Wessex Academic Health Science Network

NHS

Independent Evaluation of AccuRx Florey Plus in Hampshire & Isle of Wight Integrated Care Board

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DISCLAIMER

This report presents the findings of an independent evaluation of AccuRx Florey Plus in the context of Hampshire and Isle of Wight (HIOW) Integrated Care Board (ICB) primary care practices. The findings of this independent evaluation are those of the authors and do not necessarily represent the views of HIOW ICB or AccuRx Ltd.

DECLARATION OF INTEREST STATEMENT

Wessex AHSN supports innovators to bring their innovations to the NHS as well as provide an evaluation service more broadly to our members and others. On occasion, we evaluate innovations that we have also supported. Whilst these evaluations are independent, for transparency we disclose our dual role where applicable. In this report we note the dual role of Wessex AHSN to facilitate both implementation and independent evaluation of AccuRx Florey Plus.

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EXECUTIVE SUMMARY

BACKGROUND

In June 2021, NHS England and NHS Improvement (NHS E&I) introduced the Blood Pressure at Home (BP@Home) service across primary care. The BP@Home service forms part of a range of initiatives being developed by NHS@Home, enabling personalised care connected where appropriate via digital technology accessible by patients in their place of residence. NHS E&I procured around 220,000 blood pressure (BP) monitors for clinical teams to distribute to their patients, targeting patients with poorly controlled hypertension, prioritising those most at risk of becoming seriously ill with COVID-19, or suffering heart attacks and strokes. The aim was to support patients to manage and monitor their hypertension remotely, without the need to attend GP appointments. 6000 BP monitors were allocated to Hampshire and Isle of Wight Integrated Care Board (HIOW ICB) to ensure sufficient devices would be available. A digital solution was also required to ensure this aim could be fulfilled. AccuRx Florey Plus, which includes a home monitoring of BP Florey, was the digital solution selected by HIOW ICB.

The Hampshire & Isle of Wight Primary Care Digital Roadmap has been established to create a consistent and coherent plan to further digitise primary care services in line with local, regional, and national agendas. The aim of the Hampshire & Isle of Wight Digital Self-Care Demonstrator project was to develop and embed a robust digital self-care offer. Wessex Academic Health Science Network (AHSN) sought to support the embedding and evaluation of three digital self-care innovations, via its Primary Care Demonstrator programme. One of these innovations was AccuRx Florey Plus, with Wessex AHSN providing deployment support and a locally focused evaluation.

For this evaluation, the initial focus was how BP Floreys supported practices to offer the BP@Home service. However, during scoping the evaluation expanded to include the usage and impact of all Florey surveys (Lite and Plus). The main contributing factors to this decision were that the Demonstrator practices felt the impact and the clinical indications for the BP home monitoring Floreys surveys in isolation of the rest of the BP@Home clinical pathway would be difficult to demonstrate, and that the inclusion of all Floreys allowed for exploration of other clinical areas commonly supported by Floreys surveys. The agreed scope of this evaluation was to:

1. Understand Florey Lite and Plus usage across all practices within HIOW ICB
2. Understand Florey Lite and Plus usage within four specific practices (the Demonstrators) to provide more in-depth insights into how Floreys are used by practice staff.

THE EVALUATION

The evaluation used a mixed methods approach to gather quantitative and qualitative data concurrently to provide intelligence on AccuRx Florey Plus. Following data collection and analysis of each data source, a data synthesis process was undertaken to draw together the findings and to develop conclusions to the evaluation questions.

The evaluation sought to answer seven questions on (1) the extent and variation of use across HIOW ICB and (2) within the Demonstrator practices, (3) the impact on patient care, (4) the extent that AccuRx Floreys were acceptable, appropriate, and implementable, (5) the impact on general practice, (6) how any impacts had occurred, and (7) what lessons could be gleaned from the experience.

SUMMARY OF THE USE AND VALUE OF ACCURX FLOREYS ACROSS HIOW ICB

The analyses include 163 practices in HIOW ICB, which were all operating at some point between February 2020 and April 2022. Importantly, 163 practices were not all open at the same time, but they were different practices and their data has been included. Of these, ten practices reported no use of Florey Lite or Florey Plus during this timeframe.

The total number of Floreys used between February 2020 and April 2022 was 249,074. This comprised 217,449 Floreys Lite and 31,625 Floreys Plus. The rate of use over time varied and saw sharp increases in March 2020 and the winter of 2020 with extensive use of the COVID-19 Triaging Florey (Lite) and Ethnicity Florey (Plus), to support COVID activities at practices. Across the ICB practices there was considerable variation of use with individual Florey surveys, with practices grouped into 'high variation-high usage', 'high variation-low usage', 'low variation-high usage', and 'low variation-low usage'.

The highest and most regularly used individual Floreys were COVID-19 Triaging Florey (Lite) and Asthma Florey (Lite). Since September 2021, Blood Pressure (Plus) Floreys have become the third most used Florey surveys in HIOW ICB. One Demonstrator practice used the Blood Pressure Floreys as part of their delivery of the BP@Home service; however, it was unclear whether Blood Pressure Florey use increased across the ICB solely as part of the BP@Home service or increased due to clinicians using it in their practice in an ad-hoc way.

In an ICB-wide staff survey, 37 staff from 33 practices all (100%) stated that Floreys, in general, were helpful to manage patient care. Of the 37 staff, 16 (43.2%) were GPs. Furthermore, most staff found Floreys easy to use (97.3%), increased practice productivity (97.3%), saved clinicians time to do other work (91.9%), saved appointments with clinicians (89.2%), and generally found integrating Floreys responses into other practice work easy (91.9%). The Floreys most effective at saving appointments were Blood Pressure Home Monitoring (71% of the time), Blood Pressure (70.3%), Asthma ACT (66.7%), and Chronic Obstructive Pulmonary Disease (COPD) (60%).

SUMMARY OF THE USE AND VALUE OF ACCURX WITHIN FOUR DEMONSTRATOR PRACTICES

A deep dive into four practices, as part of the HIOW Digital Self-Care Demonstrator project, complemented the HIOW ICB wide analyses. Three practices from the PCN1 (Practice C, Practice A, Practice B) and one practice from PCN2 (Practice D) participated.

The total number of Floreys used between February 2020 and April 2022 was 2,378. Practice D and Practice C were the most consistent users of Floreys. Practice B has spikes of very high activity, but almost exclusively for Florey Lite. Practice A has only used a handful of Florey Lite, but recently has started to use Florey Plus.

An investigation of staff type indicated a wide range of staff were involved and Florey activity delegated. GPs used the AccuRx system primarily for sending single messages to patients. Administrative staff also heavily used the single message function but also sent the highest number of Floreys. It was assumed this was directed activity from GPs or other clinicians but does demonstrate the division of labour when operationalising Florey surveys.

Seventeen patients linked to the participating practices completed the patient acceptability survey. All (100%) of patients thought Floreys fitted in with their daily activities, 94.1% of patients thought Floreys were technically reliable, 94.1% thought Floreys were an easy way monitor and manage their condition, 88.2% believed Floreys helped them monitor their condition, 88.2% would respond to Floreys again if needed, 87.5% reported Floreys were easy to share measurements, 82.4% of patients were confident to respond to Florey surveys, and 70.6% stated Floreys were a successful way to manage their condition.

Key impacts reported were increased convenience and ease of information sharing for both patients and practice staff, and time savings and efficiencies for staff and practices.

LESSONS LEARNED FOR HIOW ICB TO SUPPORT PRACTICES:

- Consider the training requirements on Floreys and features of AccuRx to ensure optimal operationalisation of Floreys and AccuRx across the ICB, as although the system is intuitive and easy to navigate it is hard to be aware of the breadth of Floreys and the features available. It takes time to 'give it a go' to understand how Floreys and features of AccuRx fit optimally into pathways and where they fit alongside or to replace other systems.

- Consider 'shared learning' opportunities through practices sharing their Standard Operating Procedures for Florey use in clinical areas.
- Consider 'shared learning' opportunities through e.g., user led 'Community of Practice' facilitated by the ICB between practices, so each practice is not trying to 'reinvent the wheel'. The 'less invested' practices need to be represented to avoid increasing the gap between high and low user adoption levels.
- Consider tailoring support for individual practices and their staff members in using different Floreys and features of AccuRx both within and between practices, as one standardised operational model for Floreys and features of AccuRx is not appropriate.
- Support practices to use the Floreys and features of AccuRx to meet Quality Outcomes Frameworks (QOF) targets and other incentives or prioritised care pathways within general practice.
- Support practices to embed Floreys and features of AccuRx within normal working (such as within care pathways) and encourage practices, where possible, not to be reliant on a 'champion'.
- Support for the engagement of end users in the procurement of new technologies. AccuRx was introduced when other 'competing' systems or products were already commissioned which have similar features or offerings (Mjog; eConsult).

LESSONS LEARNED FOR PRACTICES TO SUPPORT THEIR STAFF:

- Consider formal training for individual staff based upon levels of confidence with digital technology and digital literacy, as this has the potential to impact volume and diversity of use by staff members.
- Support practices to have the skills to send personalised and individualised messages which offer a human layer to gain higher response rates than robotic and standardised messages, whilst also ensuring the messages sent are professional and use appropriate language for communicating with patients.
- Consider having IT staff trained and available to facilitate the functions of AccuRx Florey Plus.

LESSONS LEARNED FOR PRACTICES TO SUPPORT THEIR PATIENTS:

- Ensure adequate information is given to the patient regarding use and completion of Floreys.
- Consider an education piece for patients who have previously not consented or have declined to be contacted via message or email at a practice level, to ensure practices are able to explain how and why message-based systems like AccuRx work and how they can complement the care provided by general practice.
- Consider an education piece for patients who would like to use digital technology like AccuRx, but do not currently have the skills to do so. This recognises that not all patients are digitally literate or confident using technology.

LESSONS LEARNED FOR ACCURX

- Consider introducing a 'read-receipt' for messages which have been sent to give practices reassurance the message has not only been sent, but also the patient has also read the content.
- Consider providing the ICB with high level reports on response rates by patients to Florey surveys and other appropriate features offered by AccuRx to enable the ICB to be better positioned to support practice strategies to increase their response rates.
- Consider developing a communication channel with AccuRx between primary and secondary care.
- Develop a PCN- / ICB- / CCG- wide directory within AccuRx / AccuMail so individual practices do not need to keep a directory of services or contact details for services updated. This directory of services

could also include referral criteria for the services, to make referring to and contacting other services more streamlined.

- Consider the character limits on the messages as, for some staff, the character limit was insufficient to ensure the content of messages sent included the required information.
- Continue to have a proactive and responsive approach to developing Floreys and features within AccuRx.
- Automate and provide analysis options in the clinician's platform so practice staff can quickly understand Florey use (1) by individual Florey, (2) by practice staff type, and (3) understand messages sent by practice staff type, as well as provide aggregated totals.

CONCLUSIONS

EXTENT AND VARIATION OF USE ACROSS HIOW ICB

The general uptake of AccuRx Florey Lite and Plus differed across the ICB. There were also differences in the usage over time across the ICB, with peaks and troughs in March 2020 and the winter of 2020. A large degree of variation of individual Florey use was seen, with high users and low users of individual Floreys or groups of Floreys. Where Floreys were being used, the only noticeable patterns were the common usage of COVID-19 triaging, asthma, and BP Floreys. Regardless of the practice or PCN across the ICB, it was noted that 'Floreys sent' made up a small proportion of total AccuRx package usage, with the majority of usage related to 'Ad hoc' messages. This indicates there is work to be done at an ICB-, PCN-, practice-, individual staff member- and innovator- level to facilitate wider utilisation of AccuRx (Florey Plus, Florey Lite, and additional features). This may require a focus on implementation strategies to enhance the utilisation of Florey Plus, Florey Lite, and other features which are not widely used (e.g., AccuMail).

IMPACT ON PATIENTS AND PRACTICES

Patients surveyed from the demonstrator practices reported positive views about the broad value of AccuRx, as 94.1% thought Floreys were an easy way to monitor and manage their condition, 88.2% believed Floreys helped them monitor their condition, and 70.6% stated Floreys were a successful way to manage their condition.

There were also perceptions from staff members from across the ICB that AccuRx impacted patient care positively due to the additional convenience it offered patients, as they were no longer required to travel to practices unnecessarily. There were also key patient groups perceived to have positively benefited from the use of AccuRx (e.g., those of working age, those with hearing difficulties or language barriers).

All practice staff who responded to the ICB-wide survey agreed that Floreys, in general, were helpful to manage patient care. This was also the case from the staff members involved in the 'variation' interviews, who reported AccuRx in general was a useful tool to help care for patients efficiently. These time-savings and efficiencies were possible as AccuRx was felt to be a flexible system which could be used across all roles within general practice as well as within clinical and non-clinical pathways.

It was widely considered that AccuRx increased, or had the potential to increase, practice productivity and offer time savings to PCNs, practices, and individual staff members. It would appear AccuRx Florey surveys have helped to reduce workload in practices and reduce some of the burden on patients.

IMPLEMENTATION SUCCESS ASSESSMENT

The staff members involved in the 'variation' interviews reported AccuRx to be acceptable, appropriate, feasible, and sustainable. Fidelity (defined as the extent AccuRx was 'used as intended') was variable, given that staff members from across the ICB reported different levels of uptake of the Floreys (Lite and Plus) and

features of AccuRx. These differing levels of uptake were reported to be based upon their own level of knowledge of the system as opposed to not valuing the features which had not been used.

A key reason for the variable levels of adoption and penetration across the ICB were the differing investments in time allocated to explore AccuRx. This implementation cost needs to be considered. Patients surveyed from the Demonstrator practices reported positive views about AccuRx. All patients thought Florey surveys fitted in with their daily activities, 94.1% of patients thought Floreys were technically reliable, 88.2% would respond to Florey surveys again if needed, 87.5% reported Floreys were easy to share measurements, and 82.4% of patients were confident to respond to Florey surveys.

FINAL SUMMARY

In conclusion, findings throughout this evaluation indicate AccuRx Florey Lite and Plus are positively regarded in most situations across HIOW ICB, but a high variation in the use of their features and different Florey surveys was also apparent. At present, there is reasonably large untapped potential in this patient communication system for HIOW ICB.

1. BACKGROUND

1.1 NATIONAL AGENDA FOR HOME MONITORING OF BLOOD PRESSURE

In June 2021, NHS England and NHS Improvement (NHS E&I) introduced the Blood Pressure at Home (BP@Home) service across primary care. It soon became apparent that there was a need to provide an effective digital solution to support practices to ensure the efficiency of the service whilst enhancing patient experience.

The BP@home service forms part of a range of initiatives being developed by NHS @home, enabling personalised care connected where appropriate via digital technology accessible by patients in their place of residence. NHS E&I procured around 220,000 blood pressure (BP) monitors for clinical teams to distribute to their patients, targeting patients with poorly controlled hypertension, prioritising those most at risk of becoming seriously ill with COVID-19, or suffering heart attacks and strokes.

The aim was to support patients to manage and monitor their hypertension remotely, without the need to attend GP appointments. 6000 BP monitors were allocated to Hampshire and Isle of Wight Integrated Care System (HIOW ICB) to ensure sufficient devices would be available. A digital solution was also required to ensure this aim could be fulfilled.

1.2 REQUIREMENTS FOR A DIGITAL SOLUTION FOR HOME MONITORING OF BP

The selected digital solution was required to assist in the collection and input of data from the clinician to the patient and vice versa. This digital solution therefore had to include the following functionality:

- Ability for patient to digitally input BP readings
- BP readings to be digitally sent back to GP practice
- BP readings to be added to and visible in the patient's GP Record
- Average BP reading over the 4–7-day monitoring period to be SNOMED coded back into the record.
- Timeframes to stand up the service
- Considerations in line with above point re: implementation
- A simple, easy innovation for practices to use – given the increased workload and stress on general practice and limited capacity due to the COVID-19 pandemic.

A review of available products which met the above criteria took place. HIOW ICB working in partnership with Wessex AHSN carried out a horizon scan of products in use in the South East region, linking with existing digital primary care suppliers to assess whether current technologies would fulfil the requirements of the digital solution eventually selected for the BP@Home service.

1.3 ACCURX BP FLOREYS FOR HOME MONITORING OF BP

AccuRx home monitoring of BP Floreys was the digital solution selected and investigated as part of the Hampshire & Isle of Wight Digital Self-Care Demonstrator project.

The Hampshire & Isle of Wight Primary Care Digital Roadmap has been established to create a consistent and coherent plan to further digitise primary care services in line with local, regional, and national agendas. The aim of the Hampshire & Isle of Wight Digital Self-Care Demonstrator project was to develop and embed a robust digital self-care offer. Wessex AHSN sought to support the embedding and evaluation of three digital self-care innovations, via its Primary Care Demonstrator programme. One of these innovations was AccuRx Florey Plus, with Wessex AHSN providing deployment support and a locally focused evaluation.

The BP Floreys are online questionnaires sent directly to patients to collect their BP readings. The questionnaire link could be sent via SMS or email. The patient would fill out the questionnaire through a

browser accessed via their mobile phone, tablet, laptop, or desktop. The patient was asked to take three BP readings and submit the average of the 3 readings each time a BP reading was requested. The reading was then returned to the practice via the link sent to the patient, which was then saved directly into the clinical record (EMIS or SystmOne) as a coded entry. The entry could have additional notes added, assigned to other colleagues, and marked as urgent depending on the BP reading.

There was a BP Florey for 4-day or 7-day home monitoring. When set on the 4-day or 7-day monitoring Florey service, text messages or emails were sent to the patient once in the morning and once in the evening for four or seven consecutive days. As above, the patient was asked to take three blood pressure readings and submit the average. Upon conclusion of the monitoring period, the 4-day or 7-day average is SNOMED coded into the GP record. All other readings sit in the record as free text.

NB: Although AccuRx was not directly named as a digital solution for BP@Home Service (https://www.england.nhs.uk/ourwork/clinical-policy/cvd/home-blood-pressure-monitoring/), it was proposed as a digital solution from the horizon scanning and for home blood pressure monitoring by UCL Partners (https://s31836.pcdn.co/wp-content/uploads/Hypertension-pathway-September-2020.pdf). As a result, the use of the 4-day and 7-day home monitoring Floreys were considered suitable for use within the BP@Home service as they met the requirements outlined in the NHS E&I Standard Operating Procedure as well as the additional requirements for HIOW ICB.

1.4 ACCURX FLOREY PLUS

HIOW ICB perceived additional benefits from using AccuRx BP Floreys. First, the 'Lite' module' and basic features of AccuRx had been used across the whole of HIOW Primary Care for at least 12 months prior to procuring Florey Plus in July 2021. Given that GPs and the wider practice workforce were believed to be familiar with using Floreys and features of AccuRx, it was felt that minimal or no training was required to implement this product.

Alongside this, the availability of the wider Florey surveys within the Plus module was felt to be of benefit as these could also be utilised with additional patient cohorts within local clinical pathways and clinics or have the potential to be useful in wider NHS@Home programmes as well as the BP@Home service.

The other additional questionnaires and surveys included in Florey Plus were:

- Health Check
- Depression - PHQ-9
- Anxiety - GAD-7
- Combined Oral Contraceptive Pill
- Progesterone-Only Pill
- Diabetes (Pre-Appointment)
- Ethnicity
- Fracture risk – FRAX.

1.5 EVALUATION IMPLICATIONS OF PROCURING THE ACCURX FLOREY PLUS MODULE

For this evaluation, the initial focus was intended to be around BP Floreys and the BP@Home service. However, during scoping the evaluation expanded to include the usage and impact of all Florey surveys (Lite and Plus). The main contributing factors to this decision were that the demonstrator practices felt the impact and the clinical indications for the BP home monitoring Floreys in isolation of the rest of the BP@Home clinical pathway would be difficult to demonstrate, and that the inclusion of all Floreys allowed for exploration of other clinical areas commonly supported by Floreys. The agreed scope of this evaluation was to:

1. Understand Florey Lite and Plus usage across all practices within HIOW ICB
2. Understand Florey Lite and Plus usage within four specific practices (the demonstrators) to provide more in-depth insights into how Floreys are used by practice staff.

2. EVALUATION QUESTIONS

Based on the scoping exercise with HIOW ICB, several evaluation questions were developed to investigate AccuRx Florey Plus.

1. To what extent and variation have AccuRx Florey Plus surveys been utilised by all HIOW ICB participating PCNs/practices?
2. To what extent and variation have AccuRx Florey Plus surveys been utilised by Demonstrator PCNs/practices?
3. What impact has AccuRx Florey Plus surveys had on service user care?
4. To what extent are AccuRx Florey Plus surveys acceptable, appropriate, used as intended, feasible and sustainable for service users?
5. What impact have AccuRx Florey Plus surveys had on the efficiency of general practice?
6. How has AccuRx Florey Plus surveys impacted on patients, staff, and services?
7. What lessons can be drawn from the experience of participating in a Demonstrator project?

3. METHODS

The evaluation used a mixed methods approach to gather quantitative and qualitative data concurrently to provide intelligence on AccuRx Florey Plus. The quantitative and qualitative data sources included in this evaluation are detailed in Section 4.

Quantitative data from the utilisation metrics and surveys were summarised and graphically presented. In some cases where appropriate, inferential statistics were used to support the analysis. A framework analysis was undertaken for the all the qualitative interviews. Appendix 1 provides the detailed table of themes from the framework analysis undertaken.

Following data collection and analysis of each data source, a data synthesis process was undertaken to draw together the findings and to develop conclusions to the evaluation questions.

Each section of this report includes synthesised findings, first reporting the quantitative findings followed by the related survey and qualitative findings to provide a ‘what was happening’ as well as ‘why it was happening’ dialogue where possible.

4. PARTICIPATION

Four practices consented to be demonstrators. Three PCN1 practices: Practice C, Practice B, Practice A, and one PCN2 practice: Practice D.

1. Practice profiles – developing profiles for each practice used publicly available data, to help build a profile of the Demonstrator practices. This looked at metrics such as populations, QOF and digital maturity, and compared practices to a national average.
2. Utilisation metrics – a large database of AccuRx Florey Plus and Lite activity, reporting on 163 practices using these innovations in HIOW ICB between February 2020 and April 2022, was available to the evaluation team and provided by HIOW ICB. This database included the number and type of

Floreys sent, and the number and type of wider functions such as various types of messaging. As an indication of the size of the database, the total number of Floreys sent between February 2020 and April 2022 was 249,074. This comprised of 217,449 Lite Floreys and 31,625 Plus Floreys.

3. HIOW ICB wide practice staff survey – an online survey was advertised via HIOW ICB communication channels and 37 practice staff from 33 different practices (20% of all HIOW ICB practices) responded to the survey during March and April 2022. The responding 33 practices were from 24 different PCNs.
4. Special focus – 'variation interviews' – three staff members were interviewed from HIOW ICB practices that had high and low levels of AccuRx Florey Plus usage. None of these practices were a Demonstrator practice. Appendix 1 includes more detail on the demographics of the staff members interviewed.
5. Demonstrator Florey Plus usage by clinician type – all four practices provided data to understand which type of clinicians were using Floreys, at the aggregated level.
6. Demonstrator practice staff interviews – four staff members were interviewed from the four Demonstrator practices. Appendix 1 includes more detail on the demographics of the staff members interviewed.
7. Patient acceptability surveys – seventeen patients completed this survey. These patients were recruited via the four Demonstrator practices.
8. Patient interviews – one patient who had experience of the AccuRx Florey 4-day home monitoring of BP consented to be interviewed. This patient was recruited via a Demonstrator practice. Appendix 1 includes more detail on the demographics of the patient interviewed.

5. UNDERSTANDING FLOREY USE ACROSS HIOW ICB

The analyses include 163 practices in HIOW ICB, who were all at some point in time open between February 2020 and April 2022. Of these, 12 closed during this period and 7 are currently marked as Dormant. They can be grouped into 43 PCNs in HIOW ICB (including some practices who are not within PCNs).

When combining message data, a small overlap of 1st to 4th February 2022 may have occurred. These instances of overlap are believed to be low number of messages that do not affect the Florey usage data.

The analyses in this section focus on several aspects of the Florey platform, including, where data availability permitted, the messaging functions and Florey surveys from both the Florey Lite and Florey Plus packages.

5.1 WIDER FUNCTIONS OF ACCURX FLOREY PLUS

It is important to note when considering the wider functions of AccuRx that not all the AccuRx functions were available across all practices. The commissioning CCG only funded messaging (SMS), Video, Pathways, Florey Lite and Florey Plus. Practices may have independently purchased other functions.

The total number of messages sent between February 2020 and January 2022 was **6,677,116** with a mean average of **278,213 messages** being sent **per month**. Due to reliability issues with the data on wider functions, data from February to April 2022 have been excluded in the analysis in Table 1.

Table 1. Total number of messages sent between February 2020 and January 2022 across the ICB.

Message Type	Number	%	Monthly Average
Ad-hoc messages sent	6,176,070	92.5%	257,336
Video links sent	86,802	1.3%	3,617
Floreys sent	227,537	3.4%	9,481
Batch messages sent	138,645	2.1%	5,777
Appointment reminders sent	165,18	0.2%	688
Pathways sent	9,310	0.1%	388
Web ad-hoc messages sent	7,239	0.1%	302
Web video links sent	2,179	0.0%	91
AccuMail messages sent	12,816	0.2%	534

Although the focus of this evaluation was on Florey usage, Table 1 demonstrates that these only account for a very small proportion of AccuRx usage across the ICB. Most of the activity was ad hoc messages, which could be one-off messages sent to patients, or where practices have created their own message templates to send.

It would not be unexpected that the most used features of AccuRx would be the ones which were felt to save the most time and offer the most efficiencies in ways of working. Staff members from the qualitative interviews reported the key features they use to be messaging (templates and free typing, with and without ability to respond; messaging with and without links), batch messaging, delayed messaging, and the ability to assign other to receive the response, which according to Table 1 were the most used Floreys.

AccuMail was one specific feature of AccuRx not commonly used, postulated to be due to staff's unawareness of it, but was perceived to be highly valuable by those who do use this feature as a mechanism for saving time.

5.2 EXTENT OF FLOREY USAGE

The total number of Floreys used between February 2020 and April 2022 was **249,074**. This comprised of **217,449** Lite Floreys and **31,625** Plus Floreys.

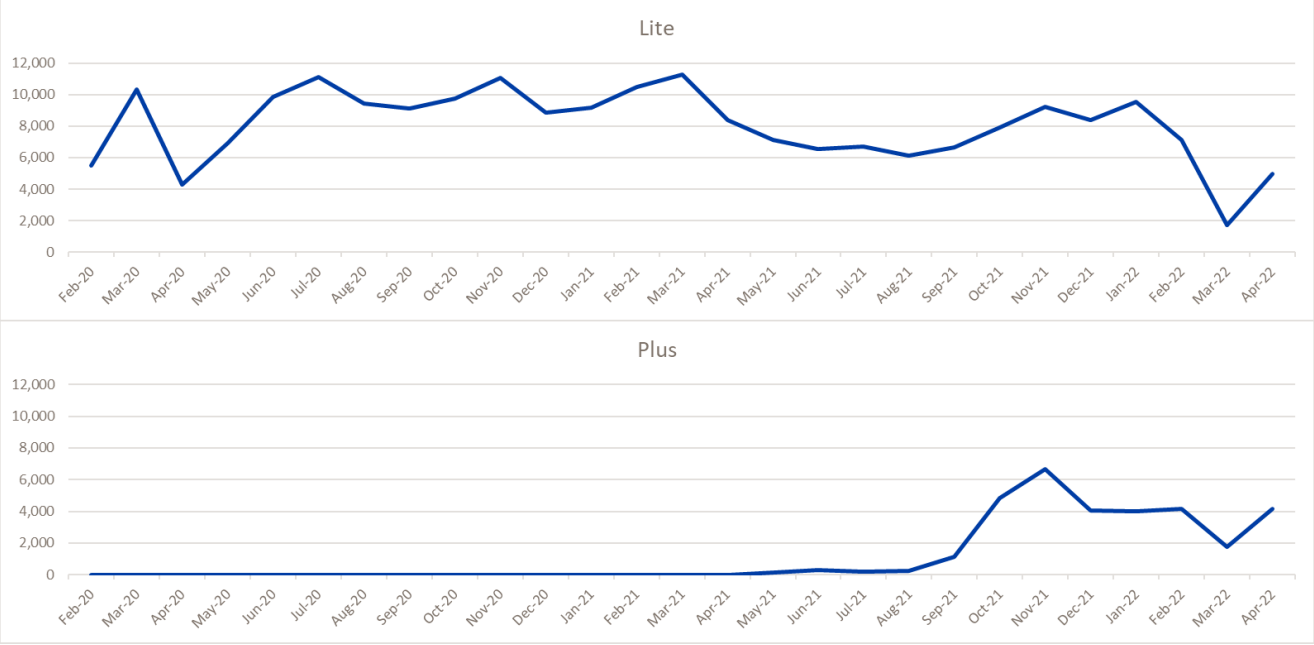

Figure 1. Total Florey usage for Lite and Plus between February 2020 and April 2022 across the ICB.

Note: Florey Plus was commissioned by Hampshire Southampton Isle of Wight (HSIOW) CCG in July 2021.

The total Floreys have been expressed here as a rate per 1,000 patients. Practice population size was used to calculate the rate, meaning that GP practice activity was comparable regardless of size.

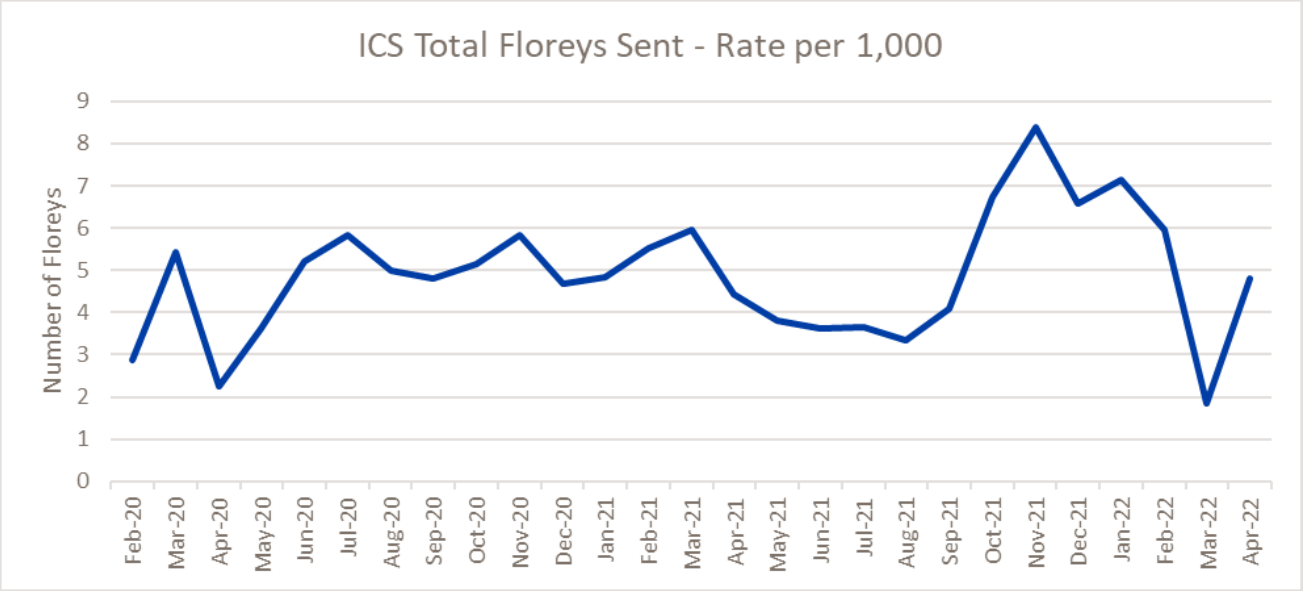

Figure 2. Total Florey usage (Lite and Plus combined) between February 2020 and April 2022 across the ICB as a rate per 1000.

Activity has regular peaks and troughs throughout the time period; however there are a couple of points that may link to external factors. The first peak occurs in March 2020 when the COVID-19 Triaging Questionnaire was started to be used by the majority of practices. There was then a dip in summer 2021, followed by a sharp increase in activity between October 2021 and January 2022. This was as a result of increased usage of COVID-19 and ethnicity questionnaires, which may be linked to an increase in COVID-19 numbers nationally. There was a sharp decline in Florey usage in March 2022, due to very low numbers of COVID-19, Ethnicity and Asthma questionnaires being sent, which were all the highest used Floreys at the time.

Further postulations regarding the peaks and troughs are related to seasonality. For example, the trough from March 2021 to September 2021 was likely due to the summer putting less pressure in the system and therefore leading to less reliance on Floreys. Similarly, the peaks from October 2021 to Feb 2022 peaks could be associated with winter and vaccination pressures, meaning the system became more reliant on Floreys to reduce the need for telephone calls and face-to-face appointments. Lastly, one interpretation of the April 2022 peak related to practices returning to 'business as usual' after winter and COVID-19 pressures, so practices have started sending out more Floreys related to long term conditions, and have begun re-focusing on QOF.

5.3 VARIATION OF FLOREY USAGE

The scatter-graph below shows all practices plotted based on the volume of Floreys sent as a rate per 1,000 in the population, against the number of different types of Floreys sent between February 2020 and April 2022. The demonstrator practices have been highlighted as yellow triangles.

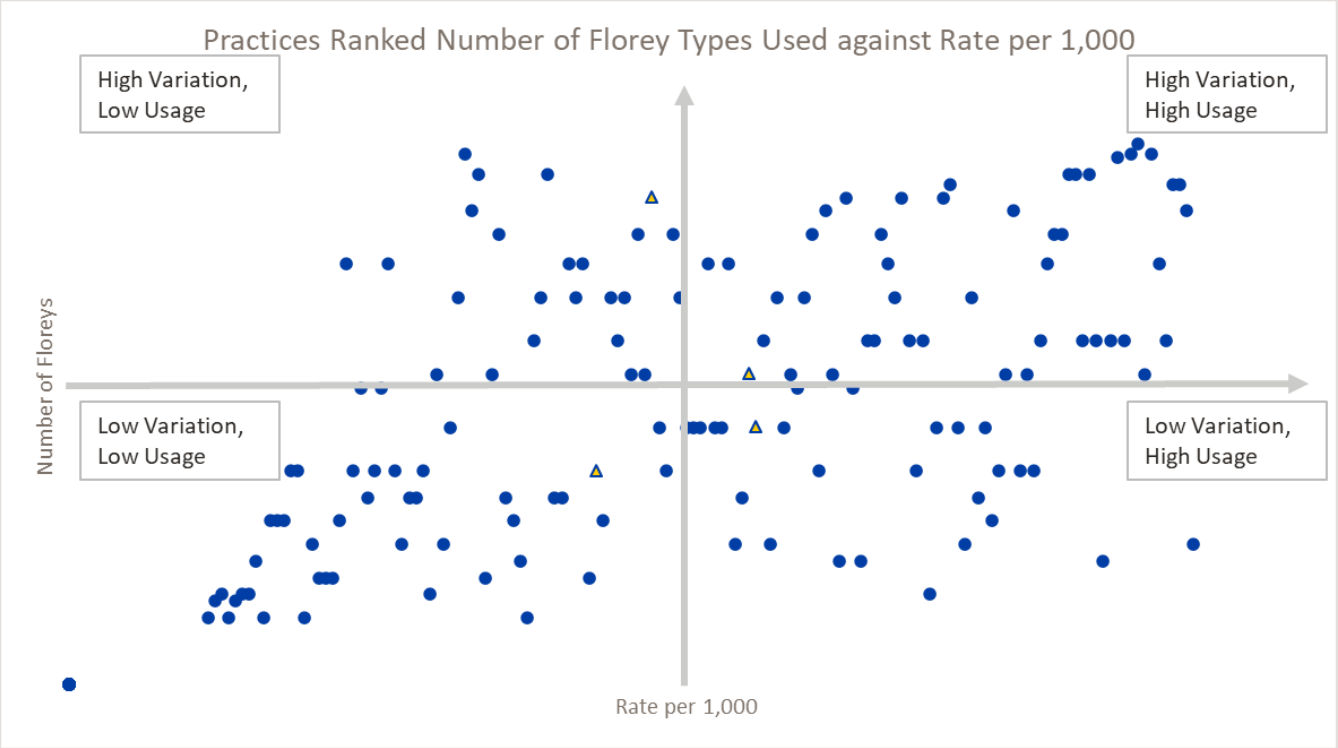

Figure 3. Practices ranked according to extent and variation of Florey usage by rate per 1000 across the ICB.

Below is a breakdown of how many practices fall into each quadrant on the chart:

- Low Volume, Low Variation = 66
- Low Volume, High Variation = 24
- High Volume, Low Variation = 27
- High Volume, High Variation = 46

This graph highlights high variation of Florey use across the ICB. The largest number of practices are in the low volume, low variation quadrant. This could be due to a variety of factors such as negative feelings around using Floreys or a greater need for additional information and training. The need for training and orientation to Floreys and the features offered by AccuRx was raised by all the staff members interviewed.

The next highest quadrant was high volume, high variation, indicating that once practices start using Floreys they are keen to experiment more. This was corroborated by the qualitative data revealing that all staff interviewed (even those who had not used many Floreys or features offered by AccuRx) found value in what they used.

It might be expected the Demonstrators be the highest users, however, not only were they spread across all four quadrants, but seem to be clustered in the middle suggesting they were only average users. This was important as it indicates that 'interest' in a product does not automatically translate into high usage, and support to convert interest into implementation was required.

It was difficult to identify any outliers who might be best placed to comment on best practice or what could be done better. Nonetheless, there are some key lessons learned from the qualitative interviews which have been detailed in section 11 which could increase adoption, penetration and sustainably of AccuRx going forward.

In addition to the distribution of practices shown above, 40 practices across the ICB (25% of total number of practices) were identified as either never using AccuRx Lite, Plus, or both. Of these, 18 closed or were classed dormant during the evaluation period. Excluding the dormant and closed practices, 10 practices did not use

AccuRx Lite or Plus, 9 practices did not use AccuRx Florey Plus, and 3 did not use AccuRx Florey Lite. Figure 4 maps the broad geography of the practices (excluding dormant/closed) yet to engage with AccuRx Florey Lite and/or Plus.

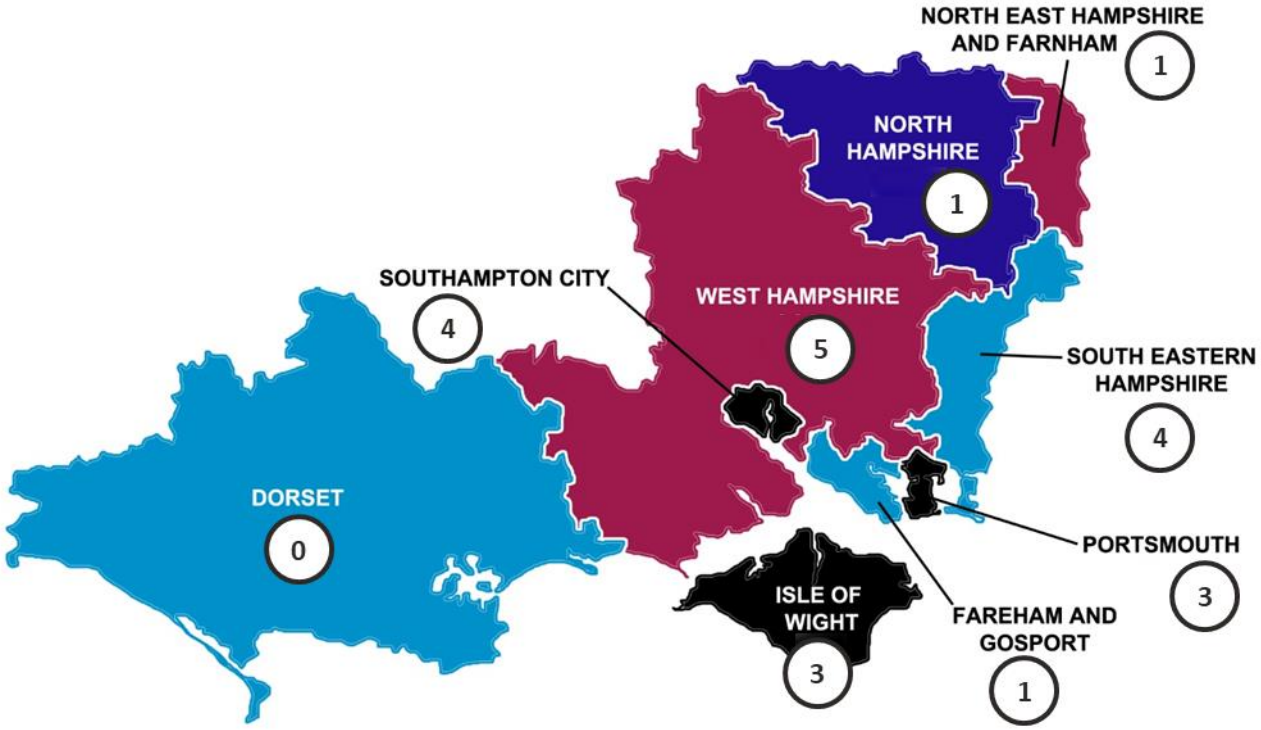

Figure 4. Geography of the practices (excluding those dormant/closed) yet to engage with AccuRx Florey Lite and/or Plus.

Of the 43 PCNs across the ICB, all used between 11-25 different types of Floreys between February 2020 and April 2022. The PCN summary indicates there was large variation in Florey usage across the ICB. Although this shows us as groups of practices that PCNs have all used a variety of Floreys, it does not indicate if there are any high/low users that are skewing the totals.

Table 2. The number of Florey Types used by PCNs across the ICB.

Number of Florey Types	Number of PCNs	%
11-15	11	25.6%
16-20	15	34.9%
21-25	17	39.5%

There has also been high variation of use at the individual Florey level. For context, 26 different Floreys have been available between February 2020 and April 2022. Not all are still in use, as some have been superseded by new measures. Some Floreys also relate to the same condition, although have different purposes. For our analysis, the table below includes the 26 Floreys grouped into their related condition(s) or function.

Table 3. Floreys grouped according to their related condition(s) or function.

Florey	Lite or Plus	Group
Anxiety GAD-7 Questionnaire	Plus	Anxiety/Depression
Depression PHQ-9 Questionnaire	Plus	Anxiety/Depression
Asthma ACT Questionnaire	Lite	Asthma
Asthma Questionnaire	Lite	Asthma
Asthma RCP Questionnaire	Lite	Asthma
Blood Pressure Questionnaire	Plus	Blood Pressure
Blood Pressure Questionnaire - 4d Home Monitoring	Plus	Blood Pressure
Blood Pressure Questionnaire - 7d Home Monitoring	Plus	Blood Pressure
Cancer Care Review Questionnaire (partnered - Macmillan)	Lite	Cancer
COCP Repeat Prescription Questionnaire	Plus	Contraception
POP Repeat Prescription Questionnaire	Plus	Contraception
COPD Questionnaire - CAT, MRC (sponsored by GSK)	Lite	COPD
COPD Questionnaire - MRC	Lite	COPD
COVID-19 Remote Monitoring Questionnaire	Lite	COVID-19
COVID-19 Triaging Questionnaire	Lite	COVID-19
Diabetes Pre-Appointment Questionnaire	Plus	Diabetes
Ethnicity Questionnaire	Plus	Ethnicity
Flu Vaccination Invite	Lite	Flu
Flu Vaccination Questionnaire	Lite	Flu
Alcohol Consumption Questionnaire - AUDIT-C	Lite	Health Monitoring
BMI Questionnaire	Lite	Health Monitoring
FRAX Questionnaire	Plus	Health Monitoring
Health Check Questionnaire	Plus	Health Monitoring
Height and Weight Questionnaire (pre-BMI Florey that did not include BMI calculation)	Lite	Health Monitoring
Smoking Questionnaire	Lite	Health Monitoring
UTI Questionnaire (partnered - TARGET)	Lite	Health Monitoring

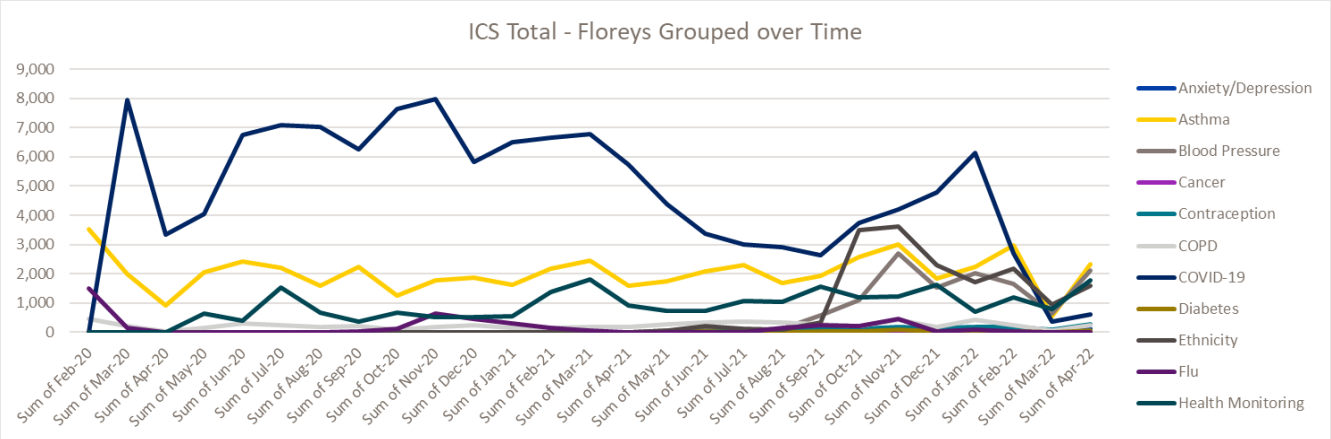

Figure 5. Total Florey usage (Lite and Plus combined) between February 2020 and April 2022 across the ICB according to the related condition or function.

The COVID-19 Floreys have been the most used from March 2020 until March 2022, which was to be expected due to the pandemic. Asthma has been consistently second and Blood Pressure usage has

increased in recent months. These Floreys relate to long-term conditions and QOF measures, so may be being used as part of this programme of work. This was elaborated on in the survey free text responses:

> *"Asthma ACT and COPD helps to judge who needs face to face review" (ICB survey respondent 7)*
>
> *"Asthma ACT as it has enabled us to get a grasp on the outstanding Asthma QoF work" (ICB survey respondent 28)*
>
> *"As a nurse doing a lot of the respiratory reviews, I don't think I could have managed without the Asthma ACT and COPD Floreys. They have been so useful and time saving. A lot of patients find them more convenient to complete in their own time." (ICB survey respondent 30)*
>
> *"BP home monitoring has enabled greater encouragement of self-management and regimen modification where appropriate in a fashion more convenient to clinicians and patients" (ICB survey respondent 33)*

Figure 5 above highlights the March 2022 decrease was across all Floreys, with COVID-19 Floreys reducing by over 5,000 across the ICB compared to the previous month. However, with COVID-19 numbers reducing, it could be expected that fewer of these Floreys would be sent as time goes on.

The variation described by the data was corroborated by the qualitative interviews, with staff members perceiving COVID-19, Asthma and Blood Pressure as the Floreys most commonly in use. Floreys for conditions not financially incentivised were not used as much and the qualitative interviews confirmed these conditions were not considered a priority to the practice.

For some of the Floreys, such as GAD-7 and PHQ-9, there may be alternative ways this questionnaire could be completed by a patient other than via a link through AccuRx. This may be one reason that usage of some Floreys was lower than others. For example, the GAD-7 and PHQ-9 questionnaires could be provided in paper format either pre-appointment whilst waiting to see a clinician or via the post for a patient to self-complete, or could be read out by a clinician (either over the telephone or in person) during a patient consultation with patient responses recorded by the clinician. It was not known which strategy was better for collecting these questionnaire responses, or the proportion of practices using each strategy.

It could be postulated that using an AccuRx Florey to collect questionnaire data such as GAD-7 or PHQ-9 would be preferred by clinicians as this strategy automatically updates the electronic record system (e.g., EMIS) that the questionnaire has been sent and when it was completed. The score was also automatically saved to the electronic record system without any manual input required. This was supported by the practice staff interviews. Patient preferences were unable to be inferred as there were too few patient interviews completed.

> *"Mental health reviews, you used to have to have a chat, but you then print them out like a PHQ-9, so physically print out that on paper, hand it to the patient, they'd either fill it out in front of you taking up appointment time, or they'd do it afterwards, […], then that paper would have to come back to the receptionist, who would then have to put it though some form of scanning, have to calculate the score, etc, very long winded, whereas now I can just ping them [a patient] a PHQ-9, and once it has come back to us we can immediately see what sort of risk or position this patient is at, you can action that, and it is immediately saved into the clinical records" (V03)*

5.4 STAFF ACCEPTABILITY AND PERCEIVED IMPACT OF ACCURX FLOREYS

Between March and April 2022, a staff survey about AccuRx Florey Lite and Plus was advertised via HIOW ICB communication channels with the intention of reaching all HIOW ICB practices. In total, 37 practice staff from 33 different practices (20% of all HIOW ICB practices) responded to the survey. The responding 33 practices were from 24 different PCNs.

The predominant staff type to respond were GPs (43.2%, n=16) and senior administrative practice staff (e.g. practice managers) (32.4%, n=12). The remainder of respondents were five nursing staff, two junior administrative practice staff, one pharmacy technician and one PCN member of staff.

Sub-analyses were performed between two distinguishable groups with enough data to warrant inferential analyses. These were GPs compared to all other staff combined.

The first section of the survey asked for general perceptions of acceptability of AccuRx Floreys and the responses are presented in Figure 6.

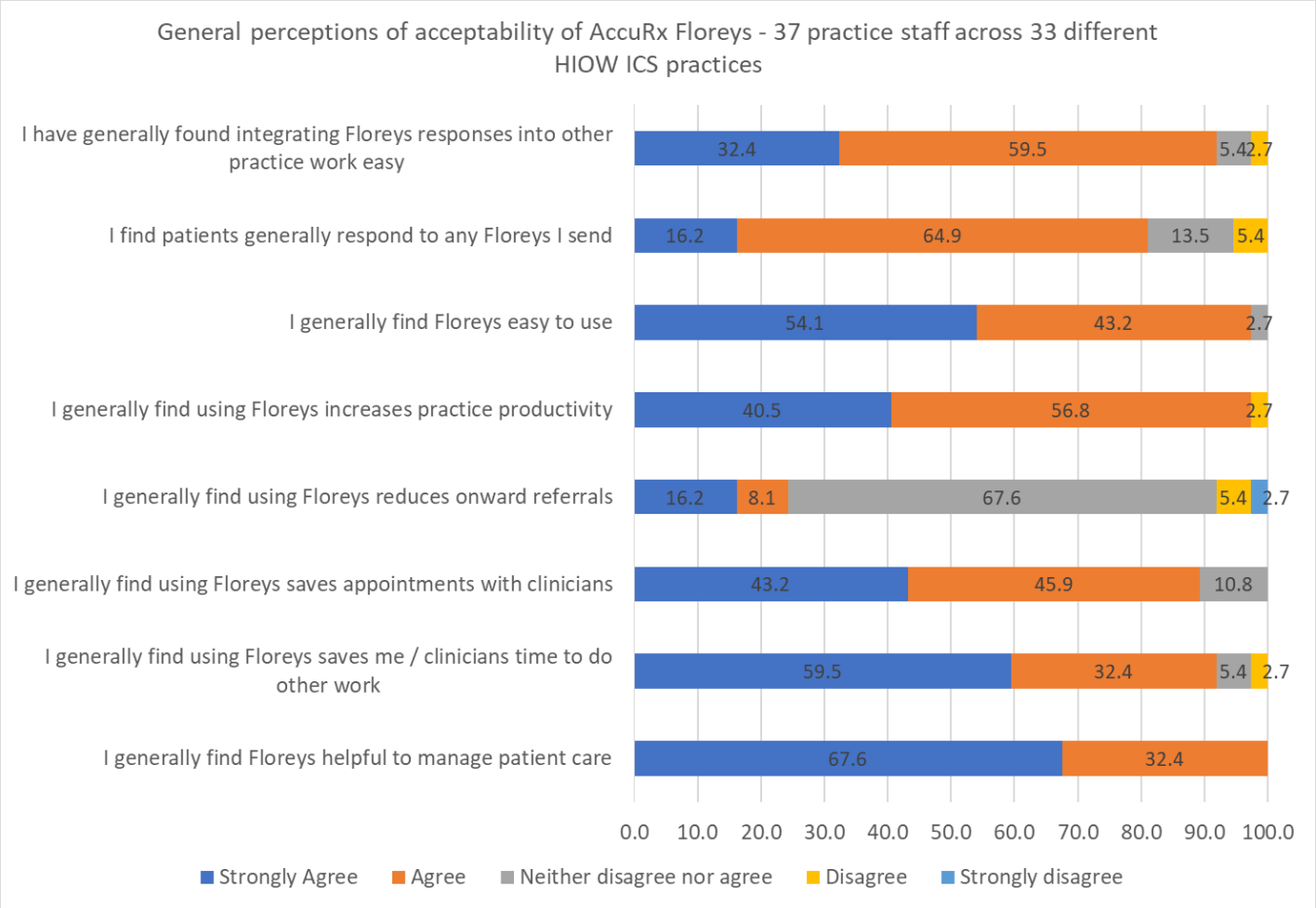

Figure 6. General perceptions of acceptability of AccuRx Floreys

When viewing all survey responses together and by combining views that 'strongly agreed' and 'agreed' with the survey statements, all (100%) practice staff who responded either strongly agreed or agreed that Floreys, in general, were helpful to manage patient care. This was also seen in the survey free text responses:

> *"They have been brilliant thank you for providing something that decreases workload for primary care." (ICB survey respondent 24)*
>
> *"I think it is vital that we continue to have access to this resource" (ICB survey respondent 35)*
>
> *"Have made working day much easier, and patients like them" (ICB survey respondent 36)*

This broad support for AccuRx Floreys was also seen in the 'variation' practice staff interviews, with one staff member reporting:

> *"I'm not being paid by AccuRx, let me be clear about that, but I don't think there has been a single thing in primary care that we've had access to in the last 10 years that has made as big a difference as AccuRx has done recently" (V03)*

An important caveat to Figure 6 above is practice staff reported patients generally respond to Floreys 81.1% of the time. Thus, approximately up to one fifth of patients may not respond to Florey surveys. In the qualitative interviews with staff members, the perceived response rates of patients to Floreys sent was

reported to be approximately 50%. Staff members who were interviewed felt that response rates increased when 'messages' with more personalised content were sent which had a 'human layer' as opposed to standardised, 'robotic' type 'messages'.

Most staff found Floreys easy to use (97.3%), increased practice productivity (97.3%), saved clinicians time to do other work (91.9%), saved appointments with clinicians (89.2%), and generally found integrating Floreys responses into other practice work easy (91.9%). However, there was considerable uncertainty (67.6% were not sure) about whether using Floreys reduced onward referrals – only 24.3% strongly agreed or agreed this was the case. When comparing all GP responses (n=16) to all other staff combined (n=21), no statistically significant differences between these staff types were identified on any of the survey statements in Figure 6.

The second section of the survey focused on perceived impact of Floreys on practice appointment (see Figure 7).

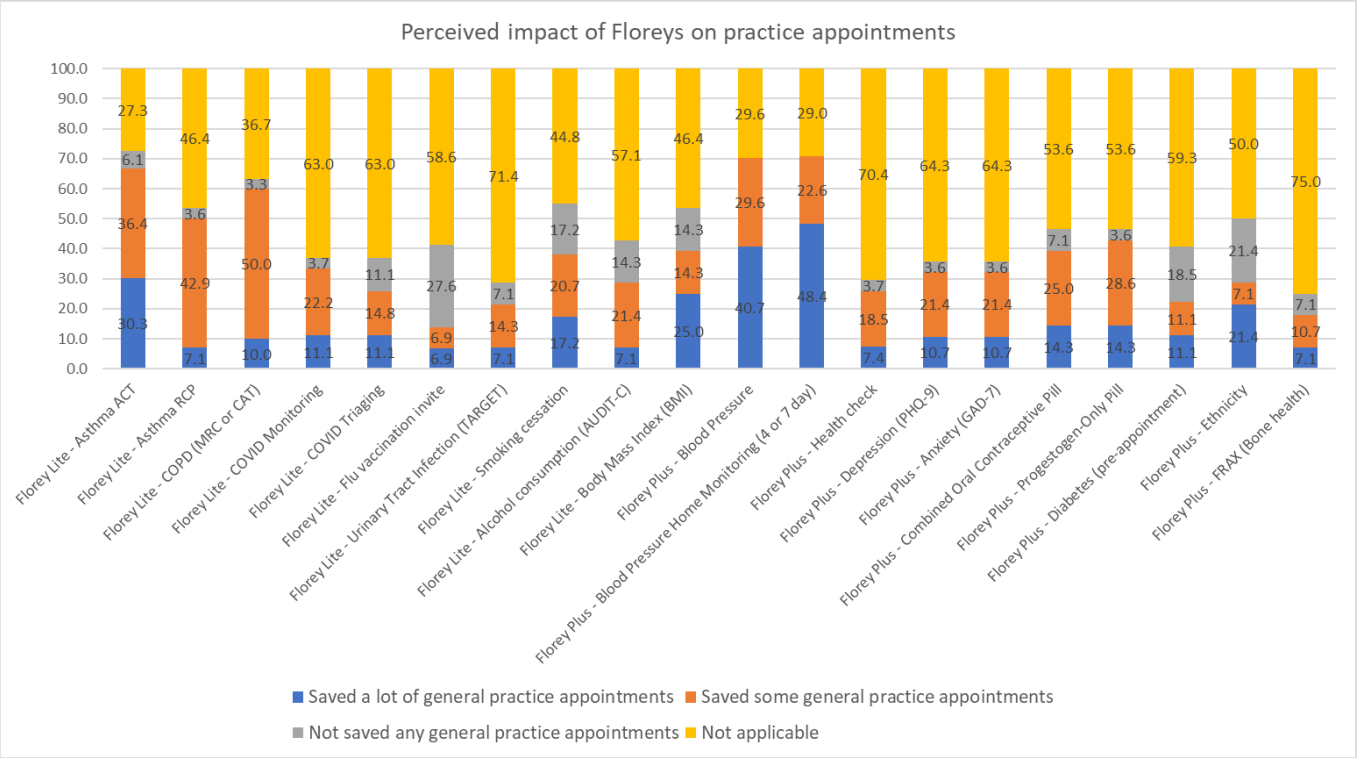

Figure 7. Perceived impact of Floreys on practice appointments.

When viewing all survey responses together and by combining 'Saved a lot of appointments' and 'Saved some appointments', the Floreys most effective at saving appointments were Blood Pressure Home Monitoring (71% of the time), Blood Pressure (70.3% of the time), Asthma ACT (66.7%), and COPD (60%).

This was also seen in the survey free text responses:

> *"Blood pressure Floreys have saved a lot of appointments and gains BP readings at home to reduce over treatment" (ICB survey respondent 10)*

The strongest views on 'no appointments saved' were related to the flu vaccine invite (27.6%), Ethnicity (21.4%), diabetes pre-appointment (18.5%), and smoking cessation (17.2%) Floreys. When comparing all GP responses to all other staff combined, no statistically significant differences between these staff types were identified on any of the survey statements in Figure 7.

The third section of the survey focused on perceived impact of Floreys on practice productivity (see Figure 8).

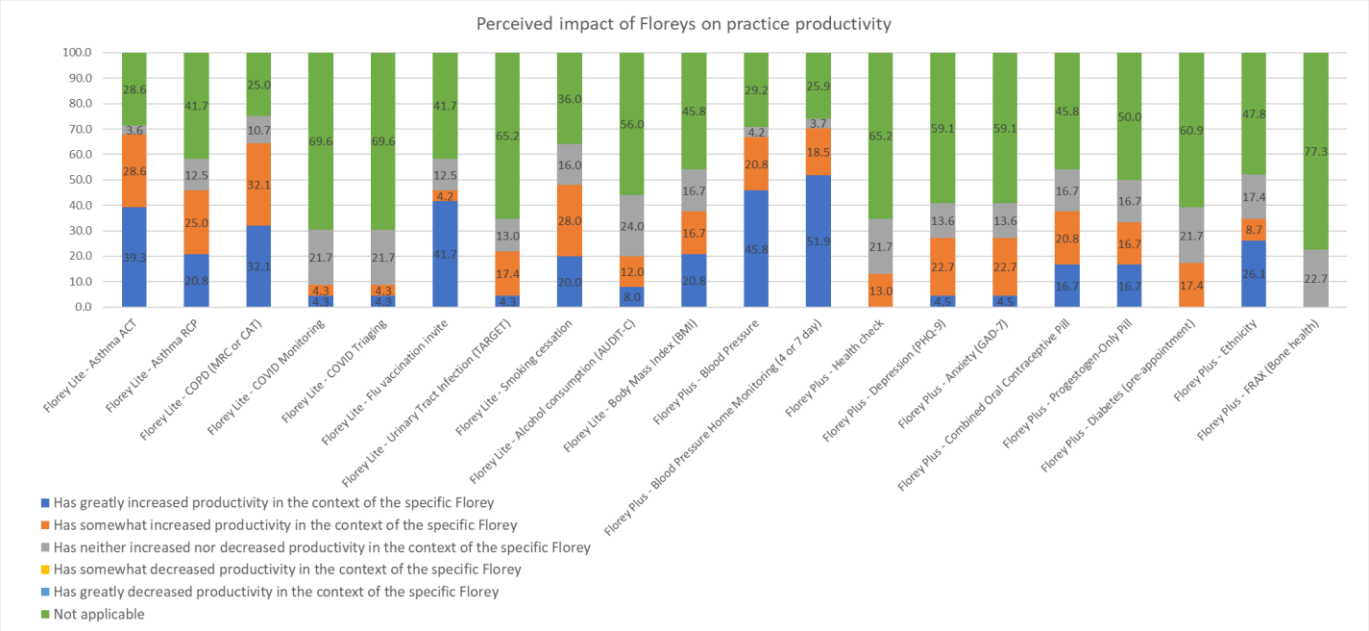

Figure 8. Perceived impact of Floreys on practice productivity.

When viewing all survey responses together and by combining 'Greatly increased productivity' and 'Somewhat increased productivity', the Floreys considered to produce efficiencies were Blood Pressure Home Monitoring (70.4% of staff reported), Asthma ACT (67.9%), Blood Pressure (66.6%), and COPD (64.2%). No survey responses indicated a decreased effect on practice productivity. The survey free text responses help to elaborate on the value of these Floreys:

> *"Clinical, administration, secretarial and reception staff all use accuRx Florey templates for different purposes and has had a big impact on practice productivity." (ICB survey respondent 16)*
>
> *"I think they're brilliant. We have created our own questionnaires to work hand-in-hand with the weight management enhanced service. We have a pathway set up so that we send a Florey to get a BMI. If the BMI is over 30, we send a second message informing patients of our Tier 2 service and ask them to respond if they would like to consent to a referral, and finally we have third text to confirm that we have made a referral and it enters the referral to weight management service code." (ICB survey respondent 38)*

When comparing all GP responses to all other staff combined, no statistically significant differences between these staff types were identified on any of the survey statements in Figure 8.

6. UNDERSTANDING FLOREY USE ACROSS FOUR DEMONSTRATOR PRACTICES

6.1 PRACTICE PROFILES

Using publicly available information, it was possible to draw together a profile of each Demonstrator practice on demographics and digitally related factors. This provided another data source to consider when triangulating the findings from different data sources.

Across all 4 Demonstrator practices, administration, and non-clinical personnel account for the majority of staff (at least 41%). At Practice A, GPs account for only 12% of staff, compared to between 21-36% for the rest (https://digital.nhs.uk/data-and-information/areas-of-interest/workforce).

The Demonstrator practices recorded that between 20-25% of their populations are aged over 65 years old. This was higher than the national average (17.4%) and might be reasonable to expect to see a slightly lower rate of digital literacy in these populations (https://digital.nhs.uk/data-and-information/publications/statistical/patients-registered-at-a-gp-practice/april-2021).

All the practices scored under the national average for deprivation, implying they are in more affluent areas (https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019).

Nationally, just under 50% patients are registered to use at least one online service. For the Demonstrator practices, this ranges between 39-65%. This means that at least 35% of patients at each of these practices are not registered for any online services. This may suggest that either patients are not engaging with online services, or that practices are not yet able/willing to offer this to their patients (https://digital.nhs.uk/data-and-information/publications/statistical/mi-patient-online-pomi/mi-patient-online-pomi).

For Practice D, obesity affects the largest proportion of patients, followed by depression and hypertension. For the rest of the Demonstrator practices, depression has the highest prevalence, followed by hypertension and obesity. However, the QOF measures may not be a true reflection of prevalence, but rather how good practices are at reporting these conditions (https://digital.nhs.uk/data-and-information/publications/statistical/quality-and-outcomes-framework-achievement-prevalence-and-exceptions-data).

Of the large range of GPIT indicators, 27 were chosen to be informing general digital readiness e.g., 'The practice promotes and offers email consultations for practice patients', 'At least 30% patients registered for patient online access appointment booking', and 'Practice system able to support patients book/cancel appointments online'. Practices self-report on these metrics but Practice B did not complete the GPIT return. Practice A responded 'Yes' to the least number of metrics (48.1%), followed by Practice D (55.6%). Practice C confirmed 74.1% of the 27 GPIT metrics chosen, suggesting they are the most digitally mature of the Demonstrators using AccuRx Floreys. They are also the practice with the highest proportion of patients registered to use at least one online service (64.6%) (https://www.primarycareindicators.nhs.uk/).

When considering the information above, it could be concluded the four Demonstrator practices generally serve older populations in areas of low deprivation. Although it could be inferred that digital poverty was less likely to affect these patients compared to other areas, low digital literacy may be more likely. This may go some way to explaining the lower-than-average registration of patients to digital services in the Demonstrator practices and the overall implied reduced digital maturity of practices from the available GPIT data. This contextual information has been considered in the interpretation of the findings in this evaluation.

6.2 WIDER FUNCTIONS OF ACCURX FLOREY PLUS

Between February 2020 and January 2022, **181,286** messages were sent across the four Demonstrator practices. Due to reliability issues with the data on wider functions, data from February to April 2022 have been excluded in the analysis in Table 4.

Table 4 presents the number of the different types of messages and Floreys sent according to each Demonstrator practice. Floreys account for a very small proportion (1.2%) of AccuRx usage for the Demonstrator practices, even lower than the ICB proportion (3.4%). Ad hoc messages account for 97.1% activity across the 4 practices.

Table 4. Total number of messages sent between February 2020 and January 2022 across the Demonstrator practices.

Message Type	Practice A	Practice B	Practice C	Practice D	%
Ad hoc messages sent	9,636	37,433	62,001	67,025	97.1%
Video links sent	171	127	769	822	1.0%
Floreys sent	71	593	880	673	1.2%
Batch messages sent	0	0	0	0	0.0%
Appointment reminders sent	0	0	0	0	0.0%
Pathways sent	16	0	506	162	0.4%
Web ad hoc messages sent	7	36	38	57	0.1%
Web video links sent	0	59	57	28	0.1%
AccuMail messages sent	2	105	12	0	0.1%

In Figure 9, the ad hoc messages response rate has been calculated by dividing the number of responses received by the total number of ad hoc messages sent with response links. On average across the ICB, 56.8% of messages were responded to. For the Demonstrator practices, only Practice A has a marginally lower rate (52.0%). Practice C has the best response rate (71.5%), indicating that their patients are the most engaged across the Demonstrator practices.

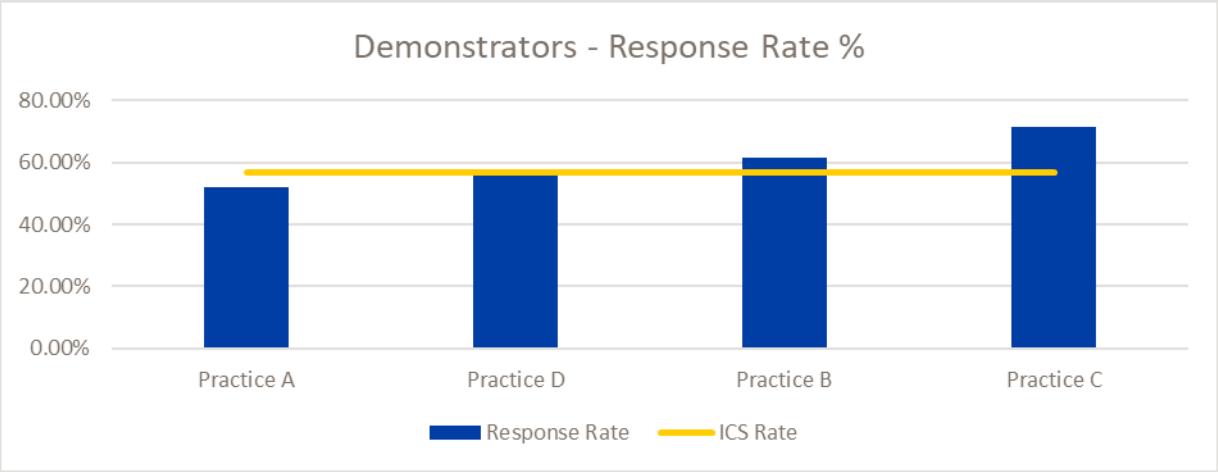

Figure 9. Ad hoc messages response rate according to the number of responses received to the total number of ad hoc messages sent with response links by Demonstrator practice.

6.3 EXTENT OF FLOREY USAGE

The total number of Floreys used, between February 2020 and April 2022, across the four participating practices was **2,378**.

The ICB Florey rate per 1,000 in the population was 4.85. Practices have been plotted against this to see how they compare to each other. The charts have been split into four to improve visualisation, and all practices apart from Demonstrators have been anonymised.

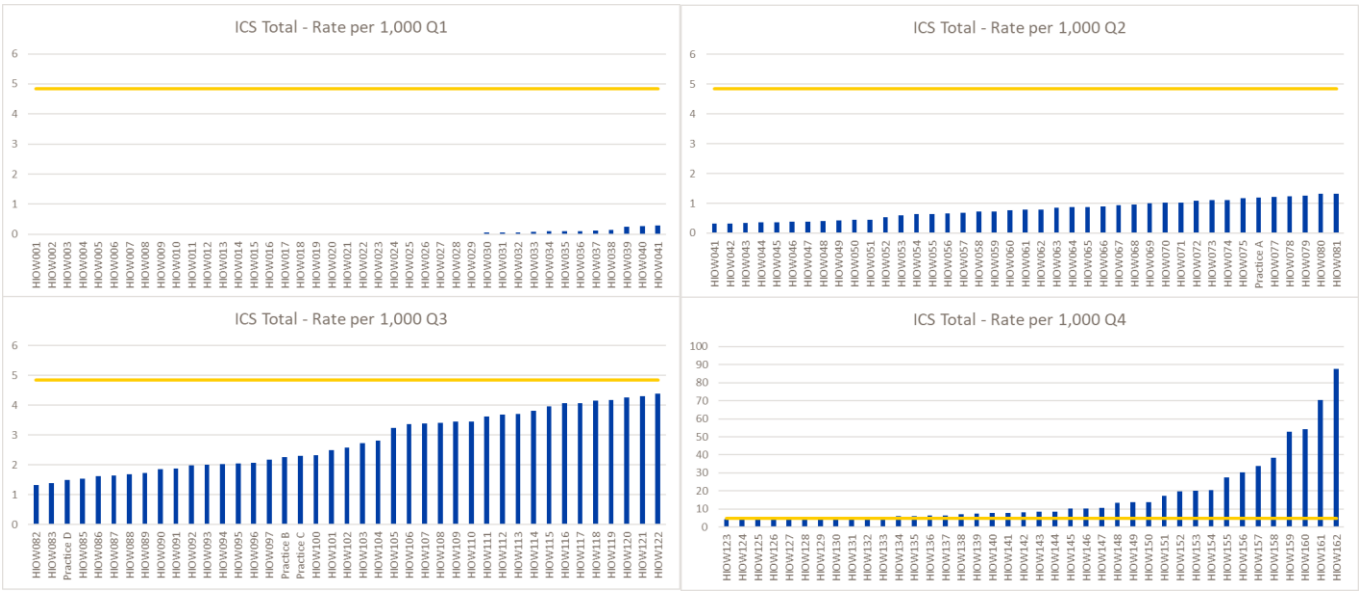

Figure 10. Florey rate per 1,000 for all practices across the ICB split across four quadrants.

Note: the axis on each of the graphs is different, and so cannot be directly compared on sight alone.

Approximately 41 practices are shown on each chart, the top left graph shows the lowest activity, and the bottom right graph the highest. Most practices fall below the ICB rate, with only 37 practices having a higher activity rate. Some of these are much higher, and these outliers have skewed the ICB rate. However, as this analysis accounts for population size, the activity was directly comparable and an accurate representation of the ICB activity.

6.4 VARIATION OF FLOREY USAGE

Variation in Florey use occurred at three different levels. **Firstly, variation was seen across practices** as described in the graphs below.

The graphs below show Florey Lite and Plus usage for the four Demonstrator practices between February 2020 and April 2022. Practice D and Practice C were the most consistent users of Floreys. Practice B has spikes of very high activity, but almost exclusively for Florey Lite. Practice A has only used a handful of Floreys in Florey Lite, but recently has started to use Florey Plus.

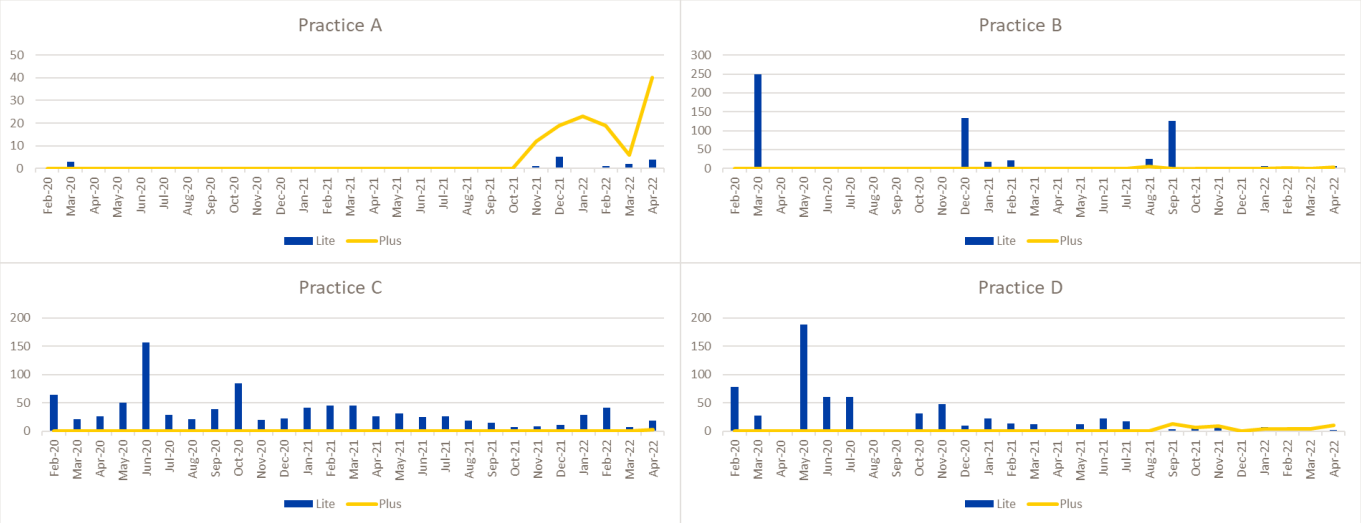

Figure 11. Florey Lite and Plus usage for the four Demonstrator practices between February 2020 and April 2022.

Note: the axis on each of the graphs is different, and so cannot be directly compared on sight alone.

Practice C and Practice D have the most consistent Florey usage across the Demonstrators, predominantly using Florey Lite. There are no consistent peaks in activity between the four practices, so it was hard to determine if activity was impacted by external circumstances. Practice A has had the highest Florey Plus usage, with activity increasing dramatically between November 2021 and April 2022. Practice D has had small pockets of Florey Plus activity, whereas Practice B and Practice C have sent 5 or fewer Floreys within Florey Plus each in total.

Practice A and Practice C have both used between 6-10 different Florey types over the time period. Practice B have used 11-15, and Practice D 16-20. However, based on the average number of different Floreys sent each month, Practice A was the lowest at between 0-1, followed by Practice B at 1-2. Practice C and Practice D both send between 2-3 different Florey types on average each month.

Insights on the peaks and troughs in usage over time was also sought from a key contact at the practices. For Practice D, the peak was most likely to be associated with the practice sending out asthma Floreys to all asthmatic patients when they first had access to the Plus Floreys. The trough likely occurred as no other 'cohorts' were sent Floreys, and Florey usage has subsequently been individual staff members using Floreys as needed.

For the PCN1 practices, the increase in April and May 2022 for Practice B and Practice C was felt to be related to when the PCN started their hypertension case finding in the 2022 new financial year. Practice C was perceived to be likely to see this similar increase over the summer of 2022 as they have only just rolled out the hypertension case finding in May 2022. There was also one GP at PCN1 who was highlighted to have recently begun to use the BP Floreys in their own sessions outside of the hypertension case finding project. This was perceived to be associated with the small increases in Florey Plus usage.

It was highlighted that Practice A had the biggest increase because this was where the PCN were able to start with their hypertension case finding project and therefore have made the most headway. With regards to the Florey Lite usage peaks and troughs, this was perceived to be related to either the COVID triaging or vaccinations, however the key contact at the practice was not able be more conclusive on this.

Importantly, the above analysis was based on Floreys sent but not necessarily Floreys completed. Data to support the latter was not available in the HIOW ICB data provided to the evaluators. After examining practice held data on Florey response rates between 1st March and 5th May 2022 (the only data available for analysis), the Practice A patient response rate to all Floreys combined was 43%. For Practice D the patient

response rate was 58%. Practice B and Practice C were unable to provide data for this analysis. This highlights the important role patients have in understanding Florey usage and value. At present, many Floreys do not receive responses and the implications are explored later in the lessons learnt section.

Secondly, variation was seen in approaches to Florey use. Two Standard Operating Procedures (SOPs) to support implementation of AccuRx were provided by the Demonstrator practices. One was from Practice D and the other from PCN1. Of interest, one of the SOPs was focussed around standardising the clinical pathway to establish where AccuRx fit into the management of specific condition. Comparatively, the other was around standardising the use of AccuRx itself across the practice, as opposed to which clinical pathways and where AccuRx fitted clinically. This shows a difference in the implementation strategies between practices.

Thirdly, variation was seen in how practice staff viewed different Floreys. During the qualitative interviews, staff from the demonstrator practices provided clinical examples to explain their rationale for using / not using different Floreys and features offered by AccuRx. The table below (Table 5) presents specific examples.

One staff member highlighted the need to try using Floreys to determine whether they improve the ability of staff to undertake their role and patient care before making a decision.

> *"It's about trying them out for yourself, and if they make your life easier, and they improve patient care, then use them"* (SA02)

One reason for not using certain Floreys or features of AccuRx occurred when the information to be returned was already available elsewhere in the patients records or an existing or alternative system was already in use and provided this same function. However, as indicated by another staff member, the fact that some features or Floreys were not being used did not mean that they did not find them useful, but instead could because of not being aware that the Florey or feature existed:

> *"I didn't know you could change them, […], so we haven't done that"* (SA03)

Another reason for not using a Florey was when it was considered not an accessible method of care provision for an individual patient.

> *"It is about how accessible it is to the patient, […], if they don't engage, then it is just pointless"* (SA04)

When the features of AccuRx required practices to procure and pay for 'upgraded' features via AccuRx themselves, this also acted as a barrier to Florey use.

Table 5. Floreys and features of AccuRx used and not used according to the examples provided in the qualitative interviews with staff from the Demonstrator practices*.

Floreys used	**Floreys not used**
Anxiety and depression (GAD-7 and PHQ-9) Contraception-related (Combined Oral Contraceptive Pill and Progestogen-Only Pill) QOF- / or financially incentivised condition- related (e.g., blood pressure and asthma) Chronic condition-related (e.g., asthma, blood pressure, COPD)	FRAX – can find the same information directly in the patient records
Features used	**Features not used**
Batch messaging Templates Free-type messages (with and without responses (including photo responses) and with or without links to information) Contacting patients via email as well as mobile number Assigning someone else to triage or manage response Automated reminders or delayed messages to follow-up patients	Video consultation – eConsult already in place

*Colour code: Blue = Florey Lite or included (free) feature; Green = Florey Plus or supplementary (additional cost) feature; *These include examples provided in the interviews only and may not represent full extent of use.*

Note: Video Consultations and eConsult differ and are different digital products, despite this not being the perceptions of those interviewed in this evaluation.

6.5 VARIATION OF FLOREY USE BY PRACTICE STAFF TYPE

To enhance the utilisation data provided by HIOW ICB, participating practices were invited to share AccuRx activity data from their own systems. This had a key benefit of understanding which type of staff were using the features of AccuRx, including Floreys – at the aggregated level. Due to the current AccuRx platform available to practices, it was not possible to breakdown Florey use by Florey Lite and Florey Plus from the data GPs have available to them.

Table 6 presents aggregated findings by staff type and shows interesting differences. GPs used the AccuRx system primarily for sending single messages to patients. Administrative staff also heavily used the single message function but also sent the highest number of Floreys. It was assumed this was directed activity from GPs or other clinicians but does demonstrate the division of labour when operationalising Florey surveys.

There were several unexpected instances of staff sending Floreys – the Deputy Practice Manager and I.T staff – which after discussions with the relevant practices revealed staff being tasked ad hoc to send out a batch of Floreys for a clinical group of patients as part of a 'push' to enhance support. In the case of the I.T. staff, they were asked by Advanced Nurse Practitioners to send a batch of Asthma ACT Floreys.

Table 6. Aggregated AccuRx usage by staff type at four Demonstrator practices between Jan 2019 and May 2022.

Staff type across 4 demonstrator practices	**Sum of Single messages sent**	**Sum of Multiple messages sent**	**Sum of Floreys sent**	**Sum of Video consults sent**	**Sum of Total sent**
GP	110560	873	485	1391	113309
Admin / Reception staff	71829	17	1004	84	72934
Nurse	16366	522	986	196	18070
Pharmacist	4812	22	5	0	4839
Unknown	3339	2	0	1	3342
Deputy Practice Manager	1829	0	121	2	1952
Wellbeing team (ARRS)	1590	5	0	27	1622
Practice Manager	1244	0	18	5	1267
I.T.	1152	1	214	2	1369
Pharmacy clerk	414	0	0	0	414
HCA	399	5	10	0	414
Paramedic	272	0	0	0	272
Mental Health Coach	15	0	0	0	15
Social Prescriber	0	0	0	0	0
PCN Manager	0	0	0	0	0
Grand Total	**213821**	**1447**	**2843**	**1708**	**219819**

6.6 UNDERSTANDING PATIENT ACCEPTABILITY OF FLOREYS

Seventeen patients completed the patient acceptability survey. Despite disseminating the survey to all four demonstrator practices, only patients from Practice A completed the survey. Patients were equally split by gender (9 male and 8 female) but not by ethnicity (all White British), and patients of different ages responded. Eight patients were 65+ years old (range 65 to 84) and nine were under 65 (range 25 to 65).

Patients that completed the survey were asked to respond based on the last Florey they were sent. The most common Florey on which the responses were based was the 4-day Blood Pressure Florey (n=9), followed by the 7-day Blood Pressure Florey (n=3), Asthma ACT Florey (n=3), Depression Florey (n=1), and Contraceptive Pill (n=1).

As seen in Figure 12, when combining Strongly agree and Agree responses, 100% of patients thought Floreys fitted in with their daily activities, 94.1% of patients thought Floreys were technically reliable, 94.1% thought Floreys were an easy way monitor and manage their condition, 88.2% believed Floreys helped them monitor their condition, 88.2% would respond to Floreys again if needed, 87.5% reported Florey were an easy to share measurements, 82.4% of patients were confident to respond to Florey surveys, and 70.6% stated Floreys were a successful way to manage their condition.

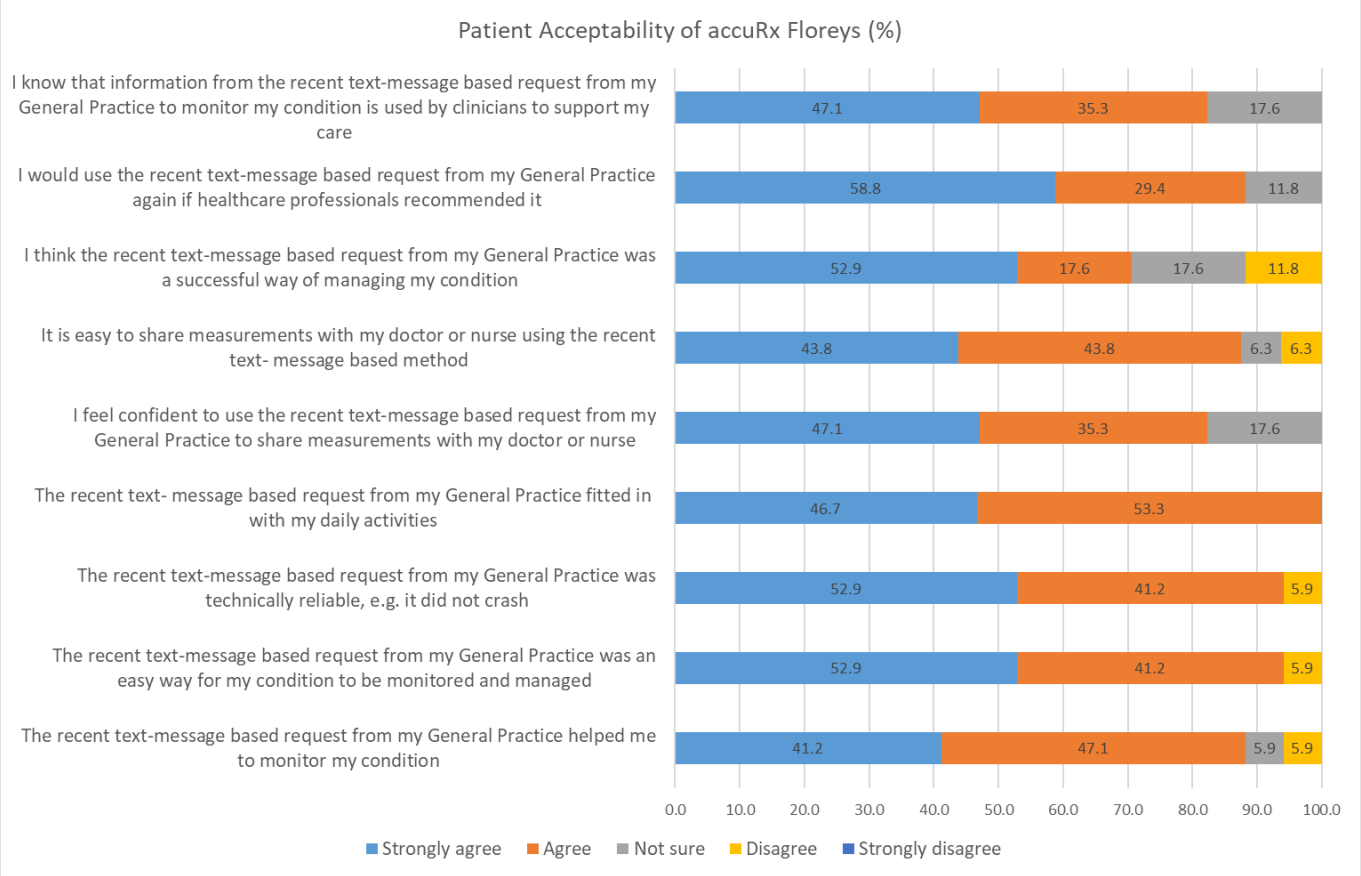

Figure 12. Patient views on the acceptability of AccuRx Floreys

7. SPECIAL INTEREST – COVID-19 FLOREYS

7.1 COVID-19 FLOREYS SENT ACROSS THE ICB

Between February 2020 and April 2022, 128,384 Covid-19 questionnaires were sent. The vast majority (98%) of these were for triaging rather than remote monitoring. They also account for the majority of all Florey

usage across the ICB. The peaks in activity around March 2020, October 2020, March 2021 and January 2022 all align with increased COVID-19 case numbers in the area.

The COVID-19 triaging Florey was developed to enable practices to triage patients who have booked face-to-face appointments before they come in to screen patients and help decrease the risk of potentially spreading the virus (https://support.accurx.com/en/articles/3778126-florey-questions-in-the-covid-19-triaging-questionnaire). Comparatively, the COVID-19 remote monitoring questionnaire was developed to monitor patients remotely after being discharged or self-isolating with COVID-19 in the community (https://support.accurx.com/en/articles/3883936-florey-questions-in-the-covid-19-remote-monitoring-questionnaire).

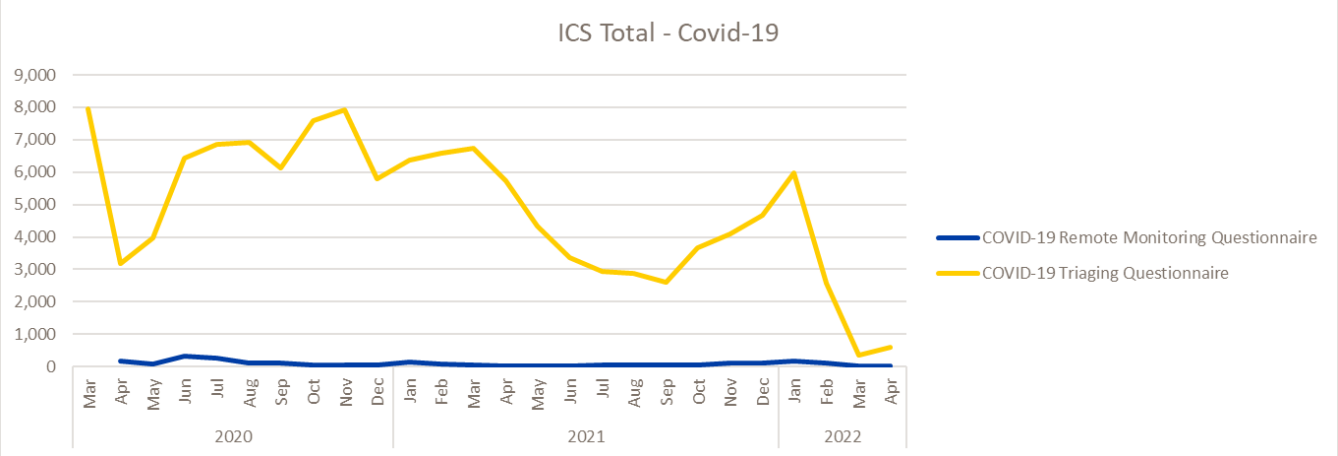

Figure 13. Total COVID-19 Remote Monitoring Questionnaire and Triaging Questionnaire Floreys sent between February 2020 and April 2022 across the ICB.

The initial peaks in the COVID-19 Florey use also seem to align with the ethnicity Florey being used. It has been postulated by the evaluators that COVID-19 could have driven up the use of the ethnicity Florey due to the need for practices to have more comprehensive records of their patient's ethnicity as ethnic minority groups have a higher risk death from COVID-19 than white patients (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/892376/COVID_stakeholder_engagement_synthesis_beyond_the_data.pdf).

It was also important to consider the reasons for why the COVID-19 triaging Florey, as opposed to the remote monitoring Florey, was more widely used. One interpretation was that practices saw more 'use' or 'value' in the Florey which directly supported how they managed patient flow through being able to triage their patients, as opposed to Floreys which form part of a care pathway that they potentially were not involved in delivering.

The high use of the COVID-19 triaging Florey also indicates that when AccuRx proactively developed features which the system urgently required, the value would be clear to the system, and consequently the Florey would be widely used.

> *"They [AccuRx] launched their COVID assessment tool, [….], we thought that our reception staff could send every single patient being seen a Florey, […], so very quickly all our chronic disease clinics, all our phlebotomy clinics, so where you have to see the patient face-to-face, we started using the Florey to send out the questionnaires" (V02)*

This interpretation was based upon the comparison to the usage of other Floreys which were reported by staff members to have less obvious value to the system and therefore have not been used as much (e.g., fracture risk Florey).

As highlighted above, the development of the new COVID-19 Floreys indicated AccuRx are responsive and proactive in recognising where their products could add value and best meet the needs of general practice.

This responsive and proactive position of AccuRx was further highlighted by the additional 'new' Floreys soon to be released:

- Hormone Replacement Therapy Review
- Medication Review
- Adult ADHD Self-Report Scale
- Pulse Oximetry
- Pre-travel
- Single Skin Lesion
- Sore Throat
- Lower Back Pain Assessment
- Cough Assessment.

7.2 COVID-19 FLOREYS SENT FROM THE DEMONSTRATORS

Between February 2020 and April 2022, 274 COVID-19 Floreys were sent from the Demonstrator practices. These Floreys comprise the same triaging and monitoring questionnaire as were available across the ICB.

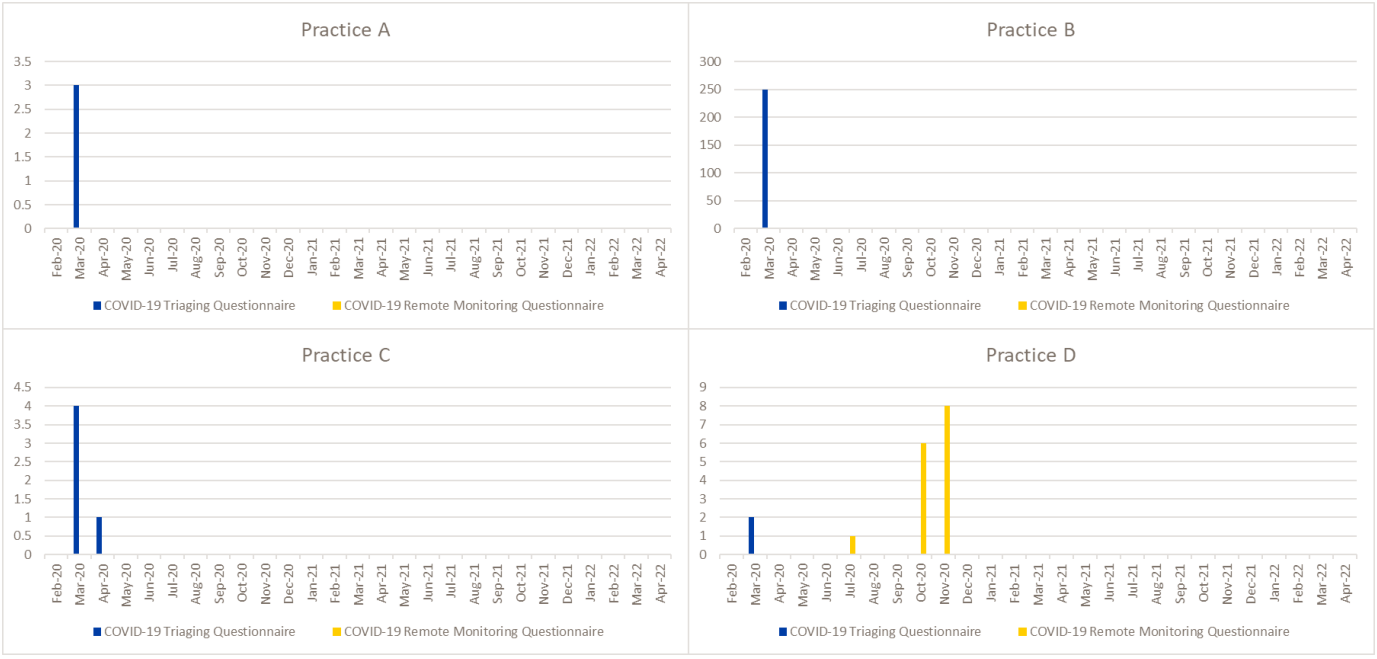

Figure 14. Total COVID-19 Remote Monitoring Questionnaire and Triaging Questionnaire Floreys sent between February 2020 and April 2022 for the Demonstrator practices.

Please note that the charts all have different axes which should be considered when comparing.

Although COVID-19 Floreys have the highest activity across the ICB, this was not the case for the demonstrator practices. For these practices, COVID-19 Floreys only account for 11.5% of Florey usage between February 2020 and April 2022. Practice B accounts for the majority of COVID-19 Florey usage (90.8%), however this only occurred in March 2020. Practice D are the only practice to use the COVID-19 remote monitoring questionnaire; however, again this was in small numbers and only for a few months. This would indicate that these practices used other methods to get information from their patients around

COVID-19. It also potentially indicates that these were practices which were not routinely engaging or reviewing the opportunities presented by AccuRx Floreys and features to support their clinical pathways.

8. SPECIAL INTEREST – BLOOD PRESSURE FLOREYS

The links below provide detailed information about the request made of patients when a BP Florey was sent. AccuRx have three blood pressure Floreys, two which relate to the reporting of multiple BP readings, one which was for a one-off BP reading alone. The selection of which Florey was sent to a patient was based on a clinical reasoning of the healthcare professional:

BP questionnaire: Florey for a one-off BP reading

https://support.accurx.com/en/articles/4747378-florey-snomed-codes-and-questions-for-the-blood-pressure-questionnaire

4-day home monitoring of BP: Florey for 4 days of BP readings

https://support.accurx.com/en/articles/5766828-florey-snomed-codes-and-questions-for-the-blood-pressure-questionnaire-4d-home-monitoring

7-day home monitoring of BP: Florey for 7 days of BP readings

https://support.accurx.com/en/articles/4747405-florey-snomed-codes-and-questions-for-the-blood-pressure-questionnaire-7d-home-monitoring

8.1 BLOOD PRESSURE FLOREYS SENT ACROSS THE ICB

Between February 2020 and April 2022, 12,621 BP Floreys were sent across the ICB. These Floreys comprise of a 'questionnaire' (a one-off BP reading), and a 4- and 7-day home monitoring of BP.

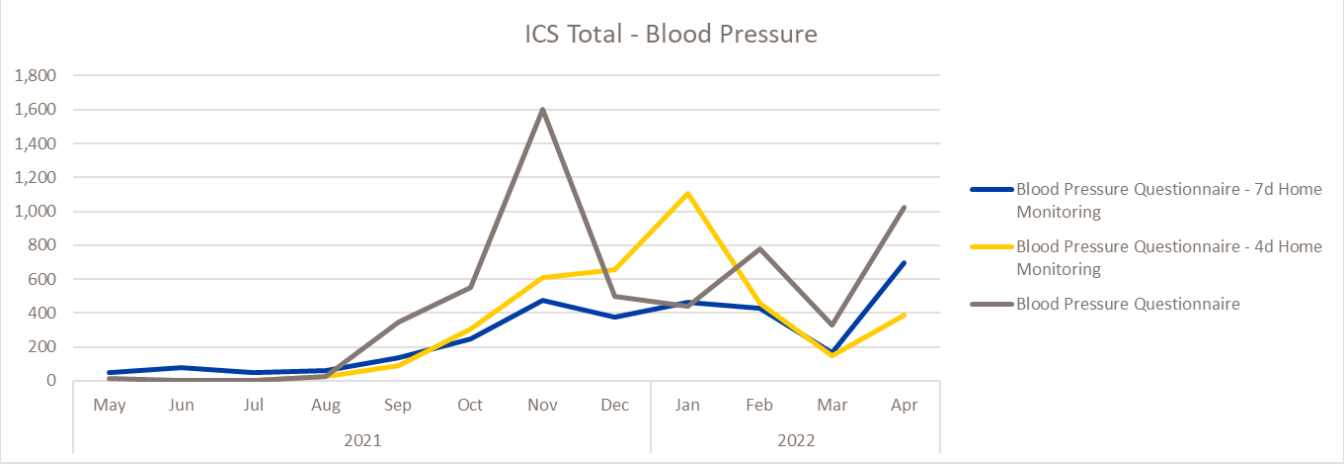

Figure 15. Total blood pressure Floreys sent between February 2020 and April 2022 across the ICB

All three BP Floreys continue to be used consistently, which was not unexpected as they can be used in tandem. The combined total for all the BP Floreys sent resulted in the BP Floreys being the second highest Florey Plus to be used. BP Floreys started to be used in May 2021, which was slightly before the ICB paid for the upgrade to Plus, meaning that some practices had done this themselves. The usage has continued to fluctuate with a sharp spike in November 2021, however the reasons for this are unknown.

8.2 BLOOD PRESSURE FLOREYS SENT FROM THE DEMONSTRATORS

Between February 2020 and April 2022, 159 Blood Pressure Floreys were sent from the Demonstrator practices. These Floreys comprise of a one-off BP recording, and 4-day and 7-day home monitoring of BP.

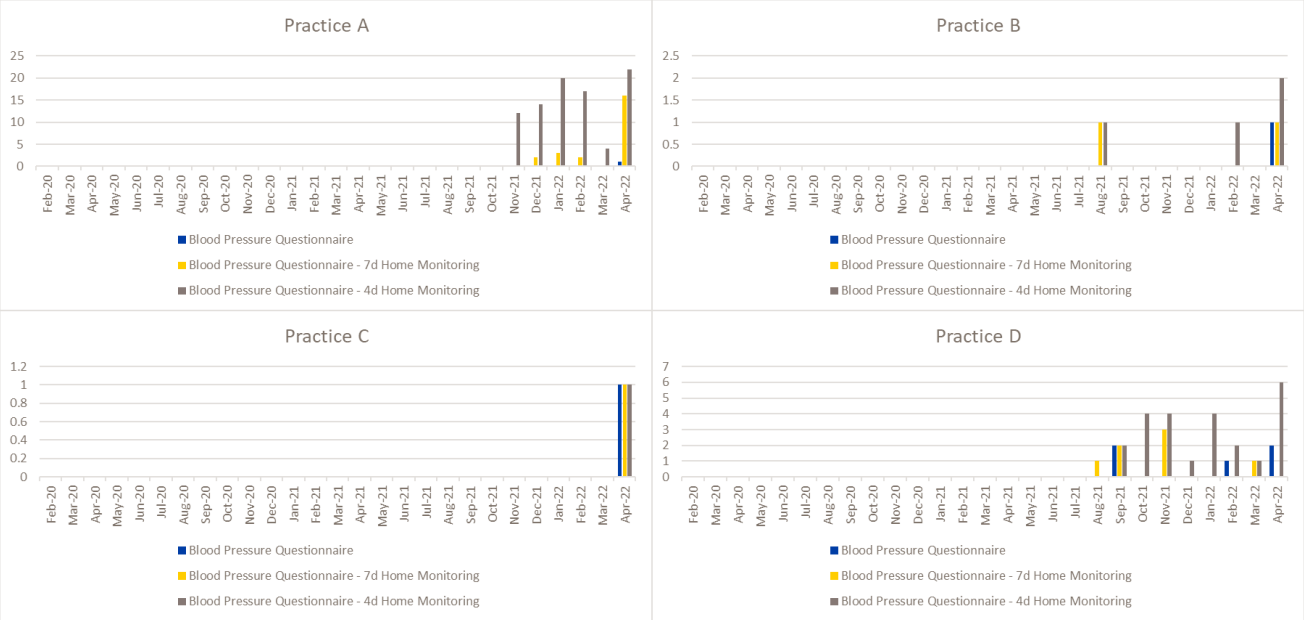

Figure 16. Total Blood Pressure Floreys sent between February 2020 and April 2022 across the Demonstrator practices

Please note that the charts all have different axes which should be considered when comparing.

The most used BP Florey was the 4-day monitoring questionnaire (74.2%) across all 4 practices. Practice C used the fewest, with just 1 of each Florey being sent in April 2022. Although Practice D has been using the Floreys for the longest, Practice A has the highest activity overall sending over 10 blood pressure Floreys each month (excluding the March 2022 dip). This demonstrated that the practices were not consistent in their usage of BP Floreys, and despite interviewing staff members from these practices, further exploration of this is required to fully understand the drivers behind the inconsistent usage.

8.3 THE COMPLEXITY OF USING A BLOOD PRESSURE FLOREY

As illustrated by a staff member, although as a practice they internally developed a standard operating procedure (SOP) for hypertension which included the use of a BP Florey and the text messaging feature of AccuRx, the clinical pathway itself presented a lot of complexity and multiple steps. These multiple steps required:

1) AccuRx message sent by practice clinician.
2) Patients to respond to an AccuRx message to determine if they had their own BP monitor at home.
3) Reply stage processes:
    a) For patients who did have a BP monitor, they were sent the BP Florey to return their BP readings.
    b) For patients who did not have a BP monitor but were intending on self-purchasing, patients were required to respond to an AccuRx message once they had a machine. At this point, the BP Florey was then sent.
    c) Patients who did not have a BP monitor and needed to be supplied with one, were referred to a pharmacy to be triaged for further management options.

This SOP resulted not only in multiple stages where patients could not respond to an AccuRx message or Florey and therefore drop off the pathway, but also highlighted the bottleneck in the pathway due to the limited numbers of BP monitors for the practices to lend to patients who did not own their own BP monitoring equipment. This provided an example of the potential for the complexity of operationalising a

clinical pathway to detract from the value of using an innovation (in this case BP Floreys), and that the need to simplify or review the pathway as opposed to ceasing to use the Florey may be required.

8.4 STAFF VIEWS ON THE VALUE OF BLOOD PRESSURE FLOREYS

All the staff members who were interviewed reported the same and highly consistent perspectives regarding the value of BP Floreys.

8.4.1 BP FLOREYS WERE THE MOST FREQUENTLY USED FLOREY

The BP Floreys were the reported to be the most frequently used Florey by all the staff members who were interviewed.

> *"The one I've used the most is the BP four-day Florey"* (SA02)

This was interesting, as although this was reported to be the most frequently used Florey, and to have value to the staff members, there were other features of AccuRx (e.g., the multitude of messaging options, creating templates, delayed messaging, and batch messaging) that were perceived to be even more useful than any single Florey.

8.4.2 BP FLOREYS ARE EFFICIENT AND SAVE TIME

Staff members explained they preferred to collect BP readings via Floreys as they perceived Floreys to be more efficient and save time. One staff member specifically compared using a BP Florey to collecting BP readings via eConsult or via a paper proforma. This staff member highlighted the Florey removed the need for them as staff members to have to manually input any BP recording returned into the electronic records of the patient, and that the BP Florey calculated average readings.

> *"For a clinician it [BP Florey] is certainly more useful, I much prefer my blood pressure average being worked out as this is saved on the message than say a piece of paper that I have got to work through, you know, 10 20 readings [to manually calculate the average]"* (SA04)

These efficiencies and time savings are important because home BP monitoring has been identified as a priority for cardiovascular disease (e.g., hypertension) monitoring (https://www.england.nhs.uk/ourwork/clinical-policy/cvd/home-blood-pressure-monitoring/) and therefore has the potential to be a condition which will form a growing proportion of workload within general practice in the future.

8.4.3 PERCEIVED LOW PATIENT RESPONSES TO BP FLOREYS

Despite staff preferring to use BP Floreys to collect information regarding BP, the one concern raised was the perceived low patient response rate.

> *"At the start it wasn't particularly good, I sent people the blood pressure reporting templates, and had quite a few not really submitting, maybe 10 out of 10 after 7 days not reporting anything, but recently I've started getting them back"* (SA04)

This did not result in staff members not using the Floreys, but was something they were aware of, and meant staff members felt the need to become more selective in which patients to send them to, and for the need to factor in time to follow-up with those who did not respond.

> *"I find it as a useful adjuvant, but it is careful selection of what patient population to use it for"* (SA04)

9. PERCEPTIONS OF IMPACT

There were many potential stakeholder groups that could be impacted by AccuRx. These groups included patients, practice staff, practices, as well as more widely across the ICB. The perceived impacts on each of these stakeholders have been highlighted below.

These findings have been drawn from several sources, including the staff interviews at Demonstrator practices, staff interviews with ICB practices with large variation of use (the 'variation interviews'), a patient interview, and the patient acceptability survey.

9.1 PATIENT CONVENIENCE

From the one patient interview completed, the main impact reported was convenience and time saving. The patient reported they preferred no longer needing to go to the practice and return a paper proforma of their BP recordings.

> *"For me, it was very useful, for me, I took the blood pressure, which I would have had to do anyway, and there was a way of inputting it straight away, no losing it [piece of paper], or dropping it off"* Patient

This perception was corroborated by staff members, who also felt patients benefited from not having to unnecessarily travel to their practice. They felt the patients who particularly benefitted were those of working age and who did not readily have access to transport.

One staff member also reflected that Floreys and features of AccuRx allowed patients to respond to messages when was convenient for them, as opposed to having to be available for a telephone call or appointment when might not be feasible to answer or attend. Also, Floreys were considered helpful for patients with hearing loss, and when English was not their first language.

Another impact on patients was the possibility of using Floreys to proactively manage conditions. BP Floreys were the examples used by staff members, indicting they allowed staff to identify potential clinical issues and address them before becomes a clinical event. This was an important impact to be keep in mind when assessing the benefit and value of Floreys and AccuRx in the future, as this potential reduction in future health issues will be a complex metric to monitor and therefore demonstrate.

> *"We have potentially identified patients with unidentified hypertension for potentially two years since they last had a high reading [by sending a BP Florey], and now we can bring them to target, […], that's a powerful thing to go that changes people's lives and their life span, […], why wouldn't we want to be doing this as much as possible [identify potential adverse health risks]"* (SA03)

It is important to caveat here that although Floreys and features of AccuRx were felt to be widely acceptable to patients by both the patient and staff members interviewed, continuing to offer alternatives to digital solutions was equally important for those patients who were digitally illiterate, digitally impoverished, or who do not agree to be contacted via text message or email.

9.2 INFORMATION SHARING WITH PATIENTS

An interesting impact perceived by staff in the variation interviews was the ability to send information to the patient following a consultation. This meant a patient was able to revisit the information, share it with others, and reduce time pressures on clinicians to communicate information to patients face-to-face. It was felt Floreys allowed consultations to obtain additional information e.g., physical measures, or address wider concerns. This was felt to reduce the pressure on patients to retain all the information given by a clinician.

> *If you know the patient can go away and do that [a Florey] in their own time, and you are not going to use up a consultation to go through and say 'do you feel like crying' etc from a questionnaire, […], as the consultation is a time limited concept, […], the first few minutes are spent starting off a*

conversation, the last few minutes are spent actually understanding what the plan is going forward, so three to give minutes to understand what the problem is, in that bit each second is precious, so if you can offload some of those questions, […], AccuRx have got this right" (V02)

9.3 OPPORTUNITY TO USE ACCURX IN DIVERSE WAYS AND ACROSS MANY PATHWAYS

As AccuRx operability was perceived by the patient interviewed to be simple and easy, the patient highlighted they would be keen to use AccuRx again for other areas of their care as well as BP monitoring again in the future. Despite this being a single patient's view, it was important to note and ensure practice staff are considering all the primary care pathways and touch points with patients that AccuRx could be integrated within going forward.

However, caution does need to be taken, as there may be times during a care pathway that using AccuRx Floreys or other features does not remove the need to telephone or see a patient face-to-face. For example, the patient interview highlighted AccuRx would not be an acceptable tool in instances where there where abnormal results to impart or difficult conversations which need to be had.

"There weren't any problems that needed to be sorted out, […], I would have expected, if the blood pressure had been out of sorts, I would have then had a phone call from the GP to say 'come and see me'" (Patient)

9.4 PRACTICE STAFF TIME SAVINGS AND EFFICIENCIES

Staff members also felt that Floreys and features of AccuRx had the potential to allow clinicians to be more efficient and better manage resources as they were able to focus on more complex patients. They felt this positively impacted patients as it meant appointments could be allocated to the most in need and not be blocked by routine or simple cases.

All staff members perceived there to be significant personal timesaving and efficiencies (e.g., though delayed messaging or using 'pathways'), less need for longwinded 'paper' / administrative processes (e.g., due to the read/write capability within EMIS and SystmOne), improved ability communication and teamwork between staff (e.g., though assigning Floreys to each other where appropriate).

The ability to send delayed messages was also a perceived benefit to patients, as it meant patients got follow-ups and 'check-ins' without adding additional pressure to an already over-burdened system.

The interoperability with EMIS and SystmOne offered by Floreys and features of AccuRx were also reported to significantly improve productivity and save time as there was no longer a need to duplicate documentation. Internal auditing of record keeping had also been made easier and has improved practice performances with within these audits as AccuRx was so well integrated within EMIS and SystmOne (ability to produce read/write codes etc).

"AccuRx was given access to EMIS to read/write whereas lots of other companies like eConsult haven't been, and that is a massive game changer, so with the ability with one click to add to the patient record, is just fantastic, it just makes it so much more empathetic to us [staff working in general practice] therefore patient care improves as we are more likely to send out messages and use Floreys" (SA02)

However, this was reliant on staff being both confident to use digital technology and innovations as well as having the time to be able to explore and experiment initially, and then refine their pathways and processes to optimise how Floreys and features of AccuRx are embedded. One staff member highlighted that without training, using AccuRx becomes more of a time-burden than a time-saver.

In additional, the use of Floreys and features of AccuRx was highlighted to allow staff members to ensure that contact with patient remains focussed on dealing with the current presented issue as opposed to resulting in it becoming a consultation within which patients say 'just whilst I am speaking to you'. This

timesaving for the clinician needs to be considered from a patient perspective, as this could be one factor which patients report reduces their acceptability and appropriateness of Floreys or other features of AccuRx.

9.5 PRACTICE-WIDE TIME SAVINGS AND EFFICIENCIES

Similar to the impacts upon practice staff, the timesaving and efficiencies were also perceived to be felt at a practice level. For example, it meant labour intensive processes could be streamlined and reduce the internal 'backwards and forwards' communication between staff.

> *"We were struggling to communicate about patients, we were having to send messages back and forth to our reception staff, the amount of time GPs spent writing to their own staff to contact a patient was a lot, you could spend less time [using AccuRx] directly contacting the patient by sending them a message"* (V02)

However, it was felt the local administrative processes, development of pathways, and 'experimenting' with AccuRx at practice level (which potentially individual practice staff did not or were not considering) was required to facilitate Floreys and features of AccuRx being adopted, penetrated, and used sustainability across practices. These included the need to organise message templates created within AccuRx in a meaningful and standardised way, develop standard operating procedures or guidance on how to embed Floreys or features of AccuRx into pathways or normal working practices, and to provide guidance and have oversight on how to communicate appropriately using Floreys and other features such as messages using AccuRx. Therefore, practices may need to accept an additional workload in the short term to achieve more efficient ways of working in the longer term.

> *"We use a lot of the templates that we have set up, and they have recently been organised, […], it was one of our care coordinators who went through the list of templates and grouped them into to different sections, and the rest of the team have fed back this has made them a lot more user friendly as we know where everything is"* (V04)

9.6 POTENTIAL FOR WIDER IMPACTS ACROSS THE ICB

Staff members who were interviewed from Demonstrator practices highlighted that by working as an ICB to share practice- and PCN- level learning and resources, there could be a reduced burden on practices to 'reinvent the wheel' and 'self-discover' Floreys and features of AccuRx.

Staff interviewed in the 'variation interviews' suggested that there were potential wider impacts and application of features of AccuRx which could promote timesaving and efficiencies, not just for practice staff or practices or PCNs, but also for others across the ICB. These wider ICB impacts required support from AccuRx and the ICB to ensure they were operationalised and were reported from 'an ideal world' perspective. The three suggestions where:

1. Development and maintenance of 'directories' at regional (e.g., mid and north Hampshire) and ICB-levels within AccuMail so practices (and therefore their staff) could be aware of contact details, referral criteria and eligibility for services they may wish to refer to or contact.
2. Ability to communicate with services and make referrals outside of primary care (e.g., secondary care services) via AccuRx, with the capacity to have the same read/write function in EMIS and SystmOne as well as electronic records used by e.g., secondary care providers to offer even greater time savings and efficiencies for both general practice and secondary care.
3. The need to consider and improve interoperability for staff working across a PCN as need multiple EMIS' (one per practice) which results in inefficient swapping between different practice EMIS' currently.

10. UNDERSTANDING THE IMPLEMENTATION OF ACCURX FLOREY PLUS

AccuRx Florey Lite has been in use across HIOW ICB practices since early 2020 and AccuRx Florey Plus was commissioned by the ICB and available to all practices since July 2021. In terms of the implementation of AccuRx Florey Plus, HIOW ICB supported this through advertising its availability. Wessex AHSN was appointed as a delivery partner to support implementation and to independently evaluate AccuRx Florey Plus specifically within several practices as part of the Demonstrator programme.

In addition, practices themselves were involved in the implementation of AccuRx Florey Plus as they operationalised the use of its functions to suit their specific practice needs. This section reflects on findings related to actions taken, where available, by all three entities involved in the implementation of AccuRx Florey Plus.

This section synthesises several data sources from this evaluation (ICB variation staff member interviews, demonstrator practice staff member interviews, a patient interview) under a framework to understand the implementation of AccuRx. Hermes et al. (2019) identified factors which are important implementation outcomes for the evaluation of remotely delivered behavioural intervention technologies. By considering the factors in this section, a rounded assessment of 'successful implementation' can be achieved based upon a comprehensive and evidence-based theory. The appendix includes more detail, including illustrative quotes, for the findings reported below.

Table 7. Hermes et al. (2019) framework for 'successful implementation'

'Successful implementation' factor	**Description of factor**
Acceptability	Perception among stakeholders that it is useful
Adoption	Intention, decision, initiation to use it
Appropriateness	Perceived fit, relevance, compatibility
Fidelity	Intervention used as intended
Feasibility	Retrospective knowledge of success/lack of success within the context
Implementation cost	Direct costs of implementation strategy
Penetration	The integration of a practice within a service setting and its subsystems
Sustainability	Maintained, institutionalised, or integrated within a service setting

10.1 HIGH ACCEPTABILITY

All the stakeholders (patients and staff members) interviewed perceived there to be high acceptability of AccuRx. Staff in the variation interviews felt it was acceptable to all stakeholders (patients, staff, practices) as a flexible system. This was confirmed by the digitally literate patient, with confidence to use technology, that took part in an interview. AccuRx BP Florey was felt to be a useful alternative to conventional reporting of BP via a paper proforma. There was some awareness from this patient that not all patients are digitally literate, and therefore acknowledged acceptability may differ between patients. In addition, some demonstrator staff, despite considering it to be highly useful in general practice, perceived themselves to have reduced knowledge and awareness of Floreys and features of AccuRx. This meant some staff were unable to comment on how widespread the sense of acceptability reached.

10.2 VARIABLE ADOPTION

The patient interviewed reported AccuRx to be easy to adopt, and that they were keen to use this as an alternative to conventional reporting of BP via a paper proforma. Staff members perceptions of adoption varied. Some staff members from the variation practices felt they lacked knowledge and awareness of all the Floreys and the features available. Other staff from the variation practices felt they were highly knowledgeable and aware of Floreys and features of AccuRx. For those staff members from the

Demonstrator practices that had tested all the Floreys, there were some which they had continued to use, and others which were not considered useful to adopt as part of normal working. Nonetheless, regardless of their current level of knowledge and awareness, all staff highlighted their intention was to use AccuRx to the best of their knowledge. It was felt that shared learning between clinicians was a vital yet underutilised strategy for AccuRx that could increase adoption of AccuRx.

10.3 HIGH APPROPRIATENESS

All the stakeholders (patients and staff members) interviewed perceived there to be high appropriateness of AccuRx. The patient interviewed reported it removed the need to see someone face-to-face or travel into practice to return a paper proforma for information which can easily be provided electronically. The patient also felt that by electronic reporting of information, that the information went straight to the person who needed to see the information rather than waiting in a pile of papers to be inputted or filed. All staff felt the fit of AccuRx into general practice was high even by those who perceived themselves to lack knowledge of all Floreys and features of AccuRx. However, some staff from the demonstrator practices felt their lack of knowledge and awareness of Floreys and features of AccuRx had impacted how confident they felt to comment on compatibility within all the care and administrative pathways within the practice.

10.4 VARIABLE FIDELITY

The fidelity (whether used as intended) of AccuRx varied between stakeholders. There was low fidelity from the patient interviewed as the patient was given insufficient information regarding the requirement to input BP readings from as soon as Florey link sent. By delaying starting inputting readings, the patient was only able to input two out of the four days of BP readings. There was higher fidelity from staff members, however this was still not considered to be high. The staff members from the variation interviews report that as a system AccuRx was easy to use, however there was a lack of awareness from some staff of the breadth of Floreys and the AccuRx features available. Staff members from the demonstrator practices reiterated this, as well as reporting a that a lack of response from patients to be an issue. They had identified strategies which they felt promoted higher response rates from patients which they had developed through experience and experimenting with AccuRx.

10.5 VARIABLE FEASIBILITY

Most interviewees felt that AccuRx was highly feasible in general practice. The patient interviewed felt AccuRx fit easily in with day-to-day life and considered it to be viable and useful way to report BP readings to practice. Staff members from the variation practices and some staff from the Demonstrator practices reported Floreys and features of AccuRx can be and have been easily embedded into general practice normal ways of working as they provide clear and obvious time savings and efficiencies. However, some staff from the Demonstrator practices reported that there were some Floreys which were felt to be of less value than others as they didn't offer the same time-savings as the Floreys reported to be more useful. There was also a concern from one staff member from a Demonstrator practice around lack of time allocated to staff to handle responses to Floreys, unlike eConsult, which was given an appointment slot to review responses.

10.6 MULTIPLE IMPLEMENTATION COSTS

There were perceived to be multiple implementation costs for AccuRx. These were only reported from a staff member perspective as there were no direct costs to the patient for using AccuRx. Staff members reported there to be a requirement for practices to accept the indirect financial burden of training staff as practice were required to release staff from their usual day-to-day tasks to learn how to use AccuRx if they wanted to promote its use. There were also implementation costs related to competing products in use already by practices which offered some of the same features as are available within AccuRx. The issue regarding competing products meant a dilemma for practices. They were required to decide as a practice to decommission or stop using existing and embedded product (even if was outdated and AccuRx was felt to be a better system), knowing that in changing the system they use, they would then unquestionably be required

to train staff to use the new, replacement product. For some practices, this staff training issue meant that existing products were not decommissioned.

10.7 VARIABLE PENETRATION

The perceptions of stakeholders for the current level of penetration, or potential to further penetrate, AccuRx within general practice differed. These variable perceptions were present as although all staff members perceived an opportunity for Floreys or features of AccuRx to fit in with all clinical care pathways as well as administrative processes within general practice, the patient interviewed felt that some elements of care would be preferable to remain a conversation rather than communicating via messages or Floreys (such as where results are abnormal or a change in management strategy was required).

10.8 HIGH SUSTAINABILITY

The sustainability of AccuRx was reported to be high from the patient interviewed, all variation practices staff member, and most of the Demonstrator practice staff members perspectives.

The patient interviewed reported they would be keen to be offered a Florey or other AccuRx features in future, highlighting the high sustainably of implementing AccuRx in care pathways from a patient perspective in the future. All the staff members from the variation practices felt Floreys and features of AccuRx were now so embedded in day-to-day working of practices that it was now considered an essential 'tool', and as a result a highly sustainable way of working.

Most Demonstrator staff perceived the use of Floreys to be sustainable, however one practice was currently relying on a champion as they 'pilot' the use of Floreys within a pathway. Therefore, once this practice has completed their piloting, it was perceived they will transition to a more sustainable model as other staff members in the practice will share the ownership of delivering the care pathway and of using AccuRx Floreys.

10.9 OVERALL IMPLEMENTATION

In summary, when considering all the above factors known to precede successful implementation, for the most part AccuRx has been implemented successfully.

> *"I'm not being paid by AccuRx, let me be clear about that, but I don't think there has been a single thing in primary care that we've had access to in the last 10 years that has made a big a different as AccuRx has done recently" (V03)*

However, there remains significant untapped potential which could be realised.

> *"We are looking at what it can do and the benefits of it and how useful it can be, it looks great, and it could realty help us as a practice and help patients, but the reservations we've had is sort of the lack of training, we haven't launched it or explored it, we haven't had training on it, so there is just a bit of a gap there" (V04)*

The limited training could partly be attributed to the rapid implementation approach undertaken during the pandemic. The implementation of innovations was required to be rapid, with no allocated time for formal 'training' prior to implementation. It is also important to consider the support and training resources offered by AccuRx, as these may or may not have been accessed and could be pursued to ensure AccuRx support and training resources are optimised.

Also of interest was lessons learned and reflections were consistent between the staff members, even if they were from high or low usage practices. However, the language used to describe the same lessons learned was different. Staff members from either high volume or high diversity usage practices generally used more proactive and positive language. In comparison, staff from low volume and low diversity practices generally used more passive or cautious language. These language differences help highlight the different ways practices engaged and embedded AccuRx.

Based on this assessment of successful implementation, the key lessons learned for stakeholder groups are presented in the section below.

11. SUMMARY OF LESSONS LEARNED

There were lessons learned from all the qualitative interviews. These are presented as lessons learned for HIOW ICB, practices to support their staff and patients, and those relevant to AccuRx directly.

11.1 LESSONS LEARNED FOR HIOW ICB TO SUPPORT PRACTICES

There were key lessons for the ICB to consider in supporting practices in using AccuRx and as a result promote optimal implementation of AccuRx.

- Consider the training requirements on Floreys and features of AccuRx to ensure optimal operationalisation of Floreys and AccuRx across the ICB as although the system is intuitive and easy to navigate it is hard to be aware of the breadth of Floreys and the features available. It takes time to 'give it a go' to understand how Floreys and features of AccuRx fit optimally into pathways and where they fit alongside / to replace other systems. This would address the perceived mindset that there was significant 'untapped potential' of AccuRx.
- Consider 'shared learning' opportunities through practices sharing their Standard Operating Procedures for Florey use in clinical areas. Two different approaches were observed in the Demonstrator practices.
- Consider 'shared learning' opportunities through e.g., user led 'Community of Practice' facilitated by the ICB between practices, so each practice is not trying to 'reinvent the wheel'. It was highlighted that 'less invested' practices need to be represented and present at the shared learning opportunities otherwise there is potential the 'Community of Practice' could simply increase the gap between high and low user adoption levels.
- Consider how best to support individual practices and their staff members to use different Floreys and features of AccuRx both within and between practices as one standardised operational model for Floreys and features of AccuRx is not appropriate.
- Support practices to use the Floreys and features of AccuRx to meet QOF targets and other incentives or prioritised care pathways within general practice.
- Support practices to embed Floreys and features of AccuRx within normal working (such as within care pathways) and ensure practices where possible to not be reliant on a 'champion'.

Support for the engagement of end users in the procurement of new technologies:

- It was reported that there was pressure from GPs within the ICB on commissioners to purchase additional Floreys and features of AccuRx. This indicated that those who were knowledgeable about AccuRx and had used it found it to be acceptable, appropriate, and feasible to use, and that it was an innovation they are keen to adopt further, and ensure it was penetrating and being integrated into as much of their normal working processes (sustained) as possible. Therefore, continuing to promote and actively get involved in the discourse around technologies to provide the perspective of those who will be using technology is considered a vital element of implementation strategies going forward.
- AccuRx was introduced when other 'competing' systems or products were already commissioned which have similar features or offerings (Mjog; eConsult). In some practices AccuRx replaced or superseded the competing systems due to being perceived to be a better product. In other practices AccuRx was currently running alongside the competing systems (despite AccuRx being perceived to be the better system). This adoption varied from practice to practice, and by regions within the ICB,

and appeared to depend on the commissioning models for the 'competing' systems as well as on how well penetrated the existing system was within a practice.

- Florey Plus was the costed element of the product that was funded via HSIOW CCG and which was of primary interest in this evaluation. However, it is also important to note that there were procurement costs for 'upgrades' and additional features of AccuRx for practices. It was reported that AccuRx offered 'incentives' when it was first developed and offered within general practice to early adopters (e.g., 'refer a GP practice and that will release a new product or feature for yourself'). This reduced the direct implementation costs for practices, as well as meant early adopters were more likely to adopt, penetrate and sustain their use of AccuRx as they had more features to use within the same product.

11.2 LESSONS LEARNED FOR PRACTICES TO SUPPORT THEIR STAFF

There were key lessons for practices to consider for practices to support their staff members and as a result promote optimal implementation of AccuRx. It was perceived that there was the assumption made by the ICB that staff members will be confident to use AccuRx within their roles however in reality staff members' own confidence with digital technologies has the potential to affect how much AccuRx was used (SA01). Therefore, the variable adoption of AccuRx observed in some ways was unsurprising (SA04).

- Consider formal training for individual staff based upon levels of confidence with digital technology and digital literacy as this has the potential to impact volume and diversity of use by staff members.
- Support practices to have the skills to send personalised and individualised messages which offer a human layer to gain higher response rates than robotic and standardised messages, whilst also ensuring the messages sent are professional and use appropriate language for communicating with patients.
- Consider having IT staff trained and available to facilitate the functions of AccuRx Floreys Plus.

11.3 LESSONS LEARNED FOR PRACTICES TO SUPPORT THEIR PATIENTS

There were key lessons for practices to consider for practices to support their patients in using AccuRx and as a result promote optimal implementation of AccuRx.

- Ensure adequate information is given to the patient regarding use and completion of Floreys.
- Consider an education piece for patients who have previously not consented or have declined to be contacted via message or email at a practice level to ensure practices are able to explain how and why message-based systems like AccuRx work and how can complement the care provided by general practice.
- Consider an education piece for patients who would like to use digital technology like AccuRx but do not currently have the skills to do so. This is in recognition that not all patients are digitally literate or confident using technology.

11.4 LESSONS LEARNED FOR ACCURX

There were key lessons for the AccuRx developers to consider in making them more aware of how they may better meet the needs of general practice and as a result promote optimal implementation of AccuRx.

To increase appropriateness:

- Consider introducing a read-receipt for messages which have been sent to give practices reassurance the message has not only been sent, but also the patient has also read the content.

To increase fidelity:

- Consider providing the ICB with high level reports on response rates by patients to Floreys and other appropriate features offered by AccuRx to better enable the ICB to understand this, and then in turn result in the ICB being better positioned to support the practices to develop strategies increase their response rates.

To increase penetration:

- Consider developing a communication channel with AccuRx between primary and secondary care.
- Develop an PCN- / ICB- / CCG- wide directory within AccuRx / AccuMail so individual practices do not need to keep a directory of services or contact details for services updated. This directory of services could also include referral criteria etc. for the services, to make referring to and contacting other services more streamlined.
- Consider the character limits on the messages as for some the character limit was insufficient to ensure the content of messages sent included the required information, and therefore some staff did not use AccuRx as often as they otherwise would.
- Continue to have a proactive and responsive approach to developing Floreys and features which AccuRx. AccuRx were perceived to have developed and released 'new' Floreys and features over time as they learnt of gaps which needed bridging in general practice (V03). This proactive and responsive approach to developing Floreys and features which AccuRx have adopted to date is therefore valued by general practice, and is something AccuRx should be encouraged to continue to adopt.

Suggested improvements for new Floreys to measure and/or support general practice from this evaluation included:

- International prostate symptom score (IPSS)
- Hormone replacement therapy (report section 7.1 indicates this is already in development)
- Mole monitoring
- Musculoskeletal conditions
- Back pain assessment (report section 7.1 indicates this is already in development)
- Mental health reviews
- Smear test (declined) administration
- Statin (declined) administration.

Suggested improvement to practice AccuRx platform:

- Automate and provide analysis options in the clinicians' platform so practice staff can quickly understand Florey use (1) by individual Florey, (2) by practice staff type, and understand (3) messages sent by practice staff type, as well as provide aggregated totals.

12. CONCLUSIONS

Having considered all the evidence presented in this report, and assessed the implementation of AccuRx, each evaluation question has been considered and conclusions drawn. This has been done in the context of Florey Plus, as well as being mindful of Florey Lite and additional features of AccuRx which were also found to be of value in this evaluation. It was a common perception that Florey Plus do not work in isolation of the Florey Lite or additional features of AccuRx, and that other features are of the same or more value to practices. The conclusions are also framed at different levels (ICB-, PCN-, practice-, individual staff member-, patient-, and innovator- levels) where appropriate to ensure differentiation between the conclusions for each potential stakeholder group.

12.1 EVALUATION QUESTION 1: TO WHAT EXTENT AND VARIATION HAVE ACCURX FLOREY PLUS SURVEYS BEEN UTILISED BY ALL HIOW ICB PARTICIPATING PCNS/PRACTICES?

The general uptake of AccuRx Florey Lite and Plus differed across the ICB. There were also differences in the usage over time across the ICB, with peaks and troughs in March 2020 and the winter of 2020. A large degree of variation of individual Florey use was seen, with high users and low users of individual Floreys or groups of Floreys. Where Floreys were being used, the only noticeable patterns were the common usage of COVID-19 triaging, asthma, and BP Floreys. Regardless of the practice or PCN across the ICB, it was noted that 'Floreys sent' made up a small proportion of total AccuRx package usage, with the majority of usage related to 'Ad hoc' messages. This indicates there is work to be done at an ICB-, PCN-, practice-, individual staff member- and innovator- level to facilitate wider utilisation of AccuRx (Florey Plus, Florey Lite, and additional features). This may require a focus on implementation strategies to enhance the utilisation of Florey Plus, Florey Lite, and other features which are not widely used (e.g., AccuMail).

12.2 EVALUATION QUESTION 2: TO WHAT EXTENT AND VARIATION HAVE ACCURX FLOREY PLUS SURVEYS BEEN UTILISED BY DEMONSTRATOR PCNS/PRACTICES?

As seen across the ICB, the uptake of AccuRx Florey Lite and Plus differed between the demonstrator practices. There were also differences in the usage over time between the Demonstrator practices, with peaks and troughs in usage. This was largely associated with delayed use of both Florey Lite and Plus in some practices but could also be attributed to the demographic profiles of the Demonstrator practices, which generally serve an older population than national average. Variation was also seen in practice's approach to Florey use through its standard operating procedures and the way staff were used to administer Florey surveys.

Regardless of the practice or PCN across the Demonstrator practices, it was noted that 'Floreys sent' made up a small proportion of total AccuRx package usage, with the majority of usage related to 'Ad hoc' messages. This indicates there is work to be done at an ICB-, PCN-, practice-, individual staff member- and innovator- level to facilitate wider utilisation of AccuRx (Florey Plus, Florey Lite, and additional features).

12.3 EVALUATION QUESTION 3: WHAT IMPACT HAVE ACCURX FLOREY PLUS SURVEYS HAD ON SERVICE USER CARE?

When viewing all survey responses together from across the ICB and by combining views that 'strongly agreed' and 'agreed' with the survey statements, all (100%) practice staff who responded either strongly agreed or agreed that Floreys, in general, were helpful to manage patient care. This was also the case from the staff members involved in the 'variation' interviews, who reported AccuRx in general was a useful tool to support them caring for patients in a more efficiency way. There were patient groups perceived to have positively impacted from the use of AccuRx (e.g., those of working age, those with hearing difficulties or language barriers).

Patients surveyed from the Demonstrator practices also reported similar views about the broad value of AccuRx in relation to the impacts, or potential impacts, on patient care. All patients thought Floreys fitted in with their daily activities, 94.1% of patients thought Floreys were technically reliable, 94.1% thought Floreys were an easy way monitor and manage their condition, 88.2% believed Floreys helped them monitor their condition, 88.2% would respond to Floreys again if needed, 87.5% reported Florey were an easy to share measurements, 82.4% of patients were confident to respond to Florey surveys, and 70.6% stated Floreys were a successful way to manage their condition. It would appear AccuRx Floreys have helped to minimise the work of being a patient.

12.4 EVALUATION QUESTION 4: TO WHAT EXTENT ARE ACCURX FLOREY PLUS SURVEYS ACCEPTABLE, APPROPRIATE, USED AS INTENDED, FEASIBLE AND SUSTAINABLE FOR SERVICE USERS?

The staff members involved in the 'variation' interviews reported AccuRx to be acceptable, appropriate, feasible, and sustainable. Fidelity (defined as the extent AccuRx was 'used as intended') was variable, given that staff members from across the ICB reported different levels of uptake of the Floreys (Plus and Lite) and features of AccuRx. These differing levels of uptake were reported to be based upon their own level of knowledge of the AccuRx package as opposed to not valuing the features which had not been used. A key reason for the variable levels of adoption and penetration across the ICB were the differing investments in time allocated to explore AccuRx. This implementation cost should be considered.

The conclusions drawn from across the Demonstrator practices were similar and highlighted the need for the ICB to support PCNs, practices, and individual staff members to ensure the reasonably large untapped potential of AccuRx can be realised.

12.5 EVALUATION QUESTION 5: WHAT IMPACT HAVE ACCURX FLOREY PLUS SURVEYS HAD ON THE EFFICIENCY OF GENERAL PRACTICE?

Staff across the ICB and Demonstrator practices widely considered that AccuRx increased, or had the potential to increase, efficiencies and offer time savings within general practice to PCNs, practices, and individual staff members (for example reducing the need for lengthy administrative processes or to use valuable consultation time to complete questionnaires which could be done pre- or post- appointment).

Furthermore, most staff found Floreys easy to use (97.3%), increased practice productivity (97.3%), saved clinicians' time to do other work (91.9%), saved appointments with clinicians (89.2%), and generally found integrating Floreys responses into other practice work easy (91.9%). The Floreys most effective at saving appointments were Blood Pressure Home Monitoring (71% of the time), Blood Pressure (70.3%), Asthma ACT (66.7%), and COPD (60%).

Staff members provided strategies for how the ICB, PCNs and practices could support individual staff members to unlock the untapped potential of AccuRx and achieve a better level of adoption, penetration, and sustainability.

12.6 EVALUATION QUESTION 6: HOW HAVE ACCURX FLOREY PLUS SURVEYS IMPACTED ON PATIENTS, STAFF, AND RELATED SERVICES?

As reported in the conclusions for evaluation question 3, AccuRx as a system was reported to have, or have the potential to, positively impact services for patients across the ICB. This positive impact of AccuRx was also felt to be extended to the whole ICB, PCNs, practices, and individual staff members.

The identified time-savings and efficiencies were able to be realised as AccuRx was felt to be a flexible system which could be used across all roles within general practice as well as within clinical and non-clinical pathways. There were also perceptions from staff members from across the ICB that AccuRx impacted patient care positively due to the additional convenience it offered patients as well as staff members, as patients were no longer required to travel to practice unnecessarily.

The ability of AccuRx to effectively integrate, with read/write functionality, within the electronic systems already in place (EMIS and SystmOne) was widely valued. The foresight of the innovator (AccuRx) to proactively develop the system to continue to meet the needs of general practice was another factor raised by staff across the ICB which positively influenced their perceived value and impact of AccuRx. Similar impacts were also reported from the Demonstrator practice staff member interviews.

12.7 EVALUATION QUESTION 7: WHAT LESSONS CAN BE DRAWN FROM THE EXPERIENCE OF PARTICIPATING IN A DEMONSTRATOR PROJECT?

Being a Demonstrator practice appeared to have minimal impact on the extent and variation of AccuRx usage across the ICB, for example, by learning being shared from the Demonstrator practices to other practices. Also, there seemed to be limited awareness that the Demonstrator project was being undertaken, among practices across the ICB who were not directly involved in the project. For the Demonstrator practices, there was greater awareness that a Demonstrator project was being undertaken around AccuRx. This is likely to be driven by the engagement the Demonstrator practices had early in the Demonstrator project with the ICB (particularly during the online workshops), Primary Care Programme at Wessex AHSN and the Insight team (evaluators) at Wessex AHSN. However, similar to the practices across the ICB, it would appear that being a Demonstrator practice did not impact on the extent or variation of AccuRx usage.

APPENDIX 1 – SUPPLEMENTARY MATERIAL FROM THE QUALITATIVE ANALYSIS

QUALITATIVE DATA ANALYSIS

A framework analysis of the patient interview, three 'variation' practice interviews, and four 'Demonstrator' practice interviews was undertaken. The framework analysis was based upon the factors identified by Hermes et al. (2019). The authors identified factors which are important implementation outcomes for the evaluation of remotely delivered behavioural intervention technologies. By considering these eight factors, a rounded assessment of 'successful implementation' was intended to be gained, based upon a comprehensive and evidence-based theory.

'Successful implementation' factors	**Description**
Acceptability	Perception among stakeholders that it is useful
Adoption	Intention, decision, initiation to use it
Appropriateness	Perceived fit, relevance, compatibility
Fidelity	Intervention used as intended
Feasibility	Retrospective knowledge of success/lack of success within the context
Implementation cost	Direct costs of implementation strategy
Penetration	The integration of a practice within a service setting and its subsystems
Sustainability	Maintained, institutionalised, or integrated within a service setting

PATIENT INTERVIEW FINDINGS

This section presents the implementation factors as themes, and the related illustrative quotes, from the one patient interview completed (Table A1 below). The patient who consented to take part in an interview was female, aged 75 to 84 and of white ethnicity. She had experience of using the 4-day home monitoring of BP Florey.

This patient's overall perception of the AccuRx 4-day home monitoring of BP Florey was positive. They reported the main impact on using the Florey over the conventional way of providing BP readings was that they were no longer required to travel into the practice to return a paper proforma containing their 4 days of BP readings. They reported they found the process of receiving the link to the Florey to acceptable, appropriate, and feasible, and as a result something they willingly adopted.

This patient felt given their experience of using this Florey, they would be keen to use this Florey, or other Floreys and features with AccuRx, again in the future. This indicated that AccuRx was something perceived to

have the potential to penetrate other areas of this patients care in future as well as sustainable method of managing hypertension for this patient.

This patient however did indicate that there were some instances whereby text-message based communication with a healthcare professional would not be preferred. For example, they reported that if they had returned their BP readings via a Florey and there was something abnormal or of concern, they would then want follow-up to either be via telephone or a face-to-face appointment to facilitate a discussion with the healthcare professional.

The only issue reported by this patient was with regards to the fidelity (defined as whether the Florey was used as intended) of the 4-day home monitoring of BP Florey. They reported that the 4-days for recording their BP began the day the Florey link was sent, not the day the patient uploaded their first BP reading. This information had not been imparted when the Florey link had been sent, so as a result the patient was only able to provide one and half days of BP readings.

This patient also stated that there were potentially patients who were older like herself, but that were not as digitally literate and as a result not as confident to use digital technology as she was. She felt there was potential that these patients would prefer to have non-digital options available to ensure they were not excluded from receiving care going forward.

It is important to note this patient had experience of using the AccuRx 4-day BP Florey only. Therefore, this data does not provide insights into the lessons learned and reflections from patients regarding other Floreys or features of AccuRx. In addition, as this patient overall had few issues with using the 4-day BP Florey, there were limited barriers or difficulties to glean.

Table A1. Themes from patient interview.

'Successful implementation' factor*	**Outcome and evidence of theme**	**Illustrative quote**
Acceptability	Highly acceptable • As a digitally literate patient who has confidence to use technology, AccuRx BP Florey was felt to be a useful alternative to conventional reporting of BP via a paper proforma. • Some awareness from this patient that not all patients are digitally literate, and therefore acknowledged acceptability may differ for between patients.	*"I do all sorts of things online, so I thought I might as well do this as well"* *"I could imagine there would be some people who are not familiar with computers and systems and that would find it more difficult"*
Adoption	Easy to adopt • Keen to use this as an alternative to conventional reporting of BP via a paper proforma.	*"I was pleased to use that system, it was quick, it was easy, it was straightforward"*
Appropriateness	Highly appropriate • Removes the need to see someone face-to-face or travel into practice to return a paper proforma for information which can easily be provided electronically.	*"It made things easier, I didn't have to write things down"* *"I knew, also, that the information I put into the system at the time of reading my blood pressure would go straight to where it ought to be"*

	• Electronic reporting meant the information went straight to the person who needed to see the information.	
Fidelity	Low fidelity • Lack of information given regarding the requirement to input BP readings from as soon as Florey link sent meant two days of BP reading were missing.	*"In future, I would know to start at the time he sent it [the Florey] rather than wait for a day or two"*
Feasibility	Highly feasible • Fits in easily with day-to-day life. • A viable and useful way to report BP readings to practice.	*"I had no problems at all [fitting it in]"* *"For me, it was very useful, for me, I took the blood pressure, which I would have had to do anyway, and there was a way of inputting it straight away, no losing it [piece of paper]"*
Implementation cost	*Not applicable*	-
Penetration	Moderately penetrable • Some elements of care that this patient would like to remain a conversation rather than communicating via messages or Floreys, such as where results are abnormal or a change in management strategy is required.	*"There weren't any problems that needed to be sorted out, […], I would have expected, if the blood pressure had been out of sorts, I would have then had a phone call from the GP to say 'come and see me'"*
Sustainability	Highly sustainable • Keen to be offered a Florey or other AccuRx features in future.	*"I would do that [use AccuRx] again very willingly"*

**Not applicable has been assigned in the 'outcome and evidence of themes' to denote when a factor has either not been discussed by or is deemed to not be relevant to the stakeholder group.*

'VARIATION' STAFF INTERVIEW FINDINGS

This section presents the implementation factors as themes, with related illustrative quotes, from the three interviews with staff from across the ICB based upon the framework analysis conducted (Table A2 below). The typology of practice was determined based upon practice usage of AccuRx Floreys from February 2020 to February 2022. The figure below (Figure A1) illustrates the four typologies identified. Understanding practice typologies was important to provide context to and guide conversations during the interviews.

The first staff member interviewed (V02) was a male GP partner from a 'high volume low diversity' user practice. This staff member was perceived to have taken on an 'early adopter' and 'advocate' type role with regards to the uptake of AccuRx, and was involved at a regional level in clinical digital care.

The second staff member interviewed (V03) was a male GP partner from a 'high volume high diversity' user practice. This staff member was perceived to have taken on an 'early adopter' and 'invested' type role with regards to the uptake of AccuRx.

The third staff member interviewed (V04) was a female Practice Manager from a 'low volume high diversity' user practice. This staff member was perceived to have taken on an 'enabler' and 'interested' type role with regards to the uptake of AccuRx.

There was no staff member interviewed from a 'low volume, low diversity' (typology 1) practice.

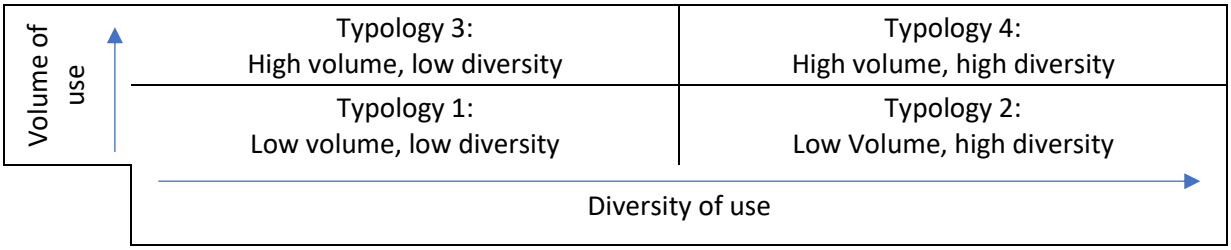

Figure A1. Four typologies of practices according to volume and diversity of Florey use.

Regardless of typology, the staff members interviewed all had a positive overall perspective of AccuRx. They also perceived there to be positive impacts for patients, staff members, practices as well as at an ICB level by engaging with AccuRx. This wide breadth of impacts was considered as the vital findings from these interviews and demonstrates the value AccuRx has for delivering care in general practice. Table A2 below provides more detailed findings from the 'variation' staff interviews.

Table A2. Themes from 'variation' staff interviews.

'Successful implementation' factor*	**Outcome and evidence of theme**	**Illustrative quote**
Acceptability	Highly acceptable • All felt it was useful to all stakeholders (patients, staff, practices) as AccuRx as a system is flexible in how it can be implemented to meet the need of each stakeholder.	*"We started using the Floreys to send out the questionnaires, all out chronic diseases, the asthma clinics, the diabetes clinics, all of them started sending out the Floreys"* (V02) *"Everybody, each individual, so no two clinicians use it alike, so two GPs use it the same, or two practices, each one uses it in a slightly different way"* (V02)
Adoption	Variable adoption • Some staff had a lack of knowledge and awareness of all the Floreys and the features available. • Other staff were highly knowledgeable and aware of Floreys and features of AccuRx. • All staff highlighted their intention was to use AccuRx to the best of their knowledge, regardless of their current level of	*"It's just having the time to sit down and start doing those things [exploring features], primary care has seen an escalation of 25-30% of demand, and then having the mind-space to sit down when we have clinicians working more than 50% of what they should be working for direct patient care, so to sit down and start looking at AccuRx, time just isn't there"* (V02) *"We are a small practice, but it has taken a bit of internal work, new and reviewing of our pathways, but now AccuRx is core to every clinical pathway we have now"* (V03) *"We don't really use Florey at all [compared to the other AccuRx features], we are looking at what it can do and the benefits of it and how useful it can be, it looks great, and it could realty help us as a practice and help patients, but the reservations we've had is sort of the lack of training, we haven't launched it or explored it,*

	knowledge and awareness.	*we haven't had training on it, so there is just a bit of a gap there"* (V04)
Appropriateness	Highly appropriate • All staff felt the fit of AccuRx into general practice was high even by those who perceived themselves to lack knowledge of all Floreys and features of AccuRx.	*"We were struggling to communicate about patients, we were having to send messages back and forth to our reception staff, the amount of time GPs spent writing to their own staff to contact a patient was a lot, you could spend less time [using AccuRx] directly contacting the patient by sending them a message"* (V02) *"Of all the things we use at the moment, AccuRx is the most indispensable, I'd get rid of EMIS before I got rid of AccuRx"* (V03) *"Our clinical and non-clinical team use AccuRx daily"* (V04)
Fidelity	Moderate fidelity • As a system AccuRx is easy to use, however there was a lack of awareness from some staff of the breadth of Floreys and the AccuRx features available.	*"It is a really user-friendly system"* (V04) *"The potential [of AccuRx] is phenomenal"* (V02) *"Speaking to someone recently, they were saying you know, all of these referral documents we've got to send, and it'll take days to get our admin sorted out, and I said, I just press one button and it just goes, and they had never heard of AccuMail even though it was sitting right there on their desk top the whole time"* (V03) *"The challenge is making sure everyone is aware of these things"* (V03)
Feasibility	Highly feasible • Floreys and features of AccuRx can be and are easily embedded into general practice normal ways of working as they provide clear and obvious time savings and efficiencies.	*"'If you know the patient can go away and do that [a Florey] in their own time, and you are not going to use up a consultation to go through and say 'do you feel like crying' etc from a questionnaire, […], as the consultation is a time limited concept, […], the first few minutes are spent starting off a conversation, the last few minutes are spent actually understanding what the plan is going forward, so three to give minutes to understand what the problem is, in that bit each second is precious, so if you can offload some of those questions, […], AccuRx have got this right"* (V02) *"It saves me time, and gets me out the building earlier"* (V03) *"It is a really efficient system"* (V04) *"The efficiency of being able to say, ok, I'll send you a text and get that information or give you this information, and then I can call you, so instead of having to see someone or call them, and then say, right, I'll call you back once you've taken a picture or tried this"* (V04)

Implementation cost	Multiple costs to consider: • Competing products. • Decommissioning existing outdated products. • Training costs.	*"We already have a product within the practice called Mjog to do the bulk messaging, […], you could run a report for patients, and say send them a smoking cessation leaflet, or invite multiple patients to their smears, or remind people of their chronic disease clinic appointments, so all that was happening via Mjog, […], we don't use the batch messaging as it is already set up within Mjog, which was commissioned before AccuRx, […], and my one primary thing is to never change a system that works even though there is a better system because of the amount of time and money you waste to retraining the team and changing processes within a practice, that all needs considering"* (V02) *"We use Mjog for batch texting, it is a very outdates and old-fashioned system, it is very difficult to monitor and manage responses, it's not great, but we had no other option on AccuRx to batch message, but now that is, we'll let go of Mjog and use Mjog even more so"* (V04)
Penetration	Highly penetrable • Perceived opportunity for related Florey or features of AccuRx to fit in with all clinical care pathways as well as administrative processes within general practice.	*"Our reception staff use it, our healthcare assistants use it, spirometry clinics, phlebotomy clinics, minor ops clinics and dressing clinics, our chronic disease nurses use it, our physiotherapist is using it, our mental health nurses are using it, our social services support are using it, our patient support teams are using it, and then last but not least the GPs are using it"* (V02) *"Our nurses can action them, our receptionists can, all staff can use them, […], we utilise the Floreys […], so pill checks, so the patient would have booked in, had their height done, their wright done, their BP done, had a little chat, takes forever, and these are young women, working, children, whereas now we can ping them off a Florey, get a response, do the medical check, and that's it for another year"* (V03)
Sustainability	Highly sustainable • Floreys and features of AccuRx now so embedded in day-to-day working of practices that it was now considered as an essential tool.	*"It's [AccuRx] is a click away, and then it is incorporated into the clinical notes, I'm not copying and pasting anything, I'm not messing around finding the right patient, […], the interface is very smooth without any clunky bits, […], every single extra click less is time saved, and means we'll use it"* (V02) *"If a product works the way the doctors want it to, they use it tremendously, […], that's the bit AccuRx delivers on"* (V02) *"I'm not being paid by AccuRx, let me be clear about that, but I don't think there has been a single thing in primary care that we've had access to in the last 10*

		years that has made a big a different as AccuRx has done recently" (V03) *"If something isn't working, we hear about it quite quickly as it effects people's ability to work and do their job, and I think you'd get a similar response [from all staff in practice], AccuRx is a useful service and makes their job easier"* (V04)

DEMONSTRATOR PRACTICE STAFF INTERVIEW FINDINGS

This section presents the implementation factors as themes, with related illustrative quotes, from the four interviews with staff from across the Demonstrator practices based upon the framework analysis conducted (Table A3 below).

The first staff member interviewed (SA01) was a female Nurse Personal Assistant. Whilst this staff member perceived herself to be in a 'supporting' role with regards to AccuRx, it was perceived by the evaluators she was actually undertaking a more active role with regards to the uptake of AccuRx and was more of a 'facilitator' and 'interested' user of AccuRx.

The second staff member interviewed (SA02) was a male GP partner. This staff member was perceived to have taken on an 'advocate' and 'enabler' role with regards to the uptake of AccuRx.

The third staff member interviewed (SA03) was a female Practice Manager. This staff member was perceived to have taken on an 'interested' but 'selective adopter' role with regards to the uptake of AccuRx. This 'selective adopter' role involved piloting an AccuRx Florey in a contained, highly-specified pathway prior to considering rolling out widely.

The fourth staff member interviewed (SA04) was a female sessional GP. This staff member was perceived to have currently taken on 'narrow user' role in relation to the uptake of AccuRx, utilising AccuRx for the clinical conditions of specific interest to them, despite indicating they were 'interested' in wider use in the future.

The staff members from these practices had positive perspectives of AccuRx overall. The staff members from practices which currently did not use AccuRx widely reported part of the reason for this low usage to be due to lack of familiarity with its features and functionalities as opposed to disliking or not valuing AccuRx.

There were key Floreys and features of AccuRx which were felt to add the most value and most positively impact patient care, in particular for chronic disease management and condition monitoring. There were also positive impacts for staff members and practices through the potential to save time using Floreys and features of AccuRx as they enabled care to be delivered more efficiently.

Going forward, training would be welcomed by staff; this training could be focused around key Floreys initially to enhance the usage of the Floreys or features of AccuRx with the perceived highest value to get the most gains from the training, or for staff who may have the least confidence or knowledge of AccuRx to enable this group to engage with AccuRx. Table A3 below provides more detailed findings from the 'Demonstrator practice' staff interviews.

Table A3. Themes from the 'Demonstrator practice' staff interviews.

'Successful implementation' factor*	**Outcome and evidence of the of theme**	**Illustrative quote**
Acceptability	Predominantly highly acceptable • Despite being considered in general to be highly useful,	*"Most of us are self-taught, […], it would have been useful to have a bit more training on it as there is probably stuff I've yet to find out, so*

	perceived reduced knowledge and awareness of Floreys and features of AccuRx meant some staff felt unable to comment on how widespread the usefulness was.	*don't know at the moment where they would be useful"* (SA01) *"I didn't even know you could do that, […], it [modifying messages] would likely be helpful"* (SA03) *"If patients will engage, then for a clinician it will be more useful, for example I much prefer my blood pressure average being worked out"* (SA04)
Adoption	Variable adoption • Intention to use Floreys and features of AccuRx was high, however lack of knowledge and awareness of Floreys and features of AccuRx had impacted whether some staff had initiated using them. • For those staff members that have tested all the Floreys, there were some which they had continued to use, and others which were not considered useful to adopt as part of normal working. • To increase adoption, shared learning between clinicians was considered vital.	*"There are ways to use them [Floreys] a bit smarter, […], and there are ways to use it better"* (SA04) *"Florey I don't have a very strong opinion on at the moment as I wouldn't say I have that much experience of them all"* (SA04) *"The one I've used the most is the BP four-day Florey, I've also used the progesterone only pill and combined pill Floreys, I have used the one-day blood pressure, asthma ones I've used, […] if I've used any other ones it has been more just to test them, like the FRAX, and I've not kept using"* (SA02) *"GPs listen to other GPs more than anyone else'* (SA03)
Appropriateness	Predominantly highly appropriate • Perceived fit within general practice was high, however lack of knowledge and awareness of Floreys and features of AccuRx had impacted whether some staff felt confident to comment on compatibility with current care and admin pathways.	*"We have potentially identified patients with unidentified hypertension for potentially two years since they last had a high reading [by sending a BP Florey], and now we can bring them to target, […], that's a powerful thing to go that changes people's lives and their life span, […], why wouldn't we want to be doing this as much as possible [identify potential adverse health risks]"* (SA03)
Fidelity	Moderate fidelity • Lack of response rates from patients was highlighted to be an issue, however strategies to promote higher response rates were identified by staff.	*"It is easy to work your way around"* (SA01) *"I liked them [Floreys], they're easy and intuitive"* (SA03) *"Most people will respond to the question itself [in the message] and not deviate from that"* (SA02)

	• AccuRx an easy system to use, however there was a lack of awareness of the breadth of Floreys and the features available.	*"I free type my own stuff a lot, […], using templates can sometimes sound quite robotic, and not personalised, people pick up on that and think you've just sent that to me the same as everyone else, so free typing it's like they are still getting that care, […], if I got a message that I felt had been sent to 500 people, I'd be more reluctant to reply, if it is a little bit more personal, even if it is the same message that has been sent out to 500 people, I'd be more inclined to reply"* (SA01) *"I think you get less adherence by just doing a batch, and them not being very personalised, so these need to be considered, there is an argument for doing batch messaging for say asthma reviews, and then anyone who doesn't respond to those, then we follow-up, […], more and more of them I am saying 'I hope your holiday was alright' or 'I am sorry about your recent illness or hospital admission' as it adds the human layer to that communication"* (SA02)
Feasibility	Variably feasible • Staff felt some Floreys and features of AccuRx could be and were embedded into general practice normal ways of working, whereas other Floreys were of less value • There was a concern from one staff member around lack of time allocated to staff to handle responses to Floreys unlike eConsult which is given an appointment slot to review responses.	*"There is certainly a role for Florey, particularly in terms of chronic disease review"* (SA04) *"If they make life easier, and they improve patient care, then use them, but if they don't, then don't use them. Something like the FRAX Florey I tend to do that just with an online calculator and the patient data I've got in the records, I don't need to collect that information off the patient"* (SA02) *"I don't know what other surgeries are like, but in our surgery, it is additional work outside of clinic time, […], if someone is sending a blood pressure via eConsult, this person is given a slot for the doctor to review them, whilst if you use the Florey template, and then that will be delt with as a task, so if you already spend 6 hours a day doing clinics, reviewing 10 Florey replies is 10 extra things to look through outside of these clinics" (SA04)*
Implementation cost	Cost of other competing products to consider.	*"All of the practices have eConsult, so a few of the practices have relied on this for their video consults, and their BP and anxiety monitoring previously, so there may have been less take up of AccuRx as they go well, we already do it this way, and the admin teams and everyone know how that works"* (SA03)

Penetration	Highly penetrable • Perceived opportunity for related Florey or features of AccuRx to fit in with all clinical care pathways as well as administrative processes within general practice.	*"As a practice we are looking at how we can integrate them more from routine basis, […], as well as Floreys, lots of texting, lots of abilities to respond, increasing use of delayed text messages for follow-up, and increased use of assigning them to other people, these are features used daily"* (SA02)
Sustainability	Variable, but predominantly highly sustainable • Most staff the use of Floreys to be sustainable, however one practice is currently relying on a champion as they 'pilot' the use of Floreys within a pathway; once piloting is completed, perceived will transition to becoming highly sustainable as others share the ownership of delivering the care pathway.	*"The more we do it, the more we get used to, the more we use it, so I think it [using Floreys] is sustainable"* (SA03) *"Once I've trained up a couple of people in order to take it [the maintenance of Florey use for the pathway being piloted within] forward, then it [sustaining use of AccuRx] is fine"* (SA04) *"AccuRx was given access to EMIS to read/write whereas lots of other companies like eConsult haven't been, and that is a massive game changer, so with the ability with one click to add to the patient record, is just fantastic, it just makes it so much more empathetic to us [staff working in general practice] therefore patient care improves as we are more likely to send out messages and use Floreys"* (SA02)