app
link should have been NHS	NHS Practice	download text from Healthy.io was linked to the
branded.	Co-ordinator	You and Type 2 At Home pathway. They
		assumed it was a scam text and ignored it.
Increased communication	Service User	One survey respondent fed back that more
about delivery windows		communication about delivery windows would
		have been useful.
Service users should have	Service User	Suggested by a service user who was a live in
been able to change the		carer. She lived away during the week and having
delivery address for the		the kit delivered to her work address would have

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<sup>&</sup>lt;sup>2</sup> There was a video provided by Thriva which walked service users through taking their own bloods. This link was on the You and Type 2 At Home webpage and re-directed participants to the Thriva website. Based on the service user interviews, and relayed conversations via the co-ordinators, it would appear that several service users did not find this video.

kit.		allowed her to complete the tests sooner.
The remote monitoring	NHS Practice	The postal kits could be used as a means of
tests could be used for	Staff Member	monitoring outcomes following a change in care
intervention follow up		(e.g. diet or medication change). This could
monitoring not the whole		potentially require less practice capacity to
annual review.		manage than the whole annual diabetes review.
The At Home pathway	NHS Project	A remote pathway with a funded co-ordinator
could be used as a	Staff Member	post will help ease some of the burdens on
screening tool to identify		primary care. Using it as a screening tool will
those who should be		allow for greater time to be spent with people at
brought in for face-to-face		higher risk of diabetes related complications.
care.		

One survey respondent also raised a concern that by completing their annual diabetes review completely remotely that they were missing their foot check.

# 3.5 Understand what factors affect the implementation of the model to inform future spread and adoption

Several factors were identified by service users and staff which they believed affected the implementation of the model and might affect its future usage.

#### 3.5.1 Target Population Demography

NHS Project Staff felt that identifying the profile of person who would engage with the pathway would benefit future adoption. The identification of this group would allow them to be targeted in future versions of the pathway. This would lead to greater success rates, and reduce the time following up people who would not engage with a remote service.



#### 3.5.2 Project Team

As described in section 3.2.2 "Roles", staff saw the project manager and co-ordinator roles as vital for the success of the pathway. The project manager role was crucial for driving the project forwards through managing and facilitating collaboration between the stakeholders, working with the practices to adopt the new pathway, and ensuring that IG and contracting requirements were met for the pathway to be created. The co-ordinator role was vital for allowing the pathway to operate, without placing additional strain onto GP practices. The co-ordinator supported practice staff with

the implementation of the new pathway, supported with admin related to the pathway such as the delivery of test kits, and followed up directly with pathway users for onboarding and follow-up support. NHS Project Staff saw the co-ordinator role as an essential part of the pathway, and suggested that these could be recruited at the PCN level, and provide support to multiple practices operating the pathway.

#### 3.5.3 Practice and Practice Engagement

GP practice size and nature was identified as an influencing factor. The At Home pathway was only offered to practices that were confidently using the standard You and Type 2 pathway. This was seen as necessary as it would allow the relatively straightforward substitution of practice based tests for at home tests without a whole separate annual review pathway needing to be set up for the remote cohort of people. Thus, practices considering adopting the At Home pathway would need to be established users of the You and Type 2 pathway.

Additionally, practice staff felt that the services provided by the GP practice and accessibility would affect uptake. One of the practices involved in the pilot had an in-house phlebotomy service with relatively short waiting lists and wide availability of appointments. They felt this meant that people were less likely to engage with the remote monitoring service, as they already had a convenient option for having bloods taken. They felt the service would be particularly beneficial for smaller practices that may not have as many services available. They also saw it as beneficial for people with physical barriers to access their practice, such as rural practices, or those poorly connected to public transport.

#### 3.5.4 Level of Commissioning

NHS Project Staff felt that the ICS or PCN level was the best level to commission this pathway. This allowed for economies of scale with procurement of the remote technologies, as well as a cost efficiency in recruiting a co-ordinator to oversee the pathway. It would also reduce the burden on individual practices in the set-up of the pathway. Furthermore, commissioning at this level would allow for the use of local commissioning frameworks, which are already integrated with local GP practices. They felt that if commissioning at either a practice or national level, the administrative burden of implementing the pathways could outweigh the benefits of the service.

#### 3.5.5 COVID

The At Home pathway was created in response to the COVID-19 pandemic, and the subsequent temporary halting of routine care in primary care. Fears of contracting COVID-19, and the difficulties in obtaining appointments were identified as motivating factors by the service users for engagement with the pathway. It was also a factor that co-ordinators used to onboard service users to the pathway. One co-ordinator reported framing the at home pathway as a way to protect the vulnerable and support the NHS. She also reported an increase in popularity when there was a pandemic related shortage of blood test vials. At this point, the finger prick blood test was the only way to complete a blood test.

This indicates that there may be less motivation to engage with the pathway in non-pandemic times. Conversely, however, there may be more capacity from primary care to engage with the pathway. NHS Project Staff reported that a significant challenge during the pathway was keeping the practices engaged given the immense pressure they were under to respond to COVID-19.

#### 3.5.6 Emergence and Familiarity with Remote Technologies

"As people get more familiar in the use of technology in healthcare, this kind of thing will become more comfortable to people. It's been a sea change in the last couple of years." NHS Project Staff

The use of remote monitoring technologies in healthcare is a rapidly evolving area. This is also the case within the NHS, with NHSE's Transformation Directorate and the National Innovation Collaborative developing and piloting remote monitoring pathways in all areas of healthcare. NHS Project Staff felt that as people became more familiar with using these technologies, they would be more likely to engage with the At Home pathway for annual diabetes reviews. Thriva also felt that this familiarity with using at home blood test kits would help with future engagement. For many of the service users in this pilot, this was their first interaction with at home finger prick blood testing. Many expressed that now having done it, they would be less apprehensive in completing it again.

## 4. Discussion

#### Service User Demographic

Overall, there were not large differences between the demographic of the people who agreed to take part in the You and Type 2 at Home pathway and the overall type 2 diabetes population at the participating practices. Age, ethnicity, deprivation status and cardio-vascular and mental health condition diagnosis were similar. As mentioned, statistical significance testing was not possible because the characteristics of the population who decline the pathway was not recorded. Therefore, it is unknown if the slight differences between service user demographics and the overall practice Type 2 population are significant.

Service user participants were more likely to have had all three of their blood, urine and blood pressure tests completed within the past year than the whole type 2 diabetes population at the participating practices. They were also more likely to have had these tests completed more recently, particularly for urine test. This suggests that the service user participant population were a more engaged group with their GP practice and diabetes care. The fact that HbA1C levels were not significantly different between the service user participant group and total population suggests, however, that they are not managing their diabetes more effectively.

#### Acceptability of the Pathway

Acceptability is a frequently used evaluation metric in healthcare. It is, however, complicated to define and measure. Sekhon et al.<sup>8</sup> propose both a definition and theoretical framework for acceptability: "Acceptability is a multi-faceted construct that reflects the extent to which people delivering or receiving a healthcare intervention consider it to be appropriate, based on anticipated or experienced cognitive and emotional responses to the intervention" (p.1). They break it down into 7 constituent domains (see figure 17) which will be used to evaluate the acceptability of the You and Type 2 at Home pathway to both service users and staff.

Figure 17: Theoretical Framework of Acceptability<sup>8</sup>

#### Affective Attitude How an individual feels

about the

intervention

## The perceived amount of effort that is required to participate in the

Burden

intervention

## Ethicality The extent to which the intervention has good fit with an individual's

value system

# Coherence The extent to which the participant understands the intervention and how it works

Intervention

#### Opportunity Cost

The extent to which benefits, profits or values must be given up to engage with the intervention

#### Perceive Effectiveness

The extent to which the intervention is perceived as likely to achieve its purpose

#### Self-Efficacy

The participant's confidence that they can perform the behaviour(s) required to participate in the intervention

Overall, survey respondents and interview participants had positive feedback of using the You and Type 2 at Home pathway and found it acceptable for use. Each of the tests were found to be acceptable to the interviewees and survey respondents, although for different reasons and to different extents. Using Sekhon et al.'s framework, the acceptability of the urine test was related to high self-efficacy and intervention coherence. These attributes were promoted through the step-by-step instructions and support provided by the app and in-box instructions. Blood pressure testing was acceptable due to intervention coherence and high self-efficacy, as well as a low opportunity cost and perceived burden. Strong contributors to the final three attributes were the familiarity of service users with completing blood pressure monitoring themselves, with many already used to completing this at home.

Blood testing was overall deemed acceptable by interview and survey participants, although they did express some reservations. Interviewees expressed low self-efficacy, saw the test as high burden and some had a low perceived effectiveness. Four survey respondents also reported finding following the instructions as 'very difficult' indicating low intervention coherence. Some interviews reported pausing the information video to follow along with the steps to make the process easier. Despite these difficulties, 27% of service users completed the blood test, and interviewees shared having attempted the tests once, that they would use this type of blood test again. This suggests

that the acceptability of this test may increase with exposure to it.

Although the tests were deemed acceptable by survey and interview participants, individual test completion rates varied overall. Several people also declined the intervention outright, although the total number of declines was not recorded. This indicates that the tests and pathway were not acceptable to everyone although we have limited information as to why. This finding echoes the opinion of one of the NHS project staff: "this kind of intervention works for about 20% of people". Interviews suggest that for those who the intervention worked for, it worked very well; with most interviewees and 9 out of 23 survey respondents willing to take these tests at home again. The at Home pathway was identified as particularly acceptable to service users with jobs which made it difficult for them to access their GP during regular hours. These interviewees were in low wage shift working roles, indicating that remote access to testing may remove barriers to accessing healthcare for certain low income people. This is an important finding given the higher prevalence of diabetes in low income populations.

Staff acceptability of the pathway varied between groups. With NHS Project Staff, Thriva and Healthy.io finding the pathway the most acceptable. Practices found the intervention less acceptable, with the main reasons for this linking to high burden, low perceived effectiveness and the opportunity cost of engaging with the pathway. These factors were most present in NHS Practice Staff who were involved in wave 1 of the project, when there was not a designated coordinator. Feedback from wave 2 practices demonstrate that having a designated coordinator, and hands-on project management support were vital for the successful adoption of the pathway by practices. This was because these roles helped reduce the amount of practice staff resource required to implement then new pathway.

Although not affecting staff acceptability, contracting and information governance agreements were identified as a major barrier to delivering this intervention. This is something that should be factored into any future intervention, particularly where person identifiable information is being shared across organisations. If sufficient time and attention is not paid to this there is a significant risk that it would reduce acceptability by introducing unanticipated burden and ultimately undermining perceived effectiveness.

#### Determinants of Future Usage

Familiarity with remote monitoring technologies was a factor identified as likely affecting the usage of the You and Type 2 at Home pathway in the future. There are an increasing amount of remote monitoring technologies being used by the NHS across all care, and in particular in long term condition management. It is therefore likely that people will become increasingly familiar with these technologies. This will increase the acceptability of, and potentially engagement with, remote monitoring interventions due to increases in self-efficacy, intervention coherence and perceived effectiveness.

Concerns about COVID-19 were identified as a motivational factor for engaging with the at Home pathway by several of the interview participants. This was due to fears of contracting the virus, or inability to access primary healthcare due to the pandemic. As the pandemic subsides, and routine primary care returns, potentially this pathway will be perceived as less acceptable to some as the opportunity cost of remote versus face-to-face care rebalances.

The level at which this pathway is commissioned will also determine future efficiency and usage of this intervention. Project support staff and practice co-ordinators were identified as vital for the successful implementation of a remote annual diabetes review pathway. Although a full economic assessment was not completed, based on their understanding of the NHS commissioning landscape, NHS Project Staff recommended that this pathway was commissioned at an ICS or PCN level. This would likely promote a higher return on investment for the funding of these posts combined with the fact that the intervention will not be appropriate for, nor taken up by, all of the practices' type 2 diabetes populations.

Alternative options for future usage of this pathway also emerged through staff interviews. Some staff expressed how this pilot demonstrated that remote monitoring pathways could be successfully implemented in diabetes care, and that important biometric data for diabetes management could be captured successfully via it. This presented opportunities for other diabetes remote monitoring pathways, such as using this for follow up care monitoring, or for screening which patients should be prioritised for face-to-face appointments. The use of these technologies for follow-up care monitoring is particularly interesting as this would incorporate the benefits of remote monitoring diabetes care, without placing as much resource strain on practices when running it as a full annual review pathway.

## 5. Conclusions

This evaluation has identified that it is possible to complete annual diabetes reviews via remote technologies, and the pathway was successfully adopted by both GP practices. Service users and staff felt this pathway would be suited to people with diabetes who are either working, digitally capable, younger, have household support to complete the tests, have non-complex diabetes, or a combination of these attributes. Two interview participantss who were in low-income shift working jobs particularly liked the intervention as it allowed them greater flexibility to complete their annual diabetes review. Service users and staff thought they pathway would be less suited to the very elderly, those who are less digitally capable, have complex health needs or are socially isolated.

Service users who participated in the interviews and surveys mostly found the tests and pathway acceptable. However, some who received the test kits did not complete the tests, and at least 119 people declined the pathway. This suggests that some people did not find the pathway acceptable, however, further research would be necessary to fully understand why this is. Interviews and surveys identified opportunities to improve the acceptability of the pathway to people with diabetes. These included providing more lances, and larger collection vials for the blood test, as well as the option of in-person demonstrations for the tests, in particular the blood test. Being guided through test instructions in a step-by-step manner was also identified as helpful.

The pathway was deemed acceptable by staff. Staff saw the pathway as an alternative to face-to-face care which could provide greater convenience for their type 2 population and reduce pressure on primary care services. Staff acceptability for a full remote monitoring annual review pathway was largely contingent on the presence of a pathway co-ordinator and project management roles. These were seen as vital for the successful implementation and running of the pathway in primary care. Allocation of sufficient time for contracting and information governance requirements was also identified as important for timely project delivery.

Commissioning this pathway at an ICS or PCN level was also identified as a way of retaining the benefits of the pathway whilst reducing the cost per service user. The cost of implementing and managing the pathway would therefore be distributed across a larger area. Several staff felt that the You and Type 2 at Home pathway was a good option for people with diabetes to complete their

annual review, however, it should only be an option and not a replacement to the face-to-face pathway. Based off their involvement in this remote monitoring pathway, staff also felt that there was potential for remote monitoring technologies to be used more widely in diabetes care, for instance in follow-up monitoring after a medication change or lifestyle intervention.

### 6. Limitations

A major limitation of this evaluation is that the total number of people the intervention was offered to was not consistently recorded. This means that it was not possible to ascertain the initial acceptability of the intervention to people with type 2 diabetes. It was also, therefore, not possible to demographically compare the participation population with those who chose not to participate. Total type 2 population at the practices was used instead to provide an overall sense of any unique characteristics of the participation group. This meant that statistical significance testing was not possible.

Another limitation was that survey response and interview participation was self-selecting and voluntary. Therefore, there is a selection bias for more engaged service users. Furthermore, survey feedback and interviews were only completed with people who opted to use the pathway. There was limited information captured on why people declined the pathway outright, and this would have provided greater understanding on the acceptability of the pathway overall.

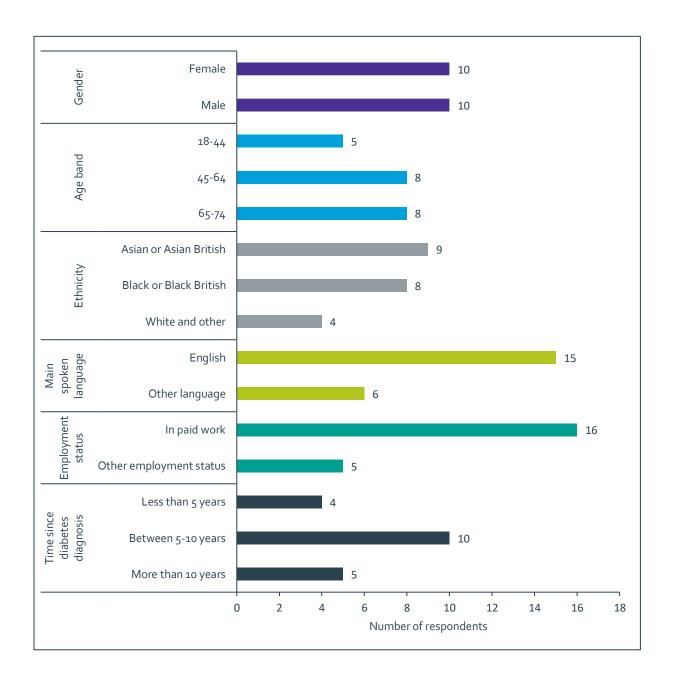
Despite the limitations identified, this evaluation was still able to draw upon a wealth of quantitative and qualitative data to produce findings and recommendations on the acceptability and experience of the You and Type 2 at Home pathway to people with Type 2 diabetes and staff.

## 7. Recommendations

- For certain individuals remote monitoring and testing for diabetes care provides a valued alternative to face-to-face care. Remote monitoring programmes should continue to be commissioned to provide this alternative care pathway. Commissioners should be mindful of not widening health inequalities when commissioning this complimentary testing pathway.
- When commissioning a remote pathway such as You and Type 2 at Home, it is beneficial to commission a co-ordinator to provide capacity to practices to successfully implement and manage the new pathway. The co-ordinator's role is to support practice staff with the implementation of the new pathway, support with admin related to the pathway such as the delivery of test kits, and to follow up directly with pathway users for onboarding and follow up support.
- When commissioning a remote pathway such as You and Type 2 at Home, it is beneficial to commission a project manager to facilitate the adoption and implementation of the new pathway with all stakeholders. The project manager's role is to manage and co-ordinate the project stakeholders, work with the practice(s) to adopt the new pathway, and ensure correct information governance, commissioning and contracting processes are followed.
- When planning to implement a pathway with multiple providers it is necessary to schedule sufficient time to complete contracting and information governance requirements.
- Commissioning such a pathway at population level would enable economies of scale. This
  would reduce the cost per person, and make the intervention more scalable.
- When designing future evaluations for remote monitoring pathways, mechanisms to capture the number of, and reasons for service user decline should be designed into operational delivery.
- Further study is advised into remote monitoring for diabetes intervention follow-up, as this was identified as a potential future development, however, it was not tested in this pilot.

## 8. Appendices

Appendix 1: Profile of Survey Respondents



Appendix 2: Service User Interview Guide

# Interview Schedule: You and Type 2 at Home

Version 3.0, 26.04.2022

#### Pre-interview procedures

- Thank you for agreeing to participate in this interview.
- This interview is part of the You and Type 2 at Home Evaluation for The Health Innovation Network, which is aiming to understand how acceptable completing annual diabetes review checks at home is. You may know this programme as: You and Type 2, Year of Care, Diabetes Annual Review Checks we are all referring to the same thing here, and looking specifically at the experience of completing your tests at home.
- I am Kate Rawlings, one of the Project Managers at the Health Innovation Network and I will be interviewing you today.
  - Emphasise that I am not clinical, this is to understand how acceptable this service is to the public.
- Run through consent forms.
  - We are looking to present the findings from this review at an NHS conference in a couple of weeks. At the end of this interview it would be great if you could provide a 20 / 30 second summary of your thoughts on the programme that we could play other NHS colleagues. Would this be something you would be willing to do?
- Before we start, do you have any questions about this interview or the service?
- Can I confirm you've read and understand the Participant Information Sheet?
- Please can you sign the Informed Consent Form?

#### Interview

#### Introduction:

- There are no right or wrong answers to questions in this interview.
- Everything you say is completely confidential and will be made anonymous.
- The more frank you can be in your answers the more it will contribute to the project.

#### Warm Up / General Info

Tell me a little bit about yourself?

[ Prompts: Age, languages spoken, working, ethnicity, other health conditions]

Motivations and Initial Engagement with the Programme:

What was it about this service that made you want to try it? [Why did you choose to complete your tests at home?]

The kit came with a free BP machine. Was this something that was appealing? [Did you already have one?]

Before you completed the tests at home, did you visit the You and Type 2 at Home webpage or watch the video? Did you find it helpful? If so, why?

#### Testing:

As part of the service you were called several times by a co-ordinator from your GP practice. After speaking to the co-ordinator, how long did you have to wait for your test kit to arrive?

When it arrived, was it what you expected?

Did you complete all the tests at home? [Prompts: Blood Pressure, Urine, Blood Test]

--- If yes

How did you find completing the tests? [Prompts: Blood Pressure, Urine, Blood Test]

Did you find the instructions easy to follow? [Prompts: instructions in kit, website, advice from coordinator]

Is there anything that could have made taking these tests easier for you?

#### --- If some

Which did you take? [Prompts: Blood Pressure, Urine, Blood Test]

Can you tell me about why you didn't complete the [INSERT TESTS NOT TAKEN] tests? ([Prompts: instructions in kit, website, advice from co-ordinator]

Would there have been anything which would have helped you to take these tests?

Of the tests that you did take, how did you find completing them?

Did you find the instructions easy to follow?

Is there anything that could have made taking these tests easier for you?

#### --- If none

Can you tell me about why you didn't complete the [INSERT TESTS NOT TAKEN] tests? ([Prompts: instructions in kit, website, advice from co-ordinator]

Would there have been anything which would have helped you to take these tests?

#### --- Only for those who completed the urine test

How did you find installing the app for the urine test?

How did you find using the app to upload your urine test results?

#### Co-ordinator:

How did you find your call with the co-ordinator? [person at the GP practice who explained about the test kits]

Following the call with the co-ordinator, how prepared did you feel for when the test kit arrived?

Did you contact them again for further support with completing the tests? (may already have been covered)

Is there anything else that they could have done to help you?

#### Future Usage:

What was the most challenging / difficult thing about the at Home pathway / What did you like least about the at Home pathway?

What did you like most about the at Home pathway?

Would you use this service again if it was offered to you? Yes / No ---- Yes / No - why?

Would you recommend it to friends or family who also have diabetes?

Is there anything that you think we should change about the service going forwards?

#### Closing the interview

That's all of the questions that I had planned to ask.

Is there anything else that you would like to add or any other comments that you would like to make before we finish the interview?

Thank you for your time.

## **Staff Interview Questions:**

What was your role in the You and Type 2 at Home project?
How do you feel the project has gone?
What went well?
What challenges did you face?
How did you find working with [INSERT OTHER STAKEHOLDERS e.g. NHS, SME providers]?
What do you see as the future of the at Home programme?
Would you recommend other system partners adopt this service?
What advice would you give someone looking to set up this service? / Summary of any big learnings to be taken away from this?

## References

- NHS Digital. National Diabetes Audit (NDA) 2021-22 quarterly report for England, Clinical Commissioning Groups and GP practices. NHS Digital. Published April 14, 2022. Accessed June 21, 2022. https://digital.nhs.uk/data-and-information/publications/statistical/national-diabetes-audit/core-q3-21-22
- 2. Diabetes UK. Tackling the crisis: Transforming Diabetes Care for a better future England.
  Published online 2020.
- 3. NHS South West London Health & Care Partnership. You & Type 2: Diabetes annual review pathway. You & Type 2: Diabetes Annual Review Pathway. Accessed June 21, 2022. https://www.swlondon.nhs.uk/diabetes-you-type-2/
- 4. NHS England. NHS Accelerated Access Collaborative » NHS Test Beds programme. Accessed July 19, 2022. https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/test-beds/nhs-test-beds-programme/
- 5. Kanani N, Waller E. Letter to GPs and their commissioners: Next steps on general practice response to COVID-19. Published online March 19, 2020. Accessed July 19, 2022. https://mcusercontent.com/feeeed3bba7c179fd3a7ef554/files/799doae8-fb69-4860-8c6c-5678698a0a7a/Preparedness\_letter\_primary\_care\_\_19\_March\_2020.pdf.
- 6. NICE. NICE Impact: Diabetes. NICEImpact. Published online September 2018:20.
- 7. Margham T, Williams C, Steadman J, Hull S. Reducing missed appointments in general practice: evaluation of a quality improvement programme in East London. *Br J Gen Pract*. 2020;71(702):e31-e38. doi:10.3399/bjgp20X713909
- 8. Sekhon M, Cartwright M, Francis JJ. Acceptability of healthcare interventions: an overview of reviews and development of a theoretical framework. *BMC Health Serv Res*. 2017;17(1):88. doi:10.1186/s12913-017-2031-8