

Early Stakeholder Engagement Report

National ePrescribing Project

May 2023





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Section 1: Executive Summary



Executive Summary

Electronic prescribing (ePrescribing) is one of the digital technologies that has the potential to transform healthcare by improving the efficiency and coordination of care, supporting people to manage their own medications and changing the way people engage with services and professionals¹. It is part of the modern eHealth infrastructure identified as a key strategic goal of the Sláintecare programme. There is a drive and an urgency to implement ePrescribing in Ireland.

The National ePrescribing Project has been established to plan, action and deliver ePrescribing. High-level plans were presented to patients, prescribers and pharmacy teams as part of an early stakeholder engagement process in Q1 2023. The aim was to understand how the high-level plans for ePrescribing meet user's needs, identify potential gaps and learn about drivers and barriers to ePrescribing in Ireland.

There was notable enthusiasm and optimism for the implementation of ePrescribing. Patient safety was the most important benefit for ePrescribing to enable. Examples of patient safety benefits included timely access to medicines information, improved decision-making and enhanced insight into compliance with medications. Patient empowerment and process efficiencies were other important and common benefits discussed. It is critical that ePrescribing is user friendly, accessible and does not increase inequity in society. Process change, education, training, and technological literacy were raised as potential barriers to ePrescribing. Co-design, collaboration and change management will be important to manage these barriers.

Access to the right information, in the right format, in the right place has the potential to transform healthcare. ePrescribing is the tool that will enable access to prescribed and dispensed medicines information. There is a mandate to deliver ePrescribing as summed up by the following quote from the early engagement process:



What's important is that we rapidly move towards a system that actually works."



Section 2: Background



Background

Electronic Prescribing (ePrescribing) has been implemented in many healthcare systems internationally. It is one of the digital technologies that has the potential to transform healthcare by improving the efficiency and coordination of care, supporting people to manage their own medications and changing the way people engage with services and professionals¹.

A change in legislation in 2020 in response to COVID-19 allowed the secure email of prescriptions. This is a type of ePrescribing used very commonly by GPs and less commonly by prescribers in hospitals. There have been short term advantages from the secure email of prescriptions however, the HSE wants to meet the long-term needs of our healthcare professionals and the Irish population with a more robust approach to ePrescribing.

The National ePrescribing Project has been established to deliver on the Sláintecare goal of a modern eHealth infrastructure. It aims to:

- improve prescription accuracy and reduce the risk of patients receiving the wrong medication by using a standardised medicines catalogue when prescribing and dispensing
- provide convenience and choice for patients
- reduce the risk of transcribing errors during dispensing
- enable more informed treatment decisions by sharing medicines information with healthcare professionals.

The project in its first phase will:

- establish a National ePrescription Service (ePS) - this will accept, store and transmit ePrescribing and eDispensing information
- connect GP and community pharmacy systems to the ePS

- provide digital access for patients to interact with their medication information
- engage with patients and healthcare professionals during the project.

Subsequent project phases will connect other prescribing and dispensing sites for example hospitals, dentists, optometrists and mental health services. Long-term maintenance and optimisation will also be required.

This project aligns with government targets and strategies. The importance of digital health projects, including ePrescribing, is referenced in the National eHealth Strategy, National Service Plan and HSE Corporate Plan 2021 – 2024. This project will support the EU Cross-Border Directive 2011/24/EU. On completion of this EU work, Irish citizens will be able to have their ePrescriptions accessed and dispensed in participating EU member states. It is another deliverable under Sláintecare.

The National ePrescribing Project is a multidisciplinary development and adaptive change project. It will reach all patients and a high proportion of clinical, operational and technical services within the HSE. Early stakeholder engagement was planned and executed in January and February 2023. The aim was to understand, at the earliest opportunity:

- how the current plans fit with the needs of patients, pharmacists, prescribers²
- identify potential gaps
- learn about project drivers and barriers that could influence the project.

This feedback will be reviewed against the current Business Case to refine the project and will also consider what is technically feasible, organisationally feasible, and financially feasible.

¹ The Kings Fund, 2020. *Digital Health Care, Our Position* <u>https://www.kingsfund.org.uk/projects/positions/digital-health-care</u> ² In the context of this report, the word "patient" is used to when referring to people who are prescribed or dispensed medications.Pharmacists, prescribers and their team were invited e.g. pharmacy technicians and practice nurses.



Section 3: Methodology



Design of Early Stakeholder Engagement

The Delphi technique is a well-established approach to answering a research question through the identification of a consensus view across participants who are deemed to be subject matter experts³. It involves a number of rounds where participants are asked their opinion on a particular topic. The responses then form the questions for the next round where the same participants can reflect on the anonymous views of others before giving their feedback.

A two round Delphi technique was applied to the early stakeholder engagement. Qualitative⁴ feedback was gathered during the first round with a series of face-to-face meetings exploring the opinions and experiences of patients, prescribers and pharmacists. This feedback was collated and presented to all participants in the form of an online questionnaire. The questionnaire then asked participants to consider and prioritise a number of statements in order to gather quantitative⁵ feedback.

The HIQA publication Conducting Focus Groups⁶ and the Health Services Change Guide: People's Needs Defining Change⁷ were consulted during the design of the face-to-face engagements. Advice was also sought from an Organisation Development and Change Practitioner as part of a HSE Change Consultation Clinic.

⁶ HIQA, 2018. Conducting Focus Groups.

Research on the design and development of online questionnaires was conducted as part of the design process.

Planning of Face-to-Face Meetings

Semi-structured meetings are similar to focus groups and were used in the first round to gather the qualitative feedback. Online, face-to-face, evening meetings were chosen for a number of reasons including the:

- · current demands on healthcare professionals
- convenience for participants and project team
- · time frame to complete the two round process
- low cost associated with online meetings
- ability to include participants across the county without travel demands.

Eight meetings took place between 23 January and 15 February 2023. Each meeting was scheduled for 90 minutes commencing at 6pm and hosted on Microsoft Teams (MS Teams) videoconferencing platform. Mixed meetings of prescribers, pharmacists and patients were considered. Given the range of stakeholders within each group, for example primary and secondary care healthcare professionals, pharmacists and pharmacy technicians and prescribers from different professions, individual meetings were chosen.

Two patient meetings took place, there was the option to hold a third meeting based on the number of responses received when looking for participants. Three prescriber meetings and three pharmacist meetings were conducted. There was a range of 2 to 10 participants per meeting.

³ Barrett et Al, 2020. *What are Delphi Studies?* <u>https://ebn.bmj.com/content/23/3/68</u>

⁴ Qualitative research involves collecting and analysing non-numerical data (e.g., text, video, or audio) to understand concepts, opinions, or experiences. ⁵ Quantitative research is the process of collecting and analysing numerical data.

https://www.hiqa.ie/sites/default/files/Focus-Group-methodology.pdf ⁷ HSE Change Guide, 2018. *People's Needs Defining Change*.

https://www.hse.ie/eng/staff/resources/changeguide/resources/changeguide.pdf



Figure 1: Breakdown of participants who attended the face-to-face meetings

The recommended group size for a semistructured interview is six to eight so that all participants have adequate time to speak and can easily take part in the conversation. An excess of the recommended eight participants were invited to each meeting to ensure numbers in case there were last minute cancellations and to include the desired range of representatives at each meeting. A breakdown of participants is shown in **Figure 1**.

The questions to stimulate discussion were predetermined and open dialogue among the participants was encouraged. With 90 minutes allocated, just three standard questions were asked during each meeting. Participants were emailed the questions prior to the meeting to allow them time to consider the topics in advance. Themes raised in early meetings were introduced during the discussion in later meetings. All meetings were facilitated by the Clinical Lead ePharmacy. A second member of the project team attended all meetings to manage MS Teams, take note of non-verbal responses and assist the discussion as required. A team member from eHealth and Disruptive Technologies also attended each meeting.

Analysis of Face-to-Face Meetings

The transcript of each face-to-face meeting was independently reviewed by the facilitator and note taker within 48 hours of the meeting where possible. The transcripts were anonymised and an excel spreadsheet was used to code the participant statements according to the research questions and emergent themes. If the transcript failed to pick up speech correctly the recording was used to confirm the context and the quotation. Where notes showed agreement through body language (such as nodding) these were included in the spreadsheet.

Questionnaire Design

The online questionnaire was developed by reviewing the themes identified in the face-to-face meetings. A variety of question types were used including logic gate (yes / no), Likert scale (strongly agree to strongly disagree), priority scaling (most important to least important) and long-form questions (free text). The same questions were posed to patients, prescribers and pharmacists.

The draft questionnaire was sent to eight people for pilot and feedback was incorporated in the final version. The questionnaire link was distributed by email to all early engagement participants following completion of the virtual sessions. A reminder was sent after one week to encourage as many responses as possible.

Participants

The key stakeholders identified for inclusion in the early stakeholder engagements were:

- 1. Patients
- 2. Prescribers
- 3. Pharmacists

Invitations to participate or nominate participants were sent by email and accompanied by a project briefing document and a participant information sheet (**Appendix A and B**). Most participants were invited to take part by formal channels such as representative organisations. Some informal channels were used to compliment the number of participants.

Arranging participants in a geographical manner based on the upcoming Regional Health Area structure was intended at the start of the process. This was applied to one set of invitations. However, it proved too difficult to apply to all invitations and general attendance was prioritised.

1. Patients

An expression of interest for patient involvement partners on the National ePrescribing Project Board was circulated through the HSE National Patient Forum in April 2022. All five respondents to that expression of interest were invited to take part in the early stakeholder engagement.

A new expression of interest was circulated in January 2023 through the HSE National Patient Forum to look for additional patient involvement partners. Invitations were emailed to the seven patient representatives who responded to the expression of interest.

Eight patient involvement partners attended the face-to-face meetings and were included in the online questionnaire. The representatives were from the HSE National Patient Representative Panel and Patients for Patient Safety Ireland.

2. Prescribers

Prescribers from both primary care and acute care settings were invited to take part in the early stakeholder engagement. The following organisations and some additional individuals were contacted and offered the opportunity to attend or have representatives at each of the three prescriber meetings and to complete the online questionnaire:

- Irish College of General Practitioners
- Irish Hospital Consultants Association
- Irish Medical Organisation
- National Clinical Information Officer for Nursing and Midwifery
- National Quality and Patient Safety Directorate
- National Lead Non-Consultant Hospital Doctors (NCHD)
- National Oral Health Office

There were thirteen participants across the three prescriber meetings representing general practice, nursing, consultants, NCHDs and dentists.

3. Pharmacists

Pharmacists and pharmacy technicians from primary care and secondary care were invited to take part in the pharmacist meetings. The following organisations and some individuals were contacted and offered the opportunity to attend or have representatives at each of the three pharmacist meetings and to complete the online questionnaire:

- Irish Medication Safety Network
- Irish Pharmacy Union
- National Association of Hospital Pharmacy Technicians
- National Quality and Patient Safety Directorate
- · Pharmaceutical Society of Ireland
- Primary Care Reimbursement Service
- Secondary care hospital pharmacies

There were twenty-three participants across the three pharmacist meetings representing community pharmacy, hospital pharmacy, reimbursement services and the regulator.

Materials Used

A slide deck (**Appendix C**) was developed. This was circulated in advance to participants and used during the face-to-face meetings. It provided background information and contained three open questions to explore the benefits of ePrescribing, desired features of ePrescribing and barriers to ePrescribing:

1. Could you describe how these changes would make a difference to you?

2. Can you describe what features of ePrescribing are important for you to have now and in the future?

3. Can you think of reasons why (or situations where) patients or healthcare professionals may be reluctant to use ePrescribing?

Further follow-on questions were posed depending on the participant's responses. The follow-on questions were not standardised across all sessions but rather were asked in line with the flow and topic of conversation.

Consent and Data Retention

The participant information sheet (**Appendix B**) supplied to all prospective attendees outlined that attendance at the online meetings and completion of the questionnaire would be considered as implied consent to take part. It also explained that the online meetings would be recorded and stored by the HSE in a secure and confidential manner until completion of the early stakeholder engagement process. This was to facilitate the qualitative analysis of the discussions. Recording of the meetings only commenced after participants on the call were again informed for the intent to record and transcribe the meeting.

The EUSurvey platform was used for the online questionnaire. This was chosen as it was open source, GDPR compliant and offered a range of question types. As the European Commission operates EUSurvey, it represented a safe, secure and reliable platform. Survey settings were applied to ensure that responses were anonymous. Personal details such as names, contact information and IP address were not requested or recorded. Given the small number of participants, detailed demographics were not gathered as they could potentially have identified a respondent.

Section 4: Findings

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Findings Overview

There were forty-four participants at the first round of face-to-face meetings and twenty-seven responses were received to the online questionnaire in the second round (approximately 60% response rate). The breakdown of patients, prescribers and pharmacists is shown in **Table 1**.

The following sections will describe the qualitative feedback from patient, prescriber and pharmacist groups first. The questionnaire results will then be presented and discussed.

Conversation was free flowing at all meetings with participants willing to share their views and eager to ask more detailed questions about the project. Participants considered how ePrescribing might affect other cohorts in society and not just themselves. Anonymised quotes from across the meetings are included to highlight each theme. Brackets are used on occasion to provide context to the quote provided. Additionally, three dots are used between quotes to indicate that a gap between quote content exists.

The online questionnaire results show the combined opinions across all three groups. When interpreting the questionnaire results please note there is an unequal number of responses from patients, prescribers and pharmacists as shown in **Table 1**.

	Face-to-face meeting attendees	Online questionnaire responses
Patients	8	6
Prescribers	13	7
Pharmacists	23	14

Table 1: Breakdown of participants

Question 1: Benefits of ePrescribing

- · Patient safety
- Efficiencies
- Patient empowerment

The focus during both patient meetings was on how ePrescribing could positively contribute to patient safety, result in time savings and more efficient interactions with healthcare services for patients and how it would empower patients.

Patient Safety

The effect on improving patient safety was the most discussed project benefit. There was broad agreement that patient safety would substantially improve following project implementation.

From a patient safety perspective, this is great. It's going to make a big difference with all you've done about reducing medication errors."

"There are lots and lots of benefits to the system, it's almost essential. It will become essential once it's in place because the systems or supposed systems in place at the moment are just not really 100% fit for purpose."

The absence of a safe, secure and accurate medication list was raised by participants. This led to discussion about how absence of a medication list was having a negative effect on patient safety, as there is often confusion about a patient's current medication list.

66 Something like ePrescribing would be a massive step forward because at the moment, the only place where all medications are listed is actually if a patient does it, because of different consultants, GPs." The ability for healthcare professionals to review a patient's full medication record showing prescribed and dispensed medications was very well received.

If I go to a hospital outside this area, they don't know what medication I'm taking. Now with this system they will know. So that's going to benefit people a lot as they move around the country. If they get ill and they're away from home, whoever GP or doctors or hospital will be able to go into the system and find out exactly."

Efficiencies

The positive effect on patient efficiencies was noted. Participants believed ePrescribing would make their interactions with prescribers and their community pharmacy easier as shown by the following quotes:



It should cut down on all that, going in and out to the doctor and going up to the pharmacy."

"I think particularly for people as they age they may not be as mobile, it allows them the freedom or in the in the case of carers, I think it will have a huge impact really on that when they don't have time to do these trips."

"I'd love to be able to see when its ready (my prescription) and what has been dispensed because sometimes I've gone the next day and they've been too busy, it is not ready and I'm waiting 20 minutes."

Frustration in relation to consistently having to provide the same medication history to multiple healthcare professionals was expressed. Access by healthcare professionals to a patient's medication list should reduce this.

Efficiencies (contd.)

It's a step towards not having to keep on repeating yourself all the time with endless numbers of different people all asking you exactly the same questions, that would be terrific."

The patient app was discussed at length as part of the potential benefits of the National ePrescribing Project. The current limitation of emailed prescriptions was referred to, patients do not receive a copy unless requested and are often unaware of when their prescriptions will be finished.

666 I don't actually have any access to see what is on it (my prescription), how long it lasts for so I'm never quite sure when it's about to run out and it's up to the pharmacist to tell me."

The current process of ordering prescriptions from the GP and community pharmacy is not patient friendly and often contributes to delays. Electronic ordering of prescriptions was flagged as an area that would provide future benefits for patients.



Patient choice in attending different pharmacies was voiced as a positive outcome for the project. This would allow patients flexibility to visit a conveniently located community pharmacy for their needs or change pharmacy more easily if desired. There was general agreement on the session in question that this would be particularly useful for those who live and work in different areas.



I'm assuming that the changes would enable me to use a range of pharmacies rather than being sort of stuck with one."

Patient Empowerment

Empowering patients to take their medications as intended was discussed at length at both meetings. The proposed ePrescribing approach would align with the World Health Organisation (WHO) "Know, Check, Ask" medication safety campaign. This campaign is endorsed by the HSE and encourages those taking medication to take an active role in their medication management.

The idea that patients would have access to their active and past medication records via the patient app was well received with nodding and verbal agreement noted.

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This will empower patients to keep a medication list so they can know what they're taking, in line with the WHO campaign of "Know, Check, Ask."

The addition of the patient app would allow patients access to more information relating to their prescribed and dispensed medications and it was felt that this could be useful in promoting improved medication management and compliance.

Most people don't take their medications or take them for a while and then give up so it would be interesting to see how a system like this could be used to empower and encourage patients to comply with prescribed medicines."

In order to fully empower patients it was felt that more features are required and these are summarised next.

Question 2: Features of ePrescribing

- Autonomy
- · Inclusive and user-friendly design
- · Privacy structures
- Access abroad

The following features were discussed as preferred functionality for now or in the future.

Autonomy

The right of the patient to govern their data and dictate how they and others interact with it was discussed in-depth. The topic of data ownership was raised at both patient meetings and questions were asked on how this would be approached.

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I assume that if the person gives access, then they're the people who have the right to take that access back?"

"Who owns the data? I would assume that any data about me belongs to me and that someone should ask me to see my data before they see it."

"The security levels and who actually gives permission for people to come in, is it up to me to allow my GP? But then there's five or six GP's in my practice and only one of them really knows me so?"

The question of whether the patient or the patient's healthcare data was central to the project was raised.

I think the current proposals put the patient's data at the centre of the system, whereas the focus group stressed the necessity to put the patient themselves at the centre. For this to happen meaningfully, the system has to empower the individual, which will involve working in some way of relating to and interrogating the information available on the system."

A desired feature that was not included in the high-level outline was the ability for patients to contribute to their medication list and document additional medications and / or supplements that they are taking.

This would allow patients and healthcare professionals to have a broader, more holistic view of a patient's medication history. There was consensus among participants that the ability to record other medications should be included as a feature of the project.

66 Can this system also incorporate the "my medicines list" in it? Useful if app could facilitate a patient putting in their own medicines, supplements."

"I can't see any good reason why OTC medicine recording isn't included."

A communication portal between patients and healthcare professionals was discussed as a feature of a truly patient centric approach to ePrescribing.

666 The ability to ask questions within the system is really important because otherwise there's a danger that this will look like something that makes life comfortable, better and more efficient for health professionals without necessarily empowering the public at the same time."

Inclusive and User-Friendly Design

Participants were conscious that there is a range of technology literacy across our population. The need for ePrescribing to empower all system users with regards their healthcare and not just the patient cohorts that will likely smoothly engage with such a system was reflected in the discussion.

66 I think about the development of new systems and how they empower or don't empower patients and not just the articulate, well connected patient, but also the inarticulate and not well connected patient who may be the person who's going to fret about this more than the well-connected person and who perhaps has the confidence to ask hard questions."

References were made to cohorts of users that may be marginalised in society and discussions took place on the importance of ensuring that these cohorts were appropriately considered.

What does it feel like from somebody's angle to try and engage with this system and trying to make sure that the diversity of people can feel not only comfortable and confident but also empowered by such a system? And I don't think it's impossible, I think it's a lot to do with good design and look and feel."

An inclusive and user-friendly design would encourage more users to engage with ePrescribing. Investing time and effort in this will ensure that potential users do not feel disenfranchised.



Find a co-design approach that would help you to streamline the decision-making." "Increasingly everything requires technological expertise. Is there any way that people who don't have that or can't afford it, is there any way that they can interact with this system or is it going to disenfranchise them further?"

An educational campaign to raise awareness of ePrescribing and its benefits was recommended.



Maybe 20% I believe will not use it We need to challenge this with an information campaign and so on to encourage people to use it."

Privacy Structures

Participants in both meetings raised the issue of privacy structures. They believed that a robust privacy approach would be vital in safeguarding patients' data. Patients posed numerous questions in relation to privacy and spoke about their concerns about sensitive patient information being shared across electronic platforms and accessed by multiple healthcare professionals.

Patients were keen to understand how the information would remain secure and what structures would be in place to prevent inappropriate accessing of their information.

What privacy do I have and how complicated is it to set that up? Do I really want someone else to see that I got medication?"

"How long is the history, what is it saying and who has access to it?"

"What is on it and what is not on it, who can see it and who can't see it is very important."

"I think there needs to be something else to ensure privacy because it's a medical situation."

Access Abroad

It was queried how access to medication information would occur when travelling outside of Ireland. In the past, a paper prescription would provide evidence of a patient's medication whereas the proposed ePrescribing approach would be paperless. The patient felt that a feature to allow a patient access their medication information abroad via the patient app would be necessary.

666 If we had to go abroad? We have no written prescription anymore. That was her concern as there was no paper and how do they transfer their information if they are abroad and they need access to medicines or something goes wrong?"

Question 3: Barriers to ePrescribing

- Literacy
- Trust
- Patient identification
- Contingency plans
- System interoperability

Literacy

The topic of literacy, both of technology and general literacy, was raised and discussed at length. There was widespread agreement that literacy had the potential to be a substantial barrier to the adoption of ePrescribing if not appropriately addressed. Exploring literacy research and guidelines from the USA, owing to their strong reputation in the literacy field was recommended. Technology literacy was flagged as a potential challenge. Participants raised the risk that the older population or those with limited technology skills may be overwhelmed by ePrescribing. It was noted that the older population would most likely take a larger volume of medications and therefore the proposed system would have great potential to improve their patient safety, if used correctly.

I really do think we need to think about the older population because that's where most of your medication is used. I think that's a big problem actually, it's the lack of familiarity or fear with of using an actual system."

In addition to co-design of an inclusive userfriendly patient app, participants recommended that the project consider how to engage those who may not have the skills or alternatively the desire to use ePrescribing. Co-design was listed as an effective tool to deliver an inclusive userfriendly project. A structured plan would need to be devised early in the process to encourage and assist those who currently do not engage with technology.

I think we can't ignore our older population and those that may have a physical disability or some sort of disability, even though intellectually may be fine but may not be able to use or be comfortable using the system."

"There's an awful lot of people in Ireland who do not interact with IT and never will so this system won't help them"

Literacy (contd.)

The level of adult literacy in Ireland was discussed and how this would affect patients. It was flagged that health specific language had the potential to overwhelm patients and that the language used to communicate prescribing and dispensing information needed to be clear, concise and easily understood by patients in addition to the healthcare professionals. It was noted that there are mature literacy organisations and materials that can help in this respect.

666 I think you've raised a really important point and that's literacy. So the language of this is going to be really really important. And the level of functional literacy is far less than everyone thinks."

"Healthcare professionals are going to be reading this (medicines information) and they need very precise scientific language but other users will be completely overwhelmed by that."

Trust

Participants flagged trust of technology as a potential barrier to system uptake. References were made to recent cyber-attacks in which confidential patient data was accessed and subsequently made available online. There was verbal agreement amongst other group members that these events had influenced patients' views on the safety and security of their private health information. Participants voiced that trust of technology would be a significant factor in buy-in to the proposed system.



I think there's a really big issue of trust here. Which is trust of IT and trust of the system."

"People need to trust it, particularly when you're talking about confidential data and private data like this." The public perception and trust of the HSE was mentioned when discussing potential barriers to success of the National ePrescribing Project. The question of what steps could be taken to reduce patient's fears was asked.



It's about trust of the HSE to deliver a reasonable system."

Patient Identification

There was detailed conversation at both meetings in relation to identifying patients. Numerous participants raised that a robust patient identification system would be required. Concern about the security of the Personal Public Service (PPS) number particularly among older or vulnerable populations was cited.

> We've talked about the PPS number and I know that certainly civil liberty groups have expressed concern over this."

"So people's PPS numbers are very loosely transported across the system now in banks in any kind of financial institutions and legal transactions and things like that. So whereas in the past it was relatively secure methods of identification, I think now it could be quite easily accessible."

"There's a lot of fraudulent use of PPS now."

The facilitator introduced the idea of the Individual Health Identifier (IHI) as the main source of patient identification, which would be sourced on confirmation of other patient details including the PPS number. Participants were asked how comfortable they would be with using their PPS number to source the IHI.

> I think that some people will be comfortable with it and some won't."



Contingency Plans

Contingency planning was noted as potential barrier to patient buy-in. References were made to the recent HSE cyber-attack and ongoing technology challenges. There was agreement amongst other participants that a strong contingency plan should be an essential feature to ensure continuity of care in the case of a technology issue.



Where would we be if the technology system went down, with a cyberattack for example?"

System Interoperability

The facilitator spoke in the introduction about how the proposed National ePrescribing Project would require multiple systems to work together to safely and securely transfer patient data. This system interoperability was queried as a potential barrier to project success.

Given the number of prescribers and their varying levels of systems. How confident are you at the moment that the systems as they exist will be mutually compatible?"

Owing to the complexity of the project, the facilitator said that a phased project roll out approach is planned. Two participants of the early engagement sessions felt that the current Phase 1 approach had limitations. They believed that the proposed plan was similar to the current Healthmail offering and that the phased roll out approach did not improve significantly on where we are now. The facilitator noted that inclusion of patient access to their medication list is part the first phase. This means the patient can provide their medication list to healthcare professionals who are not yet connected.



So it's GPs and pharmacies, not a massive difference to what we have at the moment."

"Not having everyone, GPs, hospital doctors, consultants.... at once can make things a little bit risky?"

Professional responsibilities

The potential challenges where prescribers can change doses on previously prescribed medications was raised. While this was not a consistent theme the importance of managing shared care with different prescribers is an important one to include.

Would there be a way that you could have visibility of actions if you see different consultants? Sometimes consultants change doses, not knowing the full impact from different areas of medicine."

Prescriber Feedback

Question 1: Benefits of ePrescribing

- · Patient safety and improved delivery of care
- Patient empowerment
- Efficiencies

Patient Safety and Improved Delivery of Care

The positive effect that ePrescribing could have on patient care was the first benefit discussed. There was widespread agreement that access to accurate and secure medication information⁸ would be invaluable and allow prescribers make more informed decisions when delivering care.

Medications get missed just because some people have paper prescriptions ... it would be nice to have a universal system that everybody would know how to use and medications won't get missed or polypharmacy could be addressed"

⁸ Medication information refers to ePrescriptions and eDispensations

"When I'm admitting someone at three in the morning, patient is unconscious and I have no clue what's going on with the patient. Next of kin is not answering. Pharmacies are not open so it would be it would be ideal if you had access to medications."

The potential for ePrescribing to improve monitoring patient's medication compliance was a noted benefit. Communication of indications and reasons for changes in patient's medication regimens were other benefits that would improve patient safety. The additional workload required to include an indication with each prescription in general practice was raised as a possible challenge.

> 6 Absolutely, it will enhance collaboration because everyone can see from a distance what's happening."

"Did they actually have a medication dispensed, particularly if it's an antimicrobialare they actually getting that medication in a timely fashion?"

Patient Empowerment

Patient empowerment through access to their medicines information was discussed. When asked about having a facility for patients to report on additional medications that they are taking (for example over-the-counter medications) prescribers were positive about having sight of this additional information. Further functionality such as the ability for patients to document how they are responding to medications was mentioned as a feature that would be helpful.

666 Fundamentally it's an enormous opportunity for patients to get more ownership over their healthcare and more knowledge and it really does empower patients."

"It's going to benefit the patients' health at the end of the day, for compliance and their overall health as well. It's going to be a big thing"

"Constant changing of medicines and dosages requires patients to be re-educated and reinforce what drugs should be taken, and (conflict between health professionals) can leave doubts in patients' minds. This (ePrescribing) system should help with this."

Patients had raised the feature of being able to ask their healthcare professional questions via the app. When broached with some of the prescriber groups it was felt that current healthcare structures and staffing would struggle with this type of format at present.

Efficiencies

There was widespread agreement that ePrescribing would have a positive effect on current ways of working. In particular streamlined activities, less duplication of work and time savings to piece together a patient's full medication history. It was clear from the enthusiasm of prescriber responses that the positive effects of ePrescribing would be welcomed.

From our point of view, it'll save duplication. If there's one definitive list, it'll save time looking at different areas to figure what they (patients) actually take and what they're not taking."

"There'll be a huge advantage for us being able to see the existing prescriptions that some of our more complicated special care patients have."

"I get referrals all the time and sometimes it can be delayed waiting for a full medical history of medications. So having essential ePrescribing centre that I can go in and look at it, it can really be amazing and can speed up the whole referral process."

"If the patient is discharged home, the GP will know what the medication if we essentially started a new medication, what is the indication for it etc. So there is communication between a doctor working on the continuity of care and communication between not only, I suppose, patient and doctor, but between doctors as well."

Sustainability

Potential benefits relating to sustainability were noted including the ability to inform prescribers about sustainable medication choices and as a tool in engaging patients, prescribers and pharmacists to buy-in to the National ePrescribing Project.



One thing that I would think would be really useful to build into this is a focus on sustainable prescribing and dispensing."

"The paper reduction angle, maybe less transport or people driving around the place dropping off prescriptions."

Question 2: Features of ePrescribing

- User friendliness
- Medication list
- · Preferred medications
- · Access to data analytics
- Allergies

User Friendliness

A common theme across all meetings was the view that ePrescribing needs to be easy to use and responsive. Participant nodding and verbal agreement confirmed that the majority of attendees shared this opinion.

It was raised that all prescribers are very busy and that ePrescribing should not create extra workload for users. Furthermore, it was noted that integration with the current system vendors should be seamless and include single sign-on.

> It's going to benefit the patients' health at the end of the day, for compliance and their overall health as well. It's going to be a big thing."

"It needs to be really seamless."

"Everyone's time is so precious and if this is going to be any way of inconvenience for them to prescribe something, I can see people not wanting to engage in it."

"The concern would be adding an additional username password and an additional system that we're expected to use and to retain information for."

"I'm accessing the server or from my computer, but we've got another server talking to that server. Will it open up the page just as quick as it used to?"

Medication List

A list, which provides a complete picture of a patient's medication history, was identified at all the prescriber sessions as an important feature of the National ePrescribing Project. This feature would have a positive effect on patient safety while streamlining prescriber processes and delivering time savings.

66 Safety is the issue here. So when we talk about counselling on prescriptions, we have an issue or reason why we are cancelling it and being able to view a full medication list is a very good component of this project because if you're prescribing something and if you can see the something could be interacting to other medication, you can highlight and act."

"Would there be the option of having a historical list of what had been previously prescribed.... that would be helpful to kind of see trends in dosing over time?"

The conversation covered medical interventions and prescriptions that patients may not want all their healthcare professionals to know about, examples used were in the area of sexual or reproductive health. The balance between affording privacy and the potential risks associated with prescribing interacting medications were noted. Access to a patient's full medication list was acknowledged as a requirement to provide the safest patient care.

Preferred Medications

It was suggested that ePrescribing could provide a great opportunity to standardise approaches to dosing schedules and preferred medications from a clinical and cost effectiveness view. Incorporating the functionality to support these activities would be very helpful to prescribers and the health system broadly.

I think that the great opportunity with the system like this to encourage good prescribing. Encourage correct scheduling, timing of medications and to ensure that there is encouragement for prescribing when appropriate for the likes of NCPE, preferred drugs and make good pharmacoeconomics decisions".

Access to Data Analytics

There was a discussion about how ePrescribing data could be used in an anonymised way to improve the quality of prescribing. Nodding and verbal agreement was noted from other participants on the call. It was felt that a deeper understanding of prescribing patterns would be a very useful feature and have a positive impact on patient care long-term.

Who owns the data and who can use this data on a national basis, (it should be used) in an anonymised way to improve the quality prescribing for our patients."

"The capacity to learn from prescribing practice, big data sets and or even small data sets to look at."

Allergies

Another important feature for prescribers was the ability to be notified of patient allergies when prescribing. This area would be reliant on the entry of standardised allergy information. This is an area of benefit to be explored further and best practice internationally should be examined.



She had an allergic reaction. It's very important that we do know that she has."

Question 3: Barriers to ePrescribing

- Technology literacy
- Trust of technology
- · Monitoring and accountability
- · Consent and privacy
- Additional Costs

Technology Literacy

It was flagged by participants that elderly patients and those with limited technological skills could find the transfer to ePrescribing difficult. Elderly patients on multiple medications, who would have the most to gain from ePrescribing from a patient safety viewpoint, could be a group that doesn't engage due to low technology literacy. There was a general feeling that this posed a potential barrier to project success.

66 Most of our patients would be senior and quite elderly so I do not suppose they would be quite technology savvy. It would be a challenge to try teach them how to use it."

"I can definitely see a problem with (some) patients that I already see being kind of digital refugees."

"In Ireland, we still have a large amount of older people who don't own smartphones."

Trust of Technology

Trust of technology was discussed as a barrier to project success. The recent cyber-attack on the HSE was raised as a factor that has resulted in trust concerns. It was raised that the project team should consider what steps could be taken to increase patient, prescriber and pharmacist trust in the ePrescribing technology.

After the HSE being hacked, they're quite up to date with their information, so it should be OK but I would think a big worry is where is this information going to end up if its gets out of the system if it was to get hacked?"

"There would be some quite private patients here who would like to keep things to themselves and if they knew the system is very open, they wouldn't be forthcoming in buying into it and disclosing personal information."

Monitoring and Accountability

The perceived monitoring and accountability of prescribers' actions was raised. It was felt that ePrescribing could be used to identify who had entered or amended medication for particular patient data and who would then be responsible for errors by consequence. The participants who raised this concern thought that this might deter some people.

66 I think people often are worried that this will be used to judge or keep an eye on practices. You know that I think that is certainly a concern that needs to be addressed."

"If you got it (medicine dosage) wrong, there's errors made and it'll come back to you."

Consent and Privacy

The approach to consent and privacy was raised multiple times throughout the three meetings. It was discussed that the current approach to patient consent was implied as the prescribers were primary caregivers and a concern was raised that ePrescribing could complicate this arrangement. A lack of structure around consent has the potential to act as a barrier to implementation. If consent is to be recorded, this should be designed early in the process, be streamlined and not add any further complexity.

66 So what normally happens when I'm doing the referral to either of your clinics is its implied consent, as I'm the primary caregiver. I am sharing their information. I don't get their consent to give you their medicines list at the moment, because it's implied that I am referring for an expert opinion into the secondary care. I would hope that (ePrescribing) won't overcomplicate things like this."

Additional Costs

It was raised that although the National ePrescribing Project looked very promising, if prescribers and pharmacists were expected to foot the additional vendor upgrade costs that this would be a barrier to system buy-in.

Just like pharmacists, GPs pay a monthly or yearly subscription. (Systems are) expensive so important that additional features

don't send the price up."

"There should be no additional cost to the GP or pharmacy."

Pharmacist Feedback

Question 1: Benefits of ePrescribing

- · Patient safety
- Efficiencies
- Patient empowerment

Patient Safety

Once again the positive impact of ePrescribing on patient safety as a result of enabling improved oversight and patient care was a noted benefit. Patients transitioning between healthcare settings set to benefit as pharmacy and medical teams would have knowledge of all prescribed and dispensed patient medications.



It would help to increase patient safety because it's very likely that that would reduce the amount of errors."

"So what this system should do is make patients life safer. And I think we've touched on the area which is really inherently unsafe at the moment, which is this transitions of care element."

"That more complete record would just be a bit of a game changer really."

Participants were enthusiastic about the future where prescribing and dispensing information is linked so that healthcare professionals have improved patient oversight. For example, it will show emergency supplies of medications and where patients are attending several prescribers. It will also show when patients do not collect their prescriptions. These insights will enable the delivery of better patient care.

666 I think we haven't mentioned the potential significant benefits that don't exist currently in that prescribers don't see emergency supplies that have been issued. So again in terms of that patient behaviour piece you know people maybe who are missing appointments or shopping or shopping around you know potentially addiction issues."

"It's the access to the medicines list for patients, carers, healthcare professionals. Particularly if you can amend, cancel and spot problems."

Efficiencies

One of the most discussed benefits across pharmacy meetings was the positive effect ePrescribing could have on improving pharmacy efficiencies. Reduced phone calls, more efficient medicine reconciliation activities, reduced paperwork, documented indications for medications, reasons for stopping or starting medications, streamlined reimbursement processes and improved workflows were the efficiency benefits pharmacists could see.

Efficiencies (contd.)

It was felt that improvements in these areas would free time to spend with patients and could have a positive effect on job satisfaction and staff retention.



Saving time and work and reducing bureaucracy, I would absolutely love that to be the gift because people are screaming for that."

"If reimbursement could run more smoothly, I mean people are crying out for that. So if anything can be done on that, that's a huge bonus."

"You're much less likely to have an illegible script because trying to read handwriting is an absolute nightmare. Everybody knows that."

Patient Empowerment

There was participant agreement that ePrescribing would be valuable to patients and provide them with a level of insight into their medication records that they do not have at present.

I would say a lot of patients feel a little bit disempowered by Healthmail. They feel they never have the prescription in their hand…It goes from the GP to the pharmacy, the pharmacy prints it and holds on to it. They never have a copy or unless they request a copy and they come back in. So that's great that access."

"This is very patient centred what we're discussing this evening. I'm delighted with it because it means that they have full access to their information and their history and they're more aware of what they're taking and why they're taking it." Patient empowerment to move between community pharmacies month to month, led to a conversation of how this could impact internal community pharmacy processes. Advance working within community pharmacies and stock levels are influenced by patients leaving their prescriptions with a particular pharmacy. A change in this would require patient education to ensure orders are placed in sufficient time to have the medication in stock and prepared in time.

Question 2: Features of ePrescribing

- User friendliness
- · Reimbursement streamlining
- Communication platform
- · Clinical decision support
- Audit functionality

User Friendliness

A common theme was the need for any change to be user friendly. It was raised that Healthmail email is easy to navigate.

66 I just want to know like will it be as simple format to use you know like you know I suppose the Healthmail is quite easy, you can go in once the name is written right? Like will it be simple enough to use?"

"With regards to training, how easy is it to use and then like staff expectations, if you think about it everybody is already so busy."

Reimbursement Streamlining

Reimbursement processes were discussed and pharmacists noted that they find current processes complex and time-consuming. There was consensus that an advantage of ePrescribing would be a streamlining of reimbursement processes.

From a pharmacist point of view, we're dealing with different schemes with the PCRS, including the hub and ordering. It's so time-consuming... one patient could be on four different schemes.if there was some way of integrating those schemes that we don't have to chase different patients on to different products, or the hub disappears that we can click through that and order the product and that would be great. It's just all this multiple logging in, logging out and finding it's we're staring at the screen and not at the patient."

Communication Platform

A positive outcome from Healthmail email is the correspondence trail tracking queries (and responses) about prescriptions. This is a feature that some pharmacists listed as beneficial to continue when ePrescribing is implemented nationally.

666 One thing that has been advantageous about the Healthmail system is when I have an issue with a prescription from a prescriber right now, I can reply in that thread and we actually have that time and date stamped correspondence from the pharmacy back to the prescriber. So you know that would be one thing that is that messaging correspondence on an issue."

Clinical Decision Support

Clinical decision support was raised as a feature that could add further value to pharmacy teams in the future. It was discussed that additional functionality to the current clinical decision support such as recommended dose and frequency of medications would be well received by pharmacy teams. Recording of patient allergies was also noted as another useful feature that could be explored. Verbal agreement and nodding of other participants was noted.

From a patient safety point of view, looking at options for clinical decision support as well and how they build on the functionality that's already there but designing with that in mind. So things like flagging if the dose is outside of a particular limit / frequency or based on the patient information that it isn't suitable for a particular disease state or an allergy."

Audit Functionality

Conversations took place around the audit functionality of the proposed ePrescribing system. There was agreement that audit capability had the ability to add value.

> It would be great for auditing purposes and just keeping an eye on the likes of where high-risk medicines are being used."

"Having that audit trail and capturing some of that rich information which would be you know as a starting point. So so beneficial."

Question 3: Barriers to ePrescribing

- Training and Education
- Legislation
- Patient Access

Training and Education

It was discussed on all pharmacy meetings that a barrier to successful implementation would be the degree of change required from the current ways of working. There was widespread agreement amongst participants that extensive training and education would be required to help patients, prescribers and pharmacy teams adjust to ePrescribing changes. If in-depth training and education was not provided in advance this would be a substantial barrier to successful adoption.

66 Perhaps the lead in or certainly lots of training, upskilling, but helping people along. I wouldn't underestimate the change and that will be as important as the system, if that makes sense."

"I think we're scratching the surface of how complex this project is."

"The education and training that's really, really important. If a doctor doesn't send the prescription immediately and that patient ends up in the pharmacy and is waiting, it's just those delays. It's just to really highlight the importance of the education and the training piece around it."

Legislation

One participant raised the issue of legislation and its importance in ensuring that ePrescribing has a sound legal footing. It was raised that without timely implementation of appropriate legislation that the project could experience substantial delays and this would be a barrier to project success. I think the legislation should be changed so that as soon as we do have electronic prescribing properly, prescribing of all those high-risk medicines should only be prescribed electronically. I think it would be a very good step towards bringing a bit of light into what is very shady."

Patient Access

The addition of a patient app to the National ePrescribing Project was widely welcomed. Similar to the views expressed in the patient meetings about how technical language could be interpreted, the advice was to plan and test the roll out to patients carefully in order to ensure a positive experience and avoid undue patient stress and anxiety. It was stated on the call in question that appropriate training and app design would be useful to prevent this being a barrier to project success.

I suppose the level of information that they're exposed to would need to be carefully considered in terms of not creating undue stress or worry if they see something recorded in a note that you know makes sense to the healthcare professional. So I think that's an information piece but also a design piece that needs to be considered in terms of what level of information they'll have access to within their portal."

Questionnaire Results

The questionnaire was circulated to the forty-four individuals who attended the face-to-face meetings and two who were unable to make them at short notice but had received the briefing information and slide deck. Twenty-seven responses were received which equates to a response rate of 61%. The patient cohort had a response rate of 75%, prescribers 54% and pharmacists 61%. One of the responses received was submitted on behalf of an organisation, rather than the individuals who attended the sessions.

The results of the questionnaire are outlined in the same order as the questionnaire was posed. A free text box was provided under each question to allow participants add extra comments or clarifications as required. A copy of the questionnaire is available in **Appendix D**.

Benefits of ePrescribing

Participants were provided with seven statements outlining a selection of ePrescribing benefits listed during the face-to-face meetings. They were asked to arrange the ePrescribing benefit statements to match their views on the relative importance of each statement. To analyse the responses, for each response, the most important benefit was allocated seven points and the least important benefit one point. The results are listed in **Table 2** in order of overall ranking from highest to lowest score, with the statements respective weighted scores* also shown. The results show that patient safety is the most important benefit for ePrescribing as the top statements all related to this theme.

Benefits of ePrescribing	Overall Ranking	Weighted Score* (Max 189)
ePrescribing will enable better and safer care when I move between healthcare settings	1	181
I will be empowered to know my medications as I will have a list of them	2	136
ePrescribing will help healthcare professionals make more informed decisions about my care	3	129
ePrescribing can improve workflows so that healthcare professionals can spend more time with patients	4	113
ePrescribing is convenient, I will spend less time attending my GP and community pharmacy	5	83
I will be able to choose what community pharmacy I attend to collect my medications	6	60
ePrescribing will be environmentally friendly, greener	7	54

Table 2: Benefits of ePrescribing

* A weighted score was developed to review participant responses and provide an overall ranking. The maximum score a statement could obtain was 189 points, i.e. all twenty-seven participants assigning a statement a seven point score. This was used as the benchmark score for comparison purposes.

Features of ePrescribing

Participants were next given eight statements outlining a selection of ePrescribing features for patients. Participants were asked to arrange the ePrescribing feature statements to match their views on the relative importance of each statement. To analyse the responses the most important ePrescribing patient feature was allocated eight points and the least important feature one point. The results are listed in **Table 3** in order of overall importance from highest to lowest score, with the statements respective weighted score also shown.

Following on from the strong focus on medication safety in the first question, the two features that empower patients to know their medications were in the top three statements. The ability to order medications electronically also ranked in the top three statements.

Features of ePrescribing for Patients	Overall Ranking	Weighted Score** (Max 216)
Patients can see their list of prescribed and dispensed medication	1	176
Patients can request a prescription from their prescriber electronically	2	165
Patients can document other medication that they take. Examples are OTC medications such as paracetamol or supplements.	3	128
Patients can order some (or all) of their medications from a community pharmacy	4	128
Patients can see when their prescription is ready for collection at the chosen community pharmacy	5	118
Patients can access the patient information leaflet for each medication	6	89
Patients can ask their healthcare professionals questions using the patient app	7	89
Patients can see who has viewed their medication information	8	79

Table 3: Features of ePrescribing for Patients

** A weighted score was developed to evaluate participant responses and provide an overall ranking. The maximum score a statement could obtain was 216 points, i.e. all twenty-seven participants assigning a statement an eight point score. This was used as the benchmark score for comparison purposes.

The last of the prioritisation questions asked participants to indicate which features of ePrescribing were of most importance for healthcare professionals. They were asked to arrange the ePrescribing feature statements to match their views on the importance of each statement. Once again, for each response, the most important healthcare professional ePrescribing feature was allocated seven points and the least important feature one point. The results are listed in **Table 4** in order of overall importance from highest to lowest score. In line with the first two priority questions the features related to safety or better medicines information ranked highest with access to a patients medication list ranked most important.

Features of ePrescribing for Healthcare Professionals	Overall Ranking	Weighted Score*** (Total 189)
Healthcare professionals can view patients medication list (medications prescribed and dispensed by any healthcare professional)	1	151
Healthcare professionals can include the reason for each medication on my ePrescription	2	136
Healthcare professionals can enter the reason for stopping or changing a medication	3	113
Healthcare professionals can document or view information on patient allergies	4	99
There is a seamless log in between the vendor software (pharmacy / GP system) and the ePrescription Service	5	91
Healthcare professionals are alerted when a medication must be approved for reimbursement before the pharmacy can dispense to me	6	83
Prescribers and pharmacists can ask and answer queries through the ePrescription service	7	83

Table 4: Features of ePrescribing for Healthcare Professionals

*** A weighted score was developed to evaluate participant responses and provide an overall ranking. The maximum score a statement could obtain was 189 points, i.e. all twenty-seven participants assigning a statement a seven point most important benefit score. This was used as the benchmark score for comparison purposes.

Access to Medication Lists

The next three questions relate to topics of security and privacy and started with a question about who should have access to a patient's medication list?

A number of healthcare professionals and staff in their organisations are involved in different stages of the prescribing and dispensing process. Participants were asked for their opinion on who should be able to access their medication list using a five-point Likert scale from strongly agree to strongly disagree. The concept of the medication list (medications prescribed and dispensed by any healthcare professional) had been explained and discussed during the face-to-face meetings. The results are displayed in **Figure 2**. There was strong agreement amongst respondents that prescribers (93%) and community pharmacists (89%) should have full access to a patient's medication list. There is almost complete consensus that nurses and pharmacy technicians should have access to a patient's medication list either as agree or strongly agree. Views on other staff in GP practices or community pharmacies having access were more divergent with over 50% of responses recorded as unsure, disagree or strongly disagree.

It was noted by a participant in the corresponding free text box that anyone not directly responsible for patient care should have their access logged which could then be subject to audit. Additionally, a participant commented that they did not realise how guarded they were about their medication list access until the question was posed. There was also an acknowledgement that the current prescribing and dispensing processes allow a wide range of individual's access a patient medication records.



Figure 2: Respondents views on which healthcare professionals and staff in their organisations should be able to access their medication list during the course of clinical care.

Patient Identification

The design of privacy and security are important considerations of the project. Different types of identification were outlined in the face-to-face meetings. The questionnaire asked participants to indicate which identification method was preferable to them. Participants could choose multiple options. The methods currently used were most popular with 74% (20 of 27) participants indicating that they would use their name, address and date of birth to confirm their identity. Use of PPS number was a close second at 70% (19 of 27) of participant responses. The new option to use a barcode accessible by mobile phone represented the third highest response with 59% (16 of 27) of respondents expressing they would use this identification method. The full results are shown in **Figure 3**.

Since the COVID-19 vaccination programme, there has been an increased use of PPS numbers to deliver / receive healthcare. Two participants in the corresponding free text box for this question felt that PPS number usage is more suited to financial and tax matters than use as an identification method in GP surgeries and pharmacies. Another participant commented that the Individual Health Identifier (IHI) number would be ideal for patient identification purposes.

During the face-to-face meeting the facilitator introduced the IHI as the proposed main source of patient identification. As the public do not know their IHI and it is not designed to be easily remembered, it must be matched to a patient when they present for healthcare. Matching of IHI's is more successful when the PPS is supplied along with core demographics such as name, date of birth and address. The concerns in relation to the security of and use of the PPS number for patient identification purpose is valuable for planning communications in this area.



Figure 3: Respondents views on what methods of identification they would use to confirm their identify when using ePrescribing

Views of Introducing Mandatory ePrescribing

Legislation has made ePrescribing mandatory in some countries. Participants were asked for their views of the introduction of mandatory ePrescribing in the following three circumstances:

- when prescribing controlled drugs
- · when prescribing high-risk medications
- · when prescribing and dispensing all medication types

Participants were given the option of selecting "Yes", "No" or "Don't Know". The results are shown in **Figure 4** below. There was a high rate of agreement that mandatory ePrescribing should be introduced as part of prescribing and dispensing activities across all three posed scenarios.

A participant commented in the corresponding free text comment box that mandatory ePrescribing had the ability to end all forged prescriptions. Two participants felt that while it would be useful for all prescribers to electronically prescribe for all medications, a backup paper option would be a sensible option to have, particularly to solve initial project roll out teething issues.



Figure 4: Respondents views on mandatory ePrescribing

Barriers to ePrescribing

Participants were asked to identify what they perceived to be the biggest barrier to the successful implementation of the National ePrescribing Project. The questionnaire allowed participants to choose only one option. The ePrescribing barrier options listed in the questionnaire were:

- · trust in the security of ePrescriptions
- technological literacy
- · changes in processes for patients, prescribers and pharmacists / pharmacy technicians
- · scale of information, education and training required
- · fear of system breakdown

The results are listed in **Figure 5.** Almost one-in-three respondents (33%) believed that process changes for patients, prescribers and pharmacists would represent the biggest barrier to successful project implementation. Education and training, and technological literacy both received 22% of the vote, representing the second highest perceived barriers to ePrescribing.

It was noted in the corresponding free text comment box that often the patients who take the most medication, are the patients with the lowest technological literacy and that this would be a challenge to overcome. Furthermore, a participant flagged that the process of managing proxies (e.g. parents, carers, nursing homes etc.) could also prove to be a substantial barrier to ePrescribing.



Figure 5: Respondents views on the biggest barrier to ePrescribing



Section 5: Limitations



Limitations

There are some limitations to bear in mind as we discuss the results of the early stakeholder engagement in the next section.

Participants who were asked to attend or volunteered to attend may have an inherent interest in the area of ePrescribing and an assumed level of technological literacy that would be needed for ePrescribing.

As with any qualitative research the numbers of participants are small to allow conversation to develop. There may be considerations and opinions from patient cohorts, pharmacists and prescribers that have not been captured by this early engagement process or that participants did not get the opportunity to raise during the meetings.

Achieving the optimum number of attendees on each call was a limitation. Six to eight participants per call represented the optimum range for inclusive wide-ranging discussions. With larger numbers (up to ten on calls) it was harder to ensure that everyone had the opportunity to contribute and observe if people were less involved.

While up to ten participants were planned for each meeting, this number of intended participants was not confirmed for all prescriber meetings. A contributing factor was the less mature communication pathway with some prescriber organisations leading to shorter notice period to potential participants. Additionally, in late January and early February our colleagues in primary and secondary care were working through exceptionally high service demands which would affect free time to attend additional meetings. The virtual platform approach used to host the face-to-face meeting had numerous advantages, but it was more difficult to read participant's body language than in person and connectivity issues (lack of a camera) led to challenges in understanding some participant's facial expressions.

Recording and transcription functionalities on MS Teams were used for all early engagement sessions. HSE staff limits on storage capacity affected file upload and subsequent transcription function. The recording was still available for download but it extended the time required to analyse one of the early engagement sessions.



Section 6: Discussion



Discussion Benefits

The aim of the early stakeholder engagement was to meet with the three stakeholder groups who will use ePrescribing on a regular basis of (patients, prescribers and pharmacists) to either receive healthcare or deliver healthcare in order to understand how the high-level plans presented would fit with their needs now and in the future. The plan was also to identify potential gaps and inform current and future project plans. Finally, the process aimed to understand what areas of ePrescribing were attractive or most beneficial to people and what areas or aspects could form potential barriers.

The participants delved into each meeting and outlined what was important for them. There were forthright conversations and participants posed questions for the project to reflect on before moving to the next stage. The project now has an improved view on where it meets expectations and also what the additional expectations are. There is an enhanced understanding of barriers to be considered and the importance of regular communication, consultation and need for codesign was heard.

The take-home messages for the National ePrescribing Project are summarised here.

Benefits

From listening to patients, prescribers and pharmacists, it was evident that patient safety was the most important benefit for the National ePrescribing Project to enable. This emerged during all the face-to-face meetings as a common theme. Notable patient safety benefits included timely access to medicines information, improved decision-making and enhanced insight into compliance with medications. The value of communicating allergies, reasons for medication changes and indications for medications were outlined also. Access to the right information, in the right format, in the right place has the potential to transform healthcare. When asked to rank benefits of ePrescribing in the questionnaire "enabling better and safer care when moving between healthcare settings" had the highest weighted score. The challenges, risks and inefficiencies during transitions of care between healthcare settings were repeated across meetings. Participants identified that access to a patient's medication list has the potential to address many of these issues during transitions of care. There was great passion and enthusiasm for a medication list functionality. It must be noted that the value of the medication list will reach its full potential when all prescribing and dispensing sites are connected, this project will commence with GP's, community pharmacy and patients in the first phase.

Standardisation is the tool that will allow safe and accurate sharing of medicines information between systems. Standards will need to be defined and implemented. Timelines for this will need to be considered during project planning. As we heard the secret to success will be to show people the benefits so they can understand why they are being asked to standardise.

Patient empowerment ranked as the second most important ePrescribing benefit by those who completed the questionnaire. If patients have access to their medicines information, through an app that they are comfortable and confident to use, this will empower them to know and manage their medications.

Discussion Features

To be empowered patients described a system:

- that is co-designed to ensure equity of access across society
- · that is user friendly
- where they can document additional medications or supplements in use
- that has real time tracking of prescriptions so they can know when items are prepared and ready for collection.

If the project wants to achieve equity of access it is recommended that the patient and the healthcare professional are considered at all design stages. This includes consideration of the language used and how information will be displayed. The importance of health information being available and understood without causing undue worry or concern to patients must also be examined.

The potential for efficiencies in the prescribing and dispensing process was discussed at length. Efficiencies ranged from improved workflows, less duplication, reduced phone calls, quicker medicines reconciliation and the potential to streamline reimbursement processes. These were applicable for both patients and healthcare professionals.

Features

Participants were asked about features they would like to see in the short and long term from ePrescribing. After the medication list, the second most important ePrescribing feature was the ability to document and therefore view the indication for each medication. Inclusion of an indication is one of the recommendations of the HIQA minimum data set for an ePrescription. On a similar vein, documenting reasons for stopping medications was a significant feature that would improve communication, reduce unnecessary calls and enable safer care during transitions of care. To reap the benefits of these features a body of work on standardisation and agreement on data sets is anticipated.

The desire for a seamless and user-friendly approach was heard during the consultations. Participants welcome change but cautioned against creating additional workload. Embedded and streamlined eligibility and reimbursement processes were seen as future developments also. Reporting requirements for areas such as antimicrobial stewardship were also linked to the topic of seamless processes.

There was also an awareness that although a wide range of preferred system features were discussed, the National ePrescribing Project will not be able to achieve all feature functionality from the outset.

Discussion Barriers

Barriers

Understanding barriers at this early stage will inform training requirements, consultations, areas for co-design and other steps to ensure key stakeholders will want to use ePrescribing.

Participants understood the scale of the change ahead for patients, prescribers and pharmacy teams. The feedback has reinforced the need for change management structures and appropriate support to help all system users transition to new ways of working and managing medicines.

Technological literacy and access to technology must be addressed if the project is to achieve widespread uptake. Older people, marginalised groups and the infrequent users of health services are likely to be less proficient with ePrescribing and in some cases it will be a barrier. Consideration of whether to retain a paper-based process (or alternative) for those who do not have the technological ability, access to technology or desire to engage with the ePrescribing will take place.

This leads into the barrier of general literacy and whether health specific language has the possibility to overwhelm patients. There are mature literacy organisations and materials that can help in this respect and there was agreement that it would be useful to conduct further research in this area.

The recent HSE cyber-attack has created a heightened awareness of the importance of cyber security. Patients were worried that similar cyberattacks in future could result in the loss of sensitive patient data. These are concerns that need to be addressed for all users of ePrescribing. The National ePrescribing Project will need to ensure the recommended security standards are applied and tested. Communication of this to build trust in ePrescribing is warranted. Knowledge of prescribed and dispensed medication information (the medication list) was a noted benefit of ePrescribing. At present, patients can attend different prescribers and pharmacies if they wish to keep some medications private, this can be used where medications are overused but also in areas of mental health or sexual health.

The questionnaire explored opinions around the medication list which would show all medications to ones healthcare provider. The strong trust in healthcare professionals (prescribers, pharmacists, nursing staff and pharmacy technicians) to have access to this information to deliver healthcare will be important and help as the project moves into more detailed privacy and security discussions The sample size was small and is not representative of all groups in society but the results are a useful signpost for the project.

The early stakeholder engagement process has shown the interest, enthusiasm and desire for ePrescribing. The process has shown that the high-level plans will meet many expectations but also outlined additional areas to consider the feasibility of for now or in the future. There was an awareness and appreciation that this is a complex piece of work which will develop with time. The need to be honest in what we will achieve and deliver at each stage was communicated.





Acknowledgements

The project team are very grateful to the organisations who circulated expressions of interest to their members and to the participants themselves who took the time from their evening to attend. These organisations include:

- Irish College of General Practitioners
- Irish Hospital Consultants Association
- Irish Medical Organisation
- Irish Medication Safety Network
- Irish Pharmacy Union
- National Association of Hospital Pharmacy Technicians
- National Clinical Information Officer for Nursing and Midwifery
- National Lead Non-Consultant Hospital Doctors (NCHD)
- National Oral Health Office
- National Patient Forum
- National Quality and Patient Safety Directorate
- · Pharmaceutical Society of Ireland
- Primary Care Reimbursement Service
- Secondary Care Hospital Pharmacies

We are extremely thankful to all participants who shared their time, knowledge and insights as part of the early engagement sessions. The feedback received was very valuable and will be vital to the ongoing progress of the National ePrescribing Project.



Section 8: Appendices



Appendix A: National ePrescribing Project Briefing Document



Prescribing and dispensing systems must understand the information shared with them. We will use standards, common codes and rules to ensure medicines information is shared

Appendix A: National ePrescribing Project Briefing Document



· Dispense a medication without needing to transcribe from an email or paper

This change will:

- · Allow access to ePrescriptions to support reimbursement processes
- Provide access to medicines information, at the point of care, to inform treatment decisions
- Provide patients with digital access to their medicines information

Who do I contact if I have any further questions?

Please email Bríd Ryan, Clinical Lead ePharmacy at brid.ryan2@hse.ie or ePrescribing@hse.ie and we would be happy to address any queries that you may have.

Appendix B: Sample Participant Information Sheet

ePrescribing@hse.ie

National ePrescribing Project – What is your Opinion?

The National ePrescribing Project is holding a series of early stakeholder engagements during January and February 2023. We want to meet with patients, prescribers and pharmacists to understand how the high-level plans for ePrescribing meet your needs, identify potential gaps and learn about drivers and barriers that you see to ePrescribing in Ireland.

What will you be asked to do?

Each participant is invited to two activities:

- 1. Attend one virtual session lasting 90 minutes
- 2. Complete an online questionnaire

During the virtual sessions the project team will meet small groups of six to ten participants. We will summarise the current ePrescribing plans and look for your feedback and insights. We will develop a questionnaire after the virtual sessions are complete. It will include the opinions of all the groups and ask you to tell us how important aspects of ePrescribing are in your opinion. The questionnaire will be emailed to you to complete at your convenience over a two week period.

When will this take place?

The virtual sessions will take place during January and February 2023 (planned dates for patients are listed below). The questionnaire will be circulated in late February 2023.

Stakeholder Group	Day and Date	Proposed start time
Patients	Monday 23 rd January	6.00 to 7.30 pm
	Wednesday 25th January	6.00 to 7.30 pm

Do I need to give my consent to participate?

Attendance at a virtual session or completion of a questionnaire will imply your consent to take part.

What information will be collected and stored?

We (the HSE) will record and store the virtual sessions in a secure and confidential manner. The project team will listen back to the recordings and write an anonymised report based on this feedback. The feedback may be grouped by representative area e.g. patients, prescribers, or pharmacists. When this is complete we will send you a summary report and a link to a questionnaire by email. The questionnaire will be created using EU Survey (or equivalent) and responses will be anonymous. The recordings will be deleted on completion of the stakeholder engagement process.

Patient Participant Information Sheet for Early Stakeholder Engagement 2023

Appendix B: Sample Participant Information Sheet



Who do I contact if I have any further questions?

Please email Brid Ryan, Clinical Lead ePharmacy at brid.ryan2@hse.ie or eprescribing@hse.ie and we would be happy to address any queries that you may have.

Patient Participant Information Sheet for Early Stakeholder Engagement 2023

Appendix C: Face-to-Face Meeting Materials







Agenda			
Facilitator		Bríd Ryan, Clinical Lead – eP	harmacy
Note Taker		Robert Howard-James, Proje	ct Support – ePharmacy
Pre-Reading Materials		 Briefing summary What is your opinion? 	
Time	Age	nda Topics	Items
18:00 - 18:20	Intro	duction	Arrival and welcome, house keeping, scene setting, ice-breaker
18:20 - 18:40	Disc	ussion Topic 1	Benefits of ePrescribing
18:40 - 19:00	Disc	ussion Topic 2	Features of ePrescribing
19:00 - 19:20	Disc	ussion Topic 3	Barriers to ePrescribing
19:20 - 19:30	Surr	mary and Close	Questions, next steps





Appendices Appendix C: Face-to-Face Meeting Materials



Understanding your needs will help refine the project.

Can you describe what features of ePrescribing are important for you to have now and in the future?









Appendix D: Early Engagement Questionnaire



The survey will take approximately 10 minutes to complete. It will remain open for your responses until 10 March 2023.

Finally, thank you for taking the time to attend the virtual session and to complete this survey. A report will be circulated by email to all participants once the results of the survey have been compiled.

Data Protection

Appendices Appendix D: Early Engagement Questionnaire

Benefits of ePrescribing

We asked how the outline of the National ePrescribing Project would make a positive difference for you. A
number of short and long-term benefits were discussed across the eight sessions.

Please use the drag/drop or arrows to put the following benefits in order of importance to you. Put the most important benefit at the top of the list and the least important benefit at the bottom.

Use drag&drop or the up/down buttons to change the order or accept the initial order.

- # ePrescribing is convenient, patients will spend less time attending their GP and community pharmacy
- Patients will be empowered to know their medications and have a list of them
- ePrescribing will be environmentally friendly, greener
- # ePrescribing will enable better and safer care when patients move between health care settings
- # ePrescribing can improve workflows so that I can spend more time with my patients
- Patients will be able to choose what community pharmacy they attend to collect their prescriptions
- Prescribing will help me make more informed decisions on my patients care

These are a selection of the benefits discussed across meetings. It is not a full list of all benefits. Please use this box if you have any extra comments or suggested benefits.

200 character(s) maximum

Appendix D: Early Engagement Questionnaire

Features of ePrescribing

Features of ePrescribing for patients

During the virtual sessions we discussed what features of ePrescribing are important to you now and in the future. We are interested in understanding the priority of the features listed below.

Please use the drag/drop or arrows to put the following features in order of importance to you. Put the most important feature at the top of the list and the least important feature at the bottom.

Use drag&drop or the up/down buttons to change the order or accept the initial order.

 Patients	can	request	а	prescription	from	their	prescriber	electronically	v
 			_						

Patients can order some (or all) of their medications from a community pharmacy

Batients can see when their prescription is ready for collection at their chosen community pharmacy

- Patients can ask me questions using the patient app
- Patients can access the patient information leaflet for each medication
- E Patients can see who has viewed their medication information
- Patients can see a list of their prescribed and dispensed medications
- Patients can document other medications that they take. Examples are over the counter medications such as paracetamol or supplements

Features of ePrescribing for healthcare professionals

Please use the drag/drop or arrows to put the following features in order of importance to you. Put the most

important feature at the top of the list and the least important feature at the bottom.

Use drag&drop or the up/down buttons to change the order or accept the initial order.

- The prescriber is alerted when a medication must be approved for reimbursement before supply
- II The indication for each medication is included by the prescriber
- There is a seamless log in between the vendor software (pharmacy / GP system) and the ePrescription Service
- I can view a patient's full medication list (this is current and past medications that have been prescribed and / or dispensed).
- II Queries or clarifications on prescribed medication can be tracked through the ePrescription Service
- I can document / receive information on patient's allergies
- It is possible to enter reasons for stopping medication or changing doses of medications

Appendix D: Early Engagement Questionnaire

These are a selection of the common features across sessions. It is not a full list of all features discussed. Please use this box if you have any extra comments or suggestions.

200 character(s) maximum

Security and Privacy

Access to Medication Records

Patients can have a number of prescribers, for example GP and hospital specialist. They may attend more than one community pharmacy for their medications also. Access to your medication list, which includes medications from all prescribers and all pharmacies, can empower your healthcare professional to make more informed and better decisions when caring for you.

A number of healthcare professionals and staff in their organisations are involved at different stages of the prescribing and dispensing process. Do you agree or disagree with the following statements about access to your medication list?

	Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
My prescriber should have access to my medication list	0	0	0	0	0
Nursing staff in my GP practice should have access to my medication list	0	0	0	0	0
Other staff in my GP practice (for example receptionists) should have access to my medication list	0	0	0	0	0
My community pharmacist should have access to my medication list	0	0	0	0	0
My pharmacy technician should have access to my medication list	0	0	۲	0	0
 Other trained pharmacy staff (for example medicines counter assistant) should have access to my medication list 	0	0	0	0	0

If you have any additional comments on this question, please add them here.

200 character(s) maximum

*Patient identification

Patient safety is a priority of the National ePrescribing Project. A common patient identifier will be attached to your prescribing and dispensing information to accurately link your health records across different

Appendix D: Early Engagement Questionnaire

ur privacy and security of your personal information is another priority. Which of t e to confirm your identity when you visit your GP or community pharmacy? More lected.	he follow than one	ving wo	ould yo I can b
Bar code on a designated persons mobile phone app, for example relative or care	r		
Name, address and date of birth			
None required, my healthcare professionals know me			
Other			
you have selected other or if you have any further comments, please use the box	below.		
200 character(s) maximum			
ews on ePrescribing gislation has made ePrescribing mandatory in some countries. In your opinion, st	nould we	introdu	uce
ews on ePrescribing gislation has made ePrescribing mandatory in some countries. In your opinion, sl andatory ePrescribing in the following situations?	Yes	introdu	uce Dor Kno
ews on ePrescribing gislation has made ePrescribing mandatory in some countries. In your opinion, sh andatory ePrescribing in the following situations? • When prescribing controlled drugs. These are medications that have the potential to be misused or cause social harm for example opioid analgesics	Yes	introdu No	Don Kno
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Barriers of ePrescribing

 Learning about the barriers and challenges that you see ahead for ePrescribing has been important. Codesign and ongoing consultation were discussed as ways of ensuring a user friendly and inclusive way of accessing the National ePrescription Service.

Which of the following do you think will be the greatest challenge to widespread uptake of ePrescribing?

Trust in the security of ePrescriptions

Appendix D: Early Engagement Questionnaire

Technological literacy

- Changes in processes for patients, prescribers and pharmacists / pharmacy technicians
- Scale of information, education and training required
- Fear of system breakdown

If you have any additional comments on ePrescribing barriers and challenges, please add them here.

200 character(s) maximum

Thank you

Finally, thank you for taking the time to attend the virtual session and to complete this survey. A report will be circulated by email to all participants once the results of the survey have been compiled.



For further information please contact:

ePrescribing@hse.ie

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