An evaluation of Electronic Repeat Dispensing services in Wessex:
Exploring perceptions and experiences of those working in General Practice, Community Pharmacy and people who receive medication by Electronic Repeat Dispensing

Final Report

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Report contributions

Cindy Brooks led the evaluation of the Electronic Repeat Dispensing (eRD) study and the final report. She undertook the literature review, designed the evaluation aims, protocol and data collection instruments, conducted the fieldwork, analysed data and synthesised findings. Dr Catherine Matheson-Monnet provided guidance throughout the eRD evaluation. Dr Anastasios Argyropoulos was involved in providing background statistical data in the early stages of the study.

Disclaimer

This report presents the findings of an independent evaluation comprising of two surveys (n=31) and (n=7) and telephone interviews with two cohorts (n=6) and (n=5). The findings and interpretations in this report are those of the lead author and do not necessarily represent the perceptions and experiences of those participating.

Acknowledgements

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<td>eRD</td>
<td>Electronic Repeat Dispensing</td>
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<td>RD</td>
<td>Repeat Dispensing</td>
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<td>EPS</td>
<td>Electronic Prescription Service</td>
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<td>GP</td>
<td>General Practitioner</td>
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<tr>
<td>Ph</td>
<td>Pharmacy professional</td>
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<td>WAHSN</td>
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Executive Summary

Background and context

Repeat prescriptions constitute nearly 80% of NHS medicine costs for primary care, involving substantial time and management in being processed (NHS England, 2015). It is estimated that there are approximately 410 million repeat prescriptions produced every year, which constitute nearly 200 per General Practitioner (GP) every week (NHS England, 2015).

In 2005, the government introduced Repeat Dispensing Services, as a way to organise and manage repeat prescriptions. At first, Repeat Dispensing was made available through paper prescriptions. In July 2009, it became possible to use Electronic Repeat Dispensing (eRD) as part of the Electronic Prescription Service (EPS) (NHS England, 2015).

EPS was recognised as a way of reducing the printing errors associated with paper-based prescriptions (Duerden et al., 2011). The purpose of EPS is to enable transmission of prescription messages and digitally-signed prescriptions from primary care prescribers through a central network and a server provider (NHS Spine), from which they can then be downloaded by dispensing contractors such as “community pharmacists, dispensing appliance contractors and dispensing doctors” (Hibberd et al. 2012; 3). Following this, prescriptions are then provided electronically to NHS Prescription Services for reimbursement (Hibberd et al., 2012).

A distinction can be made between two types of EPS:

1. EPS R1, involves a barcode being printed on the prescription form, which is then scanned by the pharmacy, which activates a download of data.
2. EPS R2, involves a digital prescription being sent to the Spine.

The pharmacy can then download and dispense the digital prescription and the patient can choose a pharmacy where they wish the prescription to be sent (Hibberd et al. 2012). As EPS has advanced, the main part of eRD is conducted using EPS R2 (Pharmaceutical Services Negotiating Committee, 2017).

Electronic Repeat Dispensing involves the collection of all eRD prescriptions on the NHS Spine. The prescriptions are then sent to the patient’s chosen pharmacy according to the specified intervals provided by the prescriber. The patient does not need to request prescriptions from a GP during this time (Wessex AHSN, 2017a). It is only when the final prescription is dispensed by the pharmacy that the patient is requested to visit their GP to receive a review and a new prescription is issued (Wessex AHSN, 2017a).

It is estimated that up to 80% of all repeat prescriptions can be changed to eRD (North of England Commissioning Support Unit, 2017). In comparison to paper based repeat dispensing, eRD is recognised as affording a number of benefits including:

- Facilitating more free time in GP practices, enabling GPs and their staff to pay attention to other more significant priorities
- Greater convenience for patients and families
• Enabling community pharmacy to provide an improved service for patients
• The requirement of only one digital signature
• Improved stock control of medicines (NHS England, 2015)
• Negating the requirement to keep paper repeatable prescriptions and batch issues (NHS Digital, 2017)

In 2019, as part of the General Medical Services contract; there was a directive for all practices in England to use Electronic Repeat Dispensing for all patients whom it is clinically appropriate (General Practitioners Committee England and NHS England (2019). In March 2020, in recognition of the benefits of eRD in the context of COVID-19, NHS England encouraged GP practices to consider transferring all suitable patients to eRD where possible (NHS England, 2020). In June 2020, NHS England recommended a temporary suspension of the need for patient consent to increase eRD in particular circumstances, with any practices in England able to transfer any clinically suitable patients to eRD if in receipt or in agreement of receipt of electronic prescriptions (NHS England, 2020).

Despite the potential benefits of eRD, there appears to be limited research exploring the experiences of those involved in using eRD in the U.K. Where eRD has featured, it has tended to be in the context of experiences of EPS more generally, such as GPs experiences (Cornford, Hibberd and Barber, 2014; Lichtner et al. 2012), community pharmacists experiences (Harvey, Avery and Barber, 2014; Garfield, Hibberd and Barber, 2013) and patients experiences (Cornford et al. 2014; Hibberd et al. 2012).

Locally, Wessex AHSN have provided several selected case studies examining the implementation of eRD in GP practices (Hussain, 2020; Howard and Pickup 2020). These case studies reported upon benefits of using eRD, for example, a reduction in the prescriptions signed by GPs, enabling a more thorough medication review and improved confidence by patients of the system of eRD in managing their repeats. Also saving time for patients in not needing to order prescriptions from their GP practice, but instead visiting their pharmacist monthly to collect their medications (Hussain, 2020; Howard and Pickup, 2020).

To better understand the benefits and challenges of implementing eRD, the Centre for Implementation Science, University of Southampton, working with Wessex AHSN, undertook an exploratory evaluation of the perceptions and experiences of those working in General Practice and Community Pharmacy as well as those receiving their medications by eRD in Wessex.

Aims and objectives of the study

To explore the perceptions and experiences of eRD from those working in General Practice and Community Pharmacy and people who receive their medication by eRD in Wessex.

To explore:
1. Enablers (what has worked or helped)/barriers (what has not worked or not helped) in using eRD
2. Which people using eRD services may benefit most/least
3. GPs/Community Pharmacists and other practice/pharmacy staff experiences of working with each other and other health professionals whilst implementing eRD
4. Experiences of people who use eRD services and impact upon their lives
5. If and how any improvements can be made to how eRD is used and implemented within practice

These overall aims and objectives feature in the following ways in each component arm of the study: i. those working in General Practice and Community Pharmacy and providing eRD services and ii. those receiving their medication by eRD. For ease of reference each of these cohorts will be referred to as General Practice and Community Pharmacy cohort and Patient cohort.

**General Practice and Community Pharmacy cohort**

1. To identify the views and experiences of GPs and other practice staff and Community Pharmacists and other pharmacy staff regarding the implementation of eRD
2. To ascertain enablers (what has worked) and barriers (what has not worked) in using eRD
3. To understand changes made to practice since using eRD
4. To investigate the views and experiences of GPs and other practice staff and Community Pharmacists and other pharmacy staff regarding which patients have benefitted the most/least from eRD
5. To gain insights about the views and experiences of GPs and other practice staff/Community Pharmacists and other pharmacy staff working with each other and with other health professionals using eRD
6. To understand if and how any improvements can be made to how eRD is used and implemented within practice

**Patient Cohort**

1. To identify the views and experiences of people who use eRD services
2. To ascertain enablers (what has worked) and barriers (what has not worked) in using eRD services
3. To ascertain the views and experiences of people who use eRD of being in contact with health professionals (e.g. GPs/Community Pharmacists) whilst using eRD services
4. To explore if and how using eRD has impacted upon the lives of people who use eRD services
5. To understand the extent to which people using eRD services agree with the following statements:
   - I have been able to ask my/the pharmacist any questions I have about electronic repeat dispensing services
   - I have been able to ask my/the GP any questions I have about electronic repeat dispensing
   - Electronic repeat dispensing has made receiving medications easier
   - Electronic repeat dispensing has been convenient for me
• Electronic repeat dispensing has had a positive impact on how I live my life/person I am representing live their life.

6. To explore if and how any improvements can be made to how eRD is used and implemented within practice to benefit the lives of people who use eRD services.

Methodology

A mixed method approach involving the use of surveys and qualitative semi-structured telephone interviews was utilised to explore the experiences of each cohort; those working in General Practice and Community Pharmacy and those receiving their medication by eRD in Wessex.

A mixed methods approach was adopted because it facilitates understanding of the breadth and depth of a particular topic (Johnson, Onwuegbuzie and Turner, 2007). Surveys enable examination of patterns and trends with respect to one or more variables (Gillham, 2000; Bell, 2002). Qualitative data collection e.g. semi-structured telephone interviews, can provide greater freedom and flexibility, than questionnaires (Denzin and Lincoln, 2005), affording insight into participants views and experiences about particular phenomena (Woods, 2011), such as using eRD services in Wessex. Semi-structured telephone interviews were utilised to provide greater depth into understanding staff views, perceptions and experiences, enabling further insight to be gained.

Results

➢ Overall perceptions and experiences of eRD services
  • The majority of respondents perceive eRD service as helpful: 72% (patient cohort) and 84% (General Practice and Community Pharmacy cohort).
  • 43% of respondents (patient cohort) and 78% of respondents (General Practice and Community Pharmacy cohort) perceive eRD as challenging.

➢ Impact of eRD upon patients’ lives
  • 86% of respondents either agreed or strongly agreed that eRD has had a positive impact on their life (patient cohort).
  • 77% of respondents perceive eRD as benefitting patients (General Practice and Community Pharmacy cohort).

➢ Recommendation of eRD to others
  • Patient cohort: All would recommend to family and friends.
  • General Practice and Community Pharmacy cohort: 87% recommend to colleagues, 87% recommend to patients, 77% recommend to family and friends.
Synthesised themes

Consistent to analysis of survey and interview data for those from the General Practice and Community Pharmacist cohort were the following themes:

- Impact of eRD upon professional practice
- Interprofessional working relations whilst using eRD
- Organisational processes around implementing eRD
- Technological functionality and eRD
- Perceptions of patients and eRD
- Considerations for the development of eRD services

Synthesised themes from the analysis of survey and interview data from those receiving their medication by eRD include:

- Impact of eRD upon everyday life
- Experiences with healthcare professionals whilst using eRD
- Considerations for the development of eRD services

Evidence from the evaluation has shown the majority of respondents from both cohorts reported eRD to be helpful, specifically with reference to the themes of convenience and time saving. On the other hand, a high proportion of respondents from the General Practice and Community Pharmacist cohort reported challenges in using eRD, and nearly half from the patient cohort. To address these challenges, considerations for development of eRD services include i. training about eRD for all staff, ii. improved consistency in the implementation of eRD across organisations and iii. improved technological functionality. For the patient cohort, technological functionality also featured as an area for development, including, a need for consistency and interoperability of different electronic systems (e.g. if an IT supplier should change in a surgery).

Across both cohorts, there was strong recognition of the beneficial contribution of eRD to patient lives and the patient cohort also reported positively on their interactions with healthcare professionals from General Practice and Community Pharmacy.

Potential areas for future research

1. To evaluate the impact of the recommendation by NHS England to transfer all suitable patients to eRD where possible (NHS England, 2020), upon the perceptions and experiences of relevant patients and those working in General Practice and Community Pharmacy across the UK.
2. To gain greater variability in the representation of the professional role of those working in General Practice and Community Pharmacy. For example, the majority (64%) of those participating in the staff survey were from GP roles, though there were more participants from a pharmacy professional role, participating in telephone interviews (60%).
3. To gain the perceptions and experiences of those working in general practice and community pharmacy involved in implementing eRD over time, to identify the longer-term enablers and barriers to implementing eRD.
1. Introduction

1.1 Background and context

Repeat prescriptions constitute nearly 80% of NHS medicine costs for primary care, involving substantial time and management in being processed (NHS England, 2015). It is estimated that there are approximately 410 million repeat prescriptions produced every year, which constitute nearly 200 per General Practitioner (GP) every week (NHS England, 2015).

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With reference to the experiences of Community Pharmacists, Garfield et al. (2013) conducted semi-structured telephone interviews with 13 English Community Pharmacists, working within a variety of locations and in a mix of independent and multiple pharmacies, to explore their experiences of using EPS. Using grounded theory (Glaser and Strauss, 1967), they derived a number of themes including motivation for moving to an electronic system, training, types of prescriptions received through the electronic system, process change to support the electronic system, changes to professional role, overall views/benefits/ barriers, as well as recommendations in using EPS. Benefits of using EPS included better safety, stock control and time management, as well as improved relations between Pharmacy and General Practice staff. Reported difficulties were closely related to the implementation and use of technology by General Practice (Garfield et al. 2013). This finding relating to Community Pharmacists concerns about the initial implementation of software and operational issues has also been reported by Cornfield et al. (2014). In addition, it was found that as the software systems became more established, on the whole Community Pharmacists reported finding them helpful (Cornfield et al., 2014).

Evaluation work conducted by Cornford et al. (2014) (see also Hibberd et al. 2012) provides insight into the experiences and practices of patients and GPs use of EPS in primary care. With reference to patient experiences of EPS, Cornford et al. (2014) conducted a combination of 58 face-to-face and telephone interviews with patients. Additionally, they observed the processes involved in managing electronic and paper prescriptions at community pharmacies and GP practices. Using content analysis as well as observational analysis, the authors reveal a complex picture of patient perceptions of EPS. Findings included that not all patients thought that the convenience of the service, in terms of reducing the need for patients to
travel to the GP practice or community pharmacy, was a positive outcome. This was attributed to a number of reasons: i. patients may prefer the interaction with the GP and community pharmacy, ii. patients feeling a need to fulfil the role of the ‘good’ patient, iii. patients may not feel happy with using computers to transmit prescriptions (despite EPS not requiring patient operation of a computer at the time of the evaluation), iv. patients who felt their prescription may not be appropriate for electronic transmission, due to regular change of their prescriptions. Whilst some patients were happy with EPS and reported that it appeared more prompt than the existing service, for others, specifically those with repeat prescriptions collected by pharmacy, it was reported to have made marginal difference. It was also noted that some patients were irritated when they arrived at the pharmacy before their acute prescription had. Consequently, the service was identified as more appropriate for repeat prescriptions/repeat dispensing rather than for acute prescriptions. In addition, the issue of patients being able to specify which pharmacy they wished their prescriptions to be delivered to, reportedly divided patients. Some patients thought it offered choice, whilst others perceived it as limiting choice (Cornford et al. 2014).

To understand GP experiences of using EPS, Cornford et al. (2014), employed a mixed method approach involving telephone interviews and observations. Findings revealed how EPS has resulted in positive changes in repeat prescription practices. Although the findings were based on a limited number of practices involved in using various GP software systems, the authors identified how EPS appeared to decrease time expended by administrative staff on repeat prescriptions. However, this benefit had to be considered against the time and extra work involved in the early implementation and start-up of the system, involving “training, revising procedures and practices, and encouraging patients to nominate a pharmacy” (p.4). This early workload was recognised as acting as a barrier to implementing EPS (Cornford et al., 2014).

Another focus of research surrounding the use of EPS has been upon measuring its accuracy and reliability (Cornford et al., 2014; Franklin et al., 2014; Franklin et al. 2013). For example, Franklin et al. (2014), compared the incidence of labelling errors (defined as incorrect information printed on the dispensing label) and content errors (defined as incorrect product being dispensed) in electronic versus paper based prescriptions in 15 English community pharmacies. Specific outcomes measures related to; the incidence of labelling errors, content errors, and labelling enhancements (referring to beneficial additions to the instructions) which were identified by researchers attending each pharmacy. Overall, they found a higher incidence of labelling errors for items transmitted electronically (7.4% of 3,733 items) compared to other prescriptions (4.8% of 12,624). However, the authors attributed this result to local practice in a particular pharmacy, irrespective of the type of prescription. They also identified how community pharmacists made labelling enhancements to approximately 1/7 dispensed items, regardless of electronic transmission or not. In conclusion, they argue that in order to gain the advantages of electronically transmitted prescriptions, there needs to be improved collaboration between community pharmacists, prescribers, professional organisations and software providers in deciding how items should be dispensed and labelled. They also recommend that Community Pharmacists ensure their computer systems are kept up to date to minimise the risk of errors (Franklin et al., 2014).
In summary, it is evident from this review that firstly, whilst policy has identified potential benefits of eRD, further understanding needs to be gained into how eRD has been used and implemented. Secondly, whilst studies have provided insight into the experiences of GPs, Community Pharmacists and patients involved in using EPS, there has been limited understanding of their experiences of specifically using eRD. Thirdly, there is a need to understand the experiences of other key parties involved in processing prescriptions in general practice, such as practice managers, or in pharmacies, such as Prescription Clerks. Fourthly, given the complex changing factors shaping the implementation of EPS (Cornford et al. 2014; Garfield, et al. 2013), there is a need to understand how eRD, has been used and implemented over time, to establish how, if at all, contributory issues and factors may change.

Locally, Wessex AHSN have provided several selected case studies examining the implementation of eRD in GP practices (Hussain, 2020; Howard and Pickup 2020). These case studies reported upon benefits of using eRD, for example, a reduction in the prescriptions signed by GPs, enabling a more thorough medication review and improved confidence by patients of the system of eRD in managing their repeats. Also saving time for patients in not needing to order prescriptions from their GP practice, but instead visiting their pharmacist monthly to collect their medications (Hussain, 2020; Howard and Pickup 2020).

To better understand the benefits and challenges of implementing eRD, the Centre for Implementation Science, University of Southampton, working with Wessex AHSN, undertook an exploratory evaluation of the perceptions and experiences of those working in General Practice and Community Pharmacy as well as those receiving their medications by eRD in Wessex.

1.2 Aims and objectives of the study

To explore the perceptions and experiences of eRD from those working in General Practice and Community Pharmacy and people who receive their medication by eRD in Wessex.

To explore:
1. Enablers (what has worked or helped)/barriers (what has not worked or not helped) in using eRD
2. Which people using eRD services may benefit most/least
3. GPs/Community Pharmacists and other practice/pharmacy staff experiences of working with each other and other health professionals whilst implementing eRD
4. Experiences of people who use eRD services and impact upon their lives
5. If and how any improvements can be made to how eRD is used and implemented within practice

These overall aims and objectives feature in the following ways in each component arm of the study: i. those working in General Practice and Community Pharmacy and providing eRD services and ii. those receiving their medication by eRD. For ease of reference each of these
cohorts will be referred to as General Practice and Community Pharmacy cohort and patient cohort.

**General Practice and Community Pharmacy cohort**

1. To identify the views and experiences of GPs and other practice staff and Community Pharmacists and other pharmacy staff regarding the implementation of eRD
2. To ascertain enablers (what has worked) and barriers (what has not worked) in using eRD
3. To understand changes made to practice since using eRD
4. To investigate the views and experiences of GPs and other practice staff and Community Pharmacists and other pharmacy staff regarding which patients have benefitted the most/least from eRD
5. To gain insights about the views and experiences of GPs and other practice staff/Community Pharmacists and other pharmacy staff working with each other and with other health professionals using eRD
6. To understand if and how any improvements can be made to how eRD is used and implemented within practice

**Patient Cohort**

1. To identify the views and experiences of people who use eRD services
2. To ascertain enablers (what has worked) and barriers (what has not worked) in using eRD services
3. To ascertain the views and experiences of people who use eRD of being in contact with health professionals (e.g. GPs/Community Pharmacists) whilst using eRD services
4. To explore if and how using eRD has impacted upon the lives of people who use eRD services
5. To understand the extent to which people using eRD services agree with the following statements:
   - I have been able to ask my/the pharmacist any questions I have about electronic repeat dispensing services
   - I have been able to ask my/the GP any questions I have about electronic repeat dispensing
   - Electronic repeat dispensing has made receiving medications easier
   - Electronic repeat dispensing has been convenient for me
   - Electronic repeat dispensing has had a positive impact on how I live my life/person I am representing live their life
6. To explore if and how any improvements can be made to how eRD is used and implemented within practice to benefit the lives of people who use eRD services
2. Methods

2.1 Methodology

A mixed method approach involving the use of surveys and qualitative semi-structured telephone interviews was utilised to explore the perceptions and experiences of each cohort; those working in General Practice and Community Pharmacy and those receiving their medication by eRD in Wessex.

A mixed methods approach was adopted because it facilitates understanding of the breadth and depth of a particular topic (Johnson, Onwuegbuzie and Turner, 2007). Surveys enable examination of patterns and trends with respect to one or more variables (Gillham, 2000; Bell, 2002). Qualitative data collection e.g. semi-structured telephone interviews, can provide greater freedom and flexibility, than questionnaires (Denzin and Lincoln, 2005), affording insight into participants views and experiences about particular phenomena (Woods, 2011), such as using eRD services in Wessex. Semi-structured interviews were utilised to provide greater depth into understanding staff views, perceptions and experiences, enabling further insight to be gained.

2.1.1 Survey and telephone interviews (General Practice and Community Pharmacy cohort)

A survey and telephone interviews were designed to establish the following:

1. To identify the views and experiences of GPs and other practice staff and Community Pharmacists and other pharmacy staff regarding the implementation of eRD
2. To ascertain enablers (what has worked) and barriers (what has not worked) in using eRD
3. To understand changes made to practice since using eRD
4. To investigate the views and experiences of GPs and other practice staff and Community Pharmacists and other pharmacy staff regarding which patients have benefitted the most/least from eRD
5. To gain insights about the views and experiences of GPs and other practice staff/Community Pharmacists and other pharmacy staff working with each other and with other health professionals using eRD
6. To understand if and how any improvements can be made to how eRD is used and implemented within practice

2.1.2 Survey and telephone interviews (Patient cohort)

A survey and telephone interviews were designed to identify the following:

1. To identify the views and experiences of people who use eRD services
2. To ascertain enablers (what has worked) and barriers (what has not worked) in using eRD services
3. To ascertain the views and experiences of people who use eRD of being in contact with health professionals (e.g. GPs/Community Pharmacists) whilst using eRD services
4. To explore if and how using eRD has impacted upon the lives of people who use eRD services
5. To understand the extent to which people using eRD services agree with the following statements:
   - I have been able to ask my/the pharmacist any questions I have about electronic repeat dispensing services
   - I have been able to ask my/the GP any questions I have about electronic repeat dispensing
   - Electronic repeat dispensing has made receiving medications easier
   - Electronic repeat dispensing has been convenient for me
   - Electronic repeat dispensing has had a positive impact on how I live my life/person I am representing live their life
6. To explore if and how any improvements can be made to how eRD is used and implemented within practice to benefit the lives of people of who use eRD services

2.2 Sample

A total of 11 telephone interviews were conducted with 10 participants. Telephone interviews were conducted between November 2017-August 2019. Telephone interviews with the General Practice and Community Pharmacy cohort were conducted from November 2017-August 2019. Telephone interviews with the patient cohort were conducted from October 2018-May 2019.

<table>
<thead>
<tr>
<th>Total no. of Questionnaires (n=38)</th>
<th>Total no. of Telephone Interviews (n=11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Those working in General Practice and Community Pharmacy</td>
<td>31</td>
</tr>
<tr>
<td>Patients receiving medication by eRD</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 1. Total number of questionnaires and telephone interviews completed.
Those working in General Practice and/or Community Pharmacy

- Have been using the eRD service a minimum of 1 month
- Pharmacy/Practice based in Wessex (Hampshire, Dorset, South Wiltshire and the Isle of Wight)

People who receive their medication by eRD

- Have been using the eRD service a minimum of 1 month
- Collect electronic repeat dispensing medicines from one of the following areas (Hampshire, Dorset, South Wiltshire and Isle of Wight)
- Aged 18 or over

Table 2. Sampling inclusion criteria

2.2.1 Recruitment strategy

Participants were recruited into the study by four main routes:

**Both cohorts**

i. Advertisement of the study via a poster on Social Media (Centre for Implementation Science website, Wessex AHSN website and twitter accounts)
ii. Local relevant events
iii. ‘Snowballing method’, whereby some participants had recommended participating in the study to other colleagues or in the case of patients, their friends

**General Practice and Community Pharmacy cohort only**

iv. Invitation circulated to potential participants by ‘gatekeeper’ in contact with those working in Community Pharmacy and General Practice

2.3 Ethics approval

University of Southampton granted relevant ethical approvals for components of the study in August 2017, September 2018 and October 2018.

2.4 Data analysis

Qualitative survey responses were analysed using a simplified version of the constant comparative method (Glaser and Strauss, 1967). Interview responses were grouped into themes, based on a thematic analysis approach (Braun and Clarke, 2006). Quantitative survey responses were analysed using MS Excel.
2.5 Limitations of the study

- By participating in the survey and interviews, those taking part may represent an ‘engaged sample’, who may already be aware and/or interested in eRD, therefore their perceptions and experiences may not reflect those who may not be as aware and/or interested in eRD.

- Due to the small sample size of both cohorts: General Practice and Community Pharmacy cohort (survey, n=31; telephone interviews, n=6) and patient cohort (survey, n=7; telephone interviews, n=5), it would be insightful to explore the perceptions and experiences of people using eRD in different localities, to facilitate corroboration and synthesis of statistical and thematic findings.

- It would also be helpful to gain greater variability in the experiences of those working in different professional roles within General Practice and Community Pharmacy. For example, the majority (64%) of respondents from the General Practice and Community Pharmacy cohort survey were from GP roles, though there were more participants from a pharmacy professional role, participating in telephone interviews (60%).

- It would also have been insightful to gain perceptions and experiences of implementing eRD over time. Though one participant, from a pharmacy professional role, did participate in a follow-up telephone interview, there was insufficient data to comment on this area for the study.

- As stated in the eRD interim report (June 2020), early findings from the interim report have changed slightly in this final report. This is due to continued synthesis of data. However, this variation is minimal, for example, there is a slight variation (∓ 4%) in the results for those recommending eRD by those working in General Practice and Community Pharmacy.

- Despite these limitations, it is proposed that this study has provided exploratory insight into an under-researched area of the experiences of those involved in using eRD services.
3. Results: General Practice and Community Pharmacy cohort

Results are presented in two sections: 3. and 4. Section 3 presents survey and telephone interview findings from the General Practice and Community Pharmacy cohort. Section 4 focuses upon survey and telephone interview findings from the Patient cohort.

3.1 Survey with General Practice and Community Pharmacy cohort

3.1.1 Profile of sample

Figure 1, Please specify your role

Figure 2, Where do you undertake your work?
Figure 3, How long have you been using the electronic repeat dispensing service?

Figure 4, Where is your practice/pharmacy based?
Q. Have you made any changes to your practice since using electronic repeat dispensing? Please explain your answer.

The majority of respondents (68%) reported that they had made changes to their practice since using eRD. Qualitative items were categorised (n=28) and are presented in the box below. The main qualitative items include Perceived general benefits (14%), Increased usage (11%), For certain patients (11%), Reviews of patients (11%), Organisational processes and procedures (11%), Future use (11%) and Problems whilst using (11%). (see Appendix 1)

Main qualitative items (n= 28)

- Perceived general benefits (n=4 or 14%)
- Increased usage (n=3 or 11%)
- For certain patients (n=3 or 11%)
- Reviews of patients (n=3 or 11%)
- Organisational processes and procedures (n=3 or 11%)
- Future use (n=3 or 11%)
- Problems whilst using (n=3 or 11%)
- Healthcare professionals involved in eRD (n=2 or 7%)
- Less work (n=2 or 7%)
- Other (n=2 or 7%)

"[Using eRD] ensures we renew, update and synchronise meds" (GP)
Q. Has the electronic repeat dispensing service been helpful? Please explain your answer.

The majority of respondents (84%) indicated that the eRD service had been helpful. Qualitative items were categorised (n=29) and are presented in the box below. The main qualitative items include *Helpful for specific patients (17%), Reduced workload (17%) and Time saving (14%).* (see Appendix 2)

![Pie chart showing responses to the question: Yes - 26 (84%) and No - 5 (16%).](image)

*Figure 6, Has the electronic repeat dispensing service been helpful?*

- 85% of all GPs agreed eRD had been helpful
- 86% of all pharmacy professionals agreed eRD had been helpful

<table>
<thead>
<tr>
<th>Main qualitative items (n=29)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Helpful for specific patients</strong> (n=5 or 17%)</td>
</tr>
<tr>
<td>• <strong>Reduced workload</strong> (n=5 or 17%)</td>
</tr>
<tr>
<td>• <strong>Time saving</strong> (n=4 or 14%)</td>
</tr>
<tr>
<td>• <strong>Accuracy and reliability</strong> (n=3 or 10%)</td>
</tr>
<tr>
<td>• <strong>Patient Benefits</strong> (n=3 or 10%)</td>
</tr>
<tr>
<td>• <strong>Mixed perception</strong> (n=3 or 10%)</td>
</tr>
<tr>
<td>• <strong>Future use</strong> (n=2 or 7%)</td>
</tr>
<tr>
<td>• <strong>Better access</strong> (n=2 or 7%)</td>
</tr>
<tr>
<td>• <strong>Other</strong> (n=2 or 7%)</td>
</tr>
</tbody>
</table>

“**Better access for patients and Community Pharmacists**” (GP)

“**More accurate, reliable audit trail, time saving for GPs, receptionists and pharmacists and patients.**” (Not stated role)
Q. Has the electronic repeat dispensing service been challenging? Please explain your answer.

Most respondents agreed that the eRD service had been challenging (78%). Qualitative items were categorised (n=28) and are presented in the box below. The main qualitative items include Difficulty making changes on electronic system (e.g. dosage, re-issuing repeat medication) and/or cancelling medications (25%), Communication between different parties (21%), Staff Understanding of eRD (18%) and Complicated (18%). (see Appendix 3).

70% of all GPs agreed that eRD has been challenging
85% of all pharmacy professionals agreed eRD has been challenging

Main qualitative items (n=28)

- Difficulty making changes on electronic system (e.g. dosage, re-issuing repeat medication) and/or cancelling medications n=7 or 25%
- Communication between different parties (n=6 or 21%)
- Staff Understanding of eRD (n=5 or 18%)
- Complicated (n=5 or 18%)
- Waste (n=3 or 11%)
- Other (n=2 or 7%)

“Changing medication dosage or stopping starting medication during the RD cycle remains difficult” (GP)
Q. Do you think patients are benefitting from electronic repeat dispensing? Please explain your answer.

The majority of respondents agreed that patients are benefitting from eRD (77%). Qualitative items were categorised (n=23) and are presented in the box below. The main qualitative items include *Convenience for patients* (26%), *Dependent upon it working* (17%), and *time saving* (17%). (see Appendix 4)

![Pie chart showing the response distribution with 77% for Yes, 13% for No, 3% for Not sure, and 7% for Not stated.](image)

*Figure 8, Do you think patients are benefitting from electronic repeat dispensing?*

- 75% of all GPs agreed that patients were benefitting
- 86% of all pharmacy professionals agreed that patients were benefitting

### Main qualitative items (n=23)

- Convenience for patients (n=6 or 26%)
- Dependent upon it working (n=4 or 17%)
- Time saving (n=4 or 17%)
- For specific patients (n=3 or 13%)
- Small numbers of patients on eRD (n=2 or 9%)
- Delays with electronic system (n=2 or 9%)
- Other (n=2 or 9%)

“But only if the right patients are selected. It is not suitable for all.”

*Pharmacy professional*
Q. Have you made any changes to how you work with other health professionals whilst using electronic repeat dispensing? (e.g. Community Pharmacist/GP/other)

Just over half (55%) of respondents had made changes to how they work with other healthcare professionals whilst using eRD. The main qualitative items were categorised (n=19) and include Closer working with pharmacies (37%) and Procedural changes (26%). (see Appendix 5)

Main qualitative categories (n=19)

- Closer working with pharmacies (n=7 or 37%)
- Procedural changes (n=5 or 26%)
- Issues (n=4 or 21%)
- Other (n= 3 or 16%)

“We have needed to agree how cancellations are dealt with and how to ensure reminders of last issue are handled.” (Pharmacy professional)

“even closer liaison with community pharmacy” (Pharmacy professional)
Q. Do you have any recommendations about how you would improve the electronic repeat dispensing service?

The main qualitative items include *Technological functionality (63%) and Training for staff, but specifically community pharmacy (25%)* (See Appendix 6 for further details).

<table>
<thead>
<tr>
<th>Main qualitative items (n=24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Technological functionality (n=15 or 63%)</td>
</tr>
<tr>
<td>• Training for staff, but specifically community pharmacy (n=6 or 25%)</td>
</tr>
<tr>
<td>• Increase usage and engage staff (n=2 or 8%)</td>
</tr>
<tr>
<td>• Other (n=1 or 4%)</td>
</tr>
</tbody>
</table>

➢ 87% recommend eRD to colleagues  
➢ 87% recommend eRD to patients  
➢ 77% recommend eRD to family and friends

“The interface with S1 needs improvement so that it is much clearer that patients are on ERD so that all changes are completed as per protocol to prevent the risk of medication errors”  
*(Pharmacy professional)*

“More training for community pharmacy.” *(GP)*
Q. Is there anything else you wish to say about electronic repeat dispensing?

The main qualitative items include *Type of medication* (21%) and *Potential use* (16%), *General benefits* (16%) and *issues* (16%) (see Appendix 7 for further details).

<table>
<thead>
<tr>
<th>Main qualitative items (n=19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Type of medication (n=4 or 21%)</td>
</tr>
<tr>
<td>• Potential use (n=3 or 16%)</td>
</tr>
<tr>
<td>• General benefits (n=3 or 16%)</td>
</tr>
<tr>
<td>• Issues (n=3 or 16%)</td>
</tr>
<tr>
<td>• Training (n=2 or 11%)</td>
</tr>
<tr>
<td>• More work (n=2 or 11%)</td>
</tr>
<tr>
<td>• Other (n=2 or 11%)</td>
</tr>
</tbody>
</table>
3.2 Telephone interviews with those from General Practice and Community Pharmacy cohort

3.2.1 Profile of interview sample

A total of 6 telephone interviews were completed with 5 participants. Telephone interviews were conducted from November 2017-August 2019. Participants included three Pharmacists, one of which participated in a follow-up telephone interview and two General Practitioners. All participants worked in organisations based in Hampshire.

3.2.2 Thematic findings

Overall, six interrelated themes emerged from the interviews with those working in General Practice and Community Pharmacy. They include i. Impact of eRD upon professional practice, ii. Interprofessional relations whilst using eRD, iii. Organisational processes around implementing eRD, iv. Technological functionality and eRD, v. Perceptions of patients and eRD, and vi. Future considerations in the development of eRD. Each theme is described in turn below and illustrated through verbatim representative extracts. The extracts are labelled according to the type of participant: (Pharmacist or GP) and numbered according to which participant.

3.2.3 Impact of eRD upon professional practice

Participants reported on the impact of eRD upon their professional practice. Many participants reported upon the benefits of eRD, including convenience and saving time. For Pharmacists it was recognised how eRD saved time by enabling pre-planning, access to and dispensing of prescriptions quickly, and not having to chase up prescriptions from various surgeries. Whilst for GPs, saved time, could result in less work, by not getting so many prescribing requests from the dispensary but also by reducing the number of prescriptions they have to prepare each week. Convenience and saving time were also acknowledged for patients.

“Yeah it cuts down the number of prescriptions you have to click off every week. It enables pre-planning from chemists and saves patients trips” (GP 1, November 2017)

“The ability for patients just to come in and collect their prescriptions when they need them seems to be something that patients like… It’s really useful then just to be able to access that prescription and dispense it virtually straight away.” (Pharmacist 2, November 2017)

1 One of the participants (Pharmacist 2), upon completion of the telephone interview, provided a list of improvements and recommended changes to eRD. Whilst many of these related to the core themes, some of these have been provided as examples and indicated in text as follows Written suggestion for improvement of eRD provided following telephone interview. Remaining examples have been included in Appendix 13, for further reference.
“The other benefit is I think, to day to day working, not getting those requests in from dispensary, so not quite so many tasks around prescribing and likewise for the dispensers not so many tasks. Not to say that they don’t get tasks related to the RDs when there have been issues in the first six months with all of the teething problems... Now the chemists are up to speed, their queries are reduced so that puts less onus to deal with those tasks on a day to day basis and so RDs are gradually running smoother as time goes by.” (GP2, August 2019)

It was also recognised by one GP, that they thought the process of starting a patient on eRD, resulted in a more thorough medication review in this early stage:

“I think it promotes a more thorough medication review by the GP when you are going to set this process up. My view personally, I’ve certainly become more minded to be robust to checking that all the reviews and checks are in place before I then put another six or twelve months up on RD, so it’s helped us to really think about and unify our recall processes, getting patients in on their birthday month, making sure that all their bloods, blood pressures, and anything else for their chronic disease management is done and then put on that new lot of RDs for either six months or a year, whichever is appropriate” (GP2 August 2019)

Some participants recognised simultaneous benefits and drawbacks regarding eRD, for example, reducing the number of prescriptions which require signing each month, but also increasing work where it had not work as planned. One participant, reported a more challenging perception of eRD, identifying a number of issues, which they perceived as increasing the workload for pharmacy, but also raising a concern later in the interview, that because of this, this has made dispensing less safe for patients.

“continuous errors, the way that the GPs initiate and don’t synchronise when they issue new medications, the way that the spine can send things down more automatically even when you haven’t called for them. The way prescriptions go missing when you have had a one-off dispensing at the pharmacy... it’s increased the workload for pharmacy.” (Pharmacist 3, November 2018)

3.2.4 Interprofessional relations whilst using eRD

Participants experiences of working with other healthcare professionals whilst using eRD also featured as a key theme. Both communication and ‘joined up working’ were recognised as integral to these relations, to make possible a clear understanding of how eRD works from beginning to end by all (community pharmacy, general practice and patients)

“It’s been very positive, and I feel that it is crucial to the success of eRD there needs to be communication on both sides of the prescription really. Community pharmacy needs to have a robust way of processing them, which I don’t think a lot of pharmacies have and the surgery needs to have a robust way of providing them. There needs to be communication between the two about which patients are going to be eligible and the timing of when the prescriptions are issued and anything which would make it easier for the other side” (Pharmacist 1, November 2017)
“The biggest challenge is around everybody understanding what the new system does and how it works and that can be the people who produce the prescriptions at the surgery, it can certainly be people within the pharmacy team not understanding what it is that’s going on but equally patients. Sometimes you spend an awful lot of time explaining to patients that they don’t need to go to the surgery anymore” (Pharmacist 2, November 2017)

“As it’s promoted and rolled out more widely ... the people doing the training [should be] more mindful to explain the whole process the primary care end to pharmacy end so that when an issue arises people understand where the chain may have broken down.” (GP2, August 2019)

One participant, also recognised the value of trust in fostering interprofessional relations:

“I think it’s a question of trust and if there is a good working relationship between pharmacy and surgery then it works well. If there isn’t that sort of rapport between them, then, there is definitely a trust barrier to break through. Training within pharmacy is variable.” (Pharmacist 2, November 2017)

One barrier to enabling communication, was access to other healthcare professionals when needing to converse regarding eRD. For example, a Pharmacist explained the difficulties they had in not being able to speak to someone by telephone at the GP surgery, when trying to resolve queries regarding eRD. They explained how some surgeries had since addressed this issue, by holding meetings where issues could be raised. This had resulted in one surgery taking action to make access to their surgery easier, providing a dedicated telephone line with a specific person responsible for answering questions relating to eRD:

“We are spending far more time on the telephone to GP surgeries who don’t answer and are keeping us waiting a considerable amount of time to resolve queries that are created by repeat dispensing... Some surgeries holding meetings and listening to what is said and acting upon it to make access to surgery by telephone easier and giving us dedicated lines, for one surgery... They have a specific person, a specific individual responsible for managing all the queries on repeat dispensing, but it depends on the individual and how much authority they are given” (Pharmacist 3, November 2018)

3.2.5 Organisational processes around implementing eRD

Many participants reported upon differences in the organisational processes around implementing eRD, including administrative processes and dispensing practices. One participant identified how some surgeries, mixed regular and non-regular items on the same prescription. Another, reported how one pharmacy does not print on the last prescription or any of the tokens what stage they are during the dispensing cycle, whilst another identified the stage of cycle by printing 1/6, 2/6 etc... on the token. Another example relates to dispensing activities, including discordance between when a doctor may issue repeat dispensing and when the patient requires medication as the patient may already have some at home.
“It would be nice if there could be a specialised token designed. So, when the patients are started on repeat dispensing, let’s say they ring up their doctor for their annual review. The doctor says right ok, your medication runs out in a couple of weeks’ times, I’ll date this prescription from the 14th November if you bring that down to the pharmacy. Then on the other side of the prescription it has a dispensing timetable or something of this sort. It could then make it really clear for everyone when these prescriptions are due.” (Pharmacist 1, November 2017)

“It can vary from PNR to PNR provider but things like having to scan every single prescription to claim it seems an inordinate waste of time. Why can’t we have a list of prescriptions that we have got and just tick them to claim them … we have to scan in bar codes of thousands of prescriptions a month. Someone has got to sit there and do it.” (Pharmacist 3, November 2018)

[Suggestion made with reference to the Pharmacy] Allow patient to order what they need rather than the quantity prescribed. Right Hand Side of prescription to include another box in which the patient indicates how many tablets they have left. These quantities are entered onto the computer, which then generates labels (to the nearest calendar strip) to bring patients medications into line automatically. (Written suggestion for improvement of eRD provided following telephone interview, Pharmacist 2, April 2018, Follow-up)

The pace of implementing eRD was also recognised by participants. Implementation was associated with a transitionary period of ‘hand-holding’ involving collaborative working between surgery and pharmacy so that if problems arise, learning can be gained, and practice developed accordingly:

“And when it’s actually up and running teams tend to evolve and make it work but there is sort of a 3 to 6 month transition at the start of moving to electronic repeat dispensing which needs a bit of hand-holding and needs a bit of give and take and collaborative working between the surgery and the pharmacy, just to say that you’ve done it in this way, it caused that problem therefore if you did it in a slightly different way that wouldn’t happen again.” (Pharmacist 2, November 2017)

“I can think of one particular practice that has gone from virtually doing none to suddenly just about trying to put everybody onto repeat dispensing and it caused quite a lot of issues to start with the local pharmacy- they’ve now had a change of policy so they’re being a lot more selective about which patients go onto repeat dispensing and because of that the issues are declin[ing]” (Pharmacist 2, April 2018, Follow-up)

“I think overall it’s a very positive change, I won’t deny that it needs some thinking around if in a practice they are thinking of putting some processes in place for it, so whilst they could just start gently, slowly with patients … dip their toe in the water and get used to it, when they are going to expand that up to slightly more complex patients, to patients say with four or more medications, they need to think about the robustness of their procedures, their reviews and also making sure that the staff that are going to be dealing with the queries back from the chemist, back from the patient that they
understand the process and that the GPs understand the process from start to finish and then that way you can resolve those queries quickly”. (GP2, August 2019)

3.2.6 Technological functionality and eRD

Some participants reported issues relating to the technological functionality of the electronic system which they use for eRD. This included making adjustments or cancellations to medications or dosages, but also inconsistencies in the compatibility of different IT systems across surgeries and pharmacies:

“The biggest glitch is changing people once they are on it because the system really doesn’t like you changing them. It crashes or throws up error messages then they have to be changed by phoning the chemist which kind of removes the point” (GP 1, November 2017)

“not realising that if you made a change to a repeat dispensing script in [name of clinical system] which is the clinical system that we use, I think a lot of GPs didn’t understand that that wouldn’t be reflected on those dispense scripts sitting on the spine, that you actually had to cancel those off and put a new one, if you say wanted to make a change, say like if it says take two tablets in the morning, if you even went to take one tablet twice a day you’d have to stop that repeat dispense script, re-write it and put it back on and I think we didn’t realise that for some time, that you couldn’t make electronic changes, to an existing script because it is up on the spine and we didn’t realise that changes our end wouldn’t impact upon what was sitting on the spine. (GP2, August 2019)

3.2.7 Perceptions of patients and eRD

Participants expressed different opinions as to whether there were particular patients who may benefit more or least from eRD. Two participants reported they thought patients benefitting from eRD include those on regular medications. In addition, one stated those that do not have to take too many drugs. In comparison, another participant (GP) reported they thought it benefitted patients who were taking lots of medication. They also identified how it had been helpful for patients who required collection at different times, due to their working patterns.

“I’m of the view that anybody that’s on regular medication, that they would benefit from electronic repeat dispensing. The ability to pick up their prescriptions, have them when they need them or just ring up and know the prescriptions there benefits most patients.” (Pharmacist 2, November 2017)

“those that don’t have many drugs but need them regularly” (GP 1, November 2017)

“I actually think it is patients who are on more medications who benefit. We do have some patients who work away a lot of the time and then are back at weekends. ... so we’ve managed to set things up for them, so that it’s going to the chemist of their choice and then they just contact the chemist if they need it drawn down slightly earlier or slightly later, so it’s helped patients who work away a lot and come back to the area,
let’s say just at weekends, and I think some of our more complex patients, who have got six, eight, ten medications, but they are pretty stable on those medications and they are just coming in for a six month or an annual review, for them to know that they pitch up and everything is there and every month has been quite reassuring because prior to that it was amazing the regularity with which one thing might get missed off…and you get a call ‘I haven’t got x,y or z’ whereas we don’t seem to get so many of those phone calls now.” (GP2, August 2019)

In terms of who may benefit least, two participants reported patients on controlled drugs, whilst another reported those on complex regimes or where medication changes very regularly. One participant thought it was not possible to categorise patients as to who may benefit more or less from eRD, but was rather dependent upon them as an individual, the surgery as well as other factors such as their medication regimes.

“[patients benefitting least] those who are on controlled drugs…I think people who are on complex regimes. The fact that things aren’t easily cancellable and changeable can result in things not being done effectively.” (GP 1, November 2017)

“those who are less stable, the people who are having frequent medication changes or perhaps those that have been stable and are going into a period of instability.” (GP2 August 2019)

“No, I don’t think you can categorise them, it depends on the individual, the surgery, the complications, the regimes.” (Pharmacist 3, November 2018)

3.2.8 Considerations in the development of eRD

A number of areas emerged in relation to the future development of eRD. These areas are closely related to the other core themes and include i. Training, resources and support needs, ii. Organisational processes around implementing eRD, iii. Technological functionality and vi. Communication.

Training, resources and support needs

Many participants reported upon the importance of organisational training about eRD. The need for training to provide a clear understanding of eRD as a process and how it works within organisations and across general practice, pharmacy and for patients was recognised:

“Quite simple I think training, training for all the relevant staff in the surgeries. The staff dealing with prescriptions and the doctors as well. So they know first of all how to identify people, what [are] the benefits of repeat dispensing, because there are very clear benefits for the doctor’s surgery, but I’m not convinced that all surgeries know that there are … and training on how to make the process as smooth as possible, the timing of when a prescription is dated, that’s crucial to that.” (Pharmacist 1, November 2017)
“even within the same pharmacy, if the whole team hasn’t been drilled and understand exactly what needs to happen from any aspect of repeat dispensing. Unless everybody that’s involved in it understands what it needs to make it work then if you get the wrong person sat in front of the patient, or the wrong person sat in front of the computer, then even within the same pharmacy you may find a service that’s excellent one day and doesn’t work the next day” (Pharmacist 2, November 2017)

“As it’s promoted and rolled out more widely … the people doing the training [to be] more mindful, to explain the whole process, the primary care end to pharmacy end so that when an issue arises people understand where the chain may have broken down.” (GP2, August 2019)

It was also identified how support and having a person within the pharmacy community to help and advise the surgery staff or alternatively surgery staff visiting and spending time within pharmacy, had been helpful:

“We’ve had members of the surgery staff come and spend the morning with us to see how we process repeat dispensing which they seemed to find quite interesting and helpful” (Pharmacist 2, November 2017)

Additional areas associated with training, included recognition of localised training and support for areas as they go live with eRD and interprofessional shared learning between surgeries and pharmacies regarding the implementation of eRD. Several participants also acknowledged the need for clearer guidance and information about eRD. For example, one participant advocated clear and concise reference guidance about eRD which could be tailored for each of the pharmacy systems. Whilst another recommended that the Standard Operating Procedure (SOP) for eRD needs to be written by someone who uses eRD on a regular basis.

Organisational processes around implementing eRD

Organisational processes around implementing eRD including administrative processes and dispensing practices also featured as areas to be developed. Examples of administrative processes include the recommendation to number each token so that the stage of the dispensing cycle is identifiable and also to provide details of the dispenser. Another participant reported it would be useful to see the patient’s dispensing history at the point when processing a prescription. Whilst another, suggested the following change to non-regular medications:

[Suggestion made with reference to the Spine, Surgery and Pharmacy] “Non-regular medications are prescribed separately but if they are being requested at the same time they can be merged onto the same prescription rather than producing many separate prescriptions. Non-regular medications should not be tied to (prescribed) with regular medications, nor should they be prescribed together as they may be required at different times. The existing pick ‘n mix approach to ordering non-regular medication from the surgery should continue within the pharmacy. There is a need for the pharmacy to be able to draw down any of these non-regular medications at the same time but then to be able to merge them into one prescription rather than having to deal with many separate
Technological functionality

Several participants reported upon increasing the functionality of the various electronic systems associated with eRD. This related to the ability to make amendments and cancel items but also more generally to edit a repeat dispensing script:

“ironing out the software glitches where the system falls apart whenever you try and cancel anything. And the whole selling point was that you changed something on your system, it changed automatically and therefore there would be less potential for error and therefore ironing out all those glitches would make the whole thing a lot more effective.” (GP 1, November 2017)

“I think that would be a utility that would be absolutely amazing, if you could edit an electronic repeat dispense script that still had issues yet to be drawn down off the spine. It would also be lovely to know how many issues have been drawn down and when they’ve been drawn down, that would be a really good development, so that you could really have real time information about those six prescriptions that you’ve got and what’s actually happening with them...but the biggest thing overall would be to be able to edit a repeat dispense that still had issues outstanding” (GP2, August 2019)

[Suggestion made with reference to the Pharmacy] Compliance monitoring for regular medications to be better assisted by the computer system. It is possible to accurately predict how long regular medications should last from the first issue within a batch of prescriptions received by the pharmacy. The PMR system knows how much medication has actually been issued and when. It should therefore be possible to show when and if a patient is over- or under- using a particular medication at every dispensing. If a medication, which is expected to be taken regularly, is requested early, the computer produces an alert, which needs to be confirmed before dispensing can proceed. Equally, if a medication marked as needing to be taken regularly hasn’t been requested, this should produce an alert when other items for the same patient are being dispensed. The pharmacy should be able to change the status of an item from regular to non-regular if the medication clearly is not intended to be taken regularly (Written suggestion for improvement of eRD provided following telephone interview, Pharmacist 2, April 2018, Follow-up)

Communication

Closely related to the theme of Interprofessional relations whilst using eRD, and highlighted by two participants is the importance of communication, sharing of information and joined up working in the implementation of eRD:

“The pharmacist needs to be able to view the full GP records to see what prescriptions can be issued, the community pharmacists need to be kept in the loop
when people are discharged from hospital and changes made to their medication and generally there needs to be better communication ... more leeway on the part of the pharmacists to decide how to set things up” (Pharmacist 3, November 2018)

“If you’re rolling it out and trying to promote it to more GPs I think it’s important that they understand the whole of the chain and not just a bit of the chain that applies to general practice so how it applies at the pharmacy end because then when the queries come back from the pharmacy you can then kind of understand where they are coming from, so it was that communication” (GP2, August 2019)

[Suggestion made with reference to the Spine, Surgery and Pharmacy]
“Information from Dispensary systems as to what has been dispensed and when is fed back into prescribing systems. The information that is currently available on The Spine should be fed back to and populate the GPs patient records. This will give GPs better information than they currently have, particularly in relation to patient compliance. This is also something that GPs frequently raise as something that needs to be in place before they will routinely use eRD.” (Written suggestion for improvement of eRD provided following telephone interview, Pharmacist 2, April 2018, Follow-up)
4. Results: Patient cohort

4.1 Survey with Patient cohort

4.1.1 Profile of sample

Figure 10, Please indicate your age/ the age of the person you are representing from the following age classification boxes

Figure 11, How would you describe your gender /the gender of the person you are representing?

n= 7 respondents

n= 7 respondents
Figure 12, How many medications do you/person you are representing currently receive by the electronic repeat dispensing service?

Figure 13, How long have you been using the electronic repeat dispensing service?
Q. Has the electronic repeat dispensing service been helpful? Please explain your answer

The majority of respondents (72%) indicated that eRD has been helpful. Qualitative items were categorised (n=21) and are presented in the box below. The main qualitative items include Convenience for patients (38%), Saves time (14%), Ease of use (14%) and Saves work (14%). (See Appendix 8)

Figure 14, Has the electronic repeat dispensing service been helpful?

<table>
<thead>
<tr>
<th>Main qualitative items (n=21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Convenience (n=8 or 38%)</td>
</tr>
<tr>
<td>• Saves time (n=3 or 14%)</td>
</tr>
<tr>
<td>• Ease of use (n=3 or 14%)</td>
</tr>
<tr>
<td>• Saves work (n=3 or 14%)</td>
</tr>
<tr>
<td>• Speed (n=2 or 9.5%)</td>
</tr>
<tr>
<td>• Generally helpful (n=2 or 9.5%)</td>
</tr>
</tbody>
</table>

“Due to many problems with the buses, plus difficulties obtaining doctors’ appointments I find it helpful. Plus I find it saves my GP work and while I can I collect prescriptions in person at the Pharmacy, thus saving the delivery service time, effort and expense, hopefully helping the NHS, too” (Female, 76-85, Hampshire)

“It’s really quite straightforward and intuitive. Helpful and quicker than doing it by paper when I physically had to drop the request into the surgery” (Female, 36-45, Hampshire)
Q. Has the electronic repeat dispensing service been challenging? Please explain your answer

Just under half of respondents reported that eRD has been challenging (43%). Qualitative items were categorised (n=4) and were evenly shared between the category of the availability and appropriateness of alternative medicines (50%) and other comments (50%). (see Appendix 9)

Figure 15, Has the electronic repeat dispensing service been challenging?

<table>
<thead>
<tr>
<th>Main qualitative items (n=4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Availability and appropriateness of alternative medicines (n=2 or 50%)</td>
</tr>
<tr>
<td>• Other (n=2 or 50%)</td>
</tr>
</tbody>
</table>

“The method of ordering repeat prescriptions is the same. However, there are some problems with items no longer manufactured and alternatives, not necessarily being adequate”. (Female, 76-85, Hampshire)
Q. Has using the electronic repeat dispensing service changed the way in which you live your life/the person you are representing live their life? Please explain your answer

The majority of respondents reported that eRD has changed the way they live their life (71%). Qualitative items were categorised (n=23) and are presented in the box below. The main qualitative items include Convenience (43%) and more time (29%). (See Appendix 10)

![Pie chart showing 71% Yes and 29% No]

*Figure 16, Has using the electronic repeat dispensing service changed the way in which you live your life/the person you are representing live their life?*

(Main qualitative items n=7)
- Convenience (n=3 or 43%)
- More time (n=2 or 29%)
- Other (n=2 or 29%)

“Very helpful to not have to go back and forth to the GP and for the pharmacy to tell me when my next prescription is ready to be collected.” (Male, 26-35, Hampshire)

“I have more time for myself I am more organised at ordering my prescription on time.”
(Female, 36-45, Hampshire)

“It has given me more free time as I don’t have to visit the doctor to collect the prescription and take it to the chemist and then wait there to get the medication.”
(Female, 66-75, Hampshire)
Q. To what extent do you agree with the following statement: I have been able to ask my/the pharmacist any questions I have about electronic repeat dispensing

*Q. To what extent do you agree with the following statement: Electronic repeat dispensing has had a positive impact on how I live my life /person I am representing live their life
*Q. To what extent do you agree with the following statement: Electronic repeat dispensing has made receiving medications easier

![Bar chart showing responses to the question.]

*2Q. To what extent do you agree with the following statement: Electronic repeat dispensing has been convenient for me

![Bar chart showing responses to the question.]

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* The respondent who indicated strongly disagree, later participated in a telephone interview. They requested it be noted that when they had completed the questionnaire they were referring to their first time of using eRD which had not worked well but that they had recently started using eRD again and reported a more positive experience in the telephone interview.
Q. To what extent do you agree with the following statement: I have been able to ask my/the GP any questions I have about electronic repeat dispensing.
Q. Are there any ways electronic repeat dispensing could be improved in the future?

The main qualitative items were equally split between Ensuring accurate and clear information (50%) and other comments (50%) (see Appendix 11 for further details).

<table>
<thead>
<tr>
<th>Main qualitative items (n=4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ensuring accurate and clear information (e.g. communication of information between doctor and dispenser and correct description of items, dose and strength) (n=2 or 50%)</td>
</tr>
<tr>
<td>• Other (n=2 or 50%)</td>
</tr>
</tbody>
</table>

➢ All would recommend to family and friends

“Better reliability of the underlying system” (male, 66-75, Hampshire)

“Ensure the information between doctor and dispense is easy to use, clear and a ‘straight road’” (Female, 66-75, Hampshire)
Q. Do you have any other comments about electronic repeat dispensing?

The main qualitative items include Text reminders or alerts (See Appendix 12 for further details).

<table>
<thead>
<tr>
<th>Qualitative items (n=3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Text reminders or alerts (n=2 or 67%)</td>
</tr>
<tr>
<td>• Other (n=1 or 33%)</td>
</tr>
</tbody>
</table>
4.2 Telephone interviews with Patient cohort

4.2.1 Profile of interview sample

A total of 5 telephone interviews were completed with 5 participants. Telephone interviews were conducted from October 2018-May 2019. Four participants identified as female and one as male. One participant identified their age within the range 76-85, two within 66-75, one within 36-45 and one within the range of 26-35. All participants received their medication within Hampshire. All participants had also completed the survey.

Participants reported first finding out about eRD in a variety of ways; one was informed by their GP, whilst another read a leaflet about it at their pharmacy. Another participant reported how they had previously tried eRD a few years ago but felt it had not worked for them. At this first try, they reported they had not been accessing it electronically. However, they had recently re-started using it, since their husband had started using eRD electronically. On this subsequent try, they reported positively about their experience. She also mentioned there may be other people similar to herself, who had previously tried, experienced problems, who may not know of developments to the system. Two participants were uncertain about how they had first found out about eRD, though one thought it could have been through advertising at a pharmacy or by a friend.

4.2.2 Thematic findings

Overall, three interrelated themes were evident from the telephone interviews with patients. They include i. Impact of eRD upon everyday life, ii. Experiences of healthcare professionals whilst using eRD and iii. Future considerations in the development of eRD.

4.2.3 Impact of eRD upon everyday life

A key analytical theme relates to the impact of eRD upon patients’ lives. All participants reported how eRD had been helpful. More specifically, helpfulness was related to convenience, saving time and electronic access to eRD records.

Convenience

A number of participants acknowledged the convenience of eRD in their lives. For two participants, convenience was related to being able to access the system electronically when they wished, rather than for example, having to travel to the GP surgery during opening hours to request the prescription. Whilst for others, eRD, proved helpful for their working and family commitments:

“I can do it anywhere that I’ve got wi-fi or even, I could do it on my phone if I wanted to ... it’s completely accessible as long as you’ve got a connected device ...I work and I’ve got young kids, and so it has made a huge difference, to being able to fit that around my lifestyle rather than having to add in unnecessary travel or remember the right opening times etc... so that for me has really been a big, big change to my lifestyle definitely.” (Female participant, 36-45 years)
“Yeah I don’t have to devote a certain day and time and journey, I can just pick up the phone and order the prescription and get it delivered...It has made it easier that way and it has taken away the worry that I have to make that trip.” (Female participant, 66-75 years)

“Well actually I found it really good...not having to go into the GP surgery every single time to wait for an appointment and have the same ‘conversation’ over and over again about how is this working? How are you feeling in yourself? You know that kind of process, bearing in mind like I said that it is always during the working week as well. (Male participant, 26-35 years)

“I think it’s pretty efficient. I don’t know what experiences other people have with it but as far as I am concerned, I’m quite happy” (Female participant, 76-85 years)

**Saving time**

Associated with convenience, a number of participants reported how eRD saves time. Saving time was identified in a number of ways including i. not having to travel to the pharmacy to collect the prescription and ii. not having to arrange another appointment with their GP to request another prescription. Whilst one participant recognised that in addition to saving patients time, it also saves the NHS time.

“I have small kids, so I don’t have to try and find time to get to the pharmacy to put in a paper request” (Female participant, 36-45 years)

“with eRD you can contact your chemist over the phone and request that you want your drugs and so as long as it is within your time limit, e.g. a monthly repeat, they would have it ready within the week and if I want it delivered they would deliver it if there was a driver available...it saves me the travel as well as the time in visiting the doctor’s and the chemists” (Female participant, 66-75 years (I))

“it really genuinely does clearly save people quite a lot of time and hassle so that can only be good ... it saves the NHS quite a lot of time doesn’t it” (Male participant, 26-35 years)

One participant also reported because of being in contact with the pharmacist about eRD, this had led to them feeling more able to ask them about other queries:

“You get to know your chemist better and you can rely on them for other queries. If you want to take OTC medicine, you can ask their advice about it and they are helpful.” (Female participant, 66-75 years (II))

**Electronic access to eRD records**

Several participants reported how being able to access eRD electronically had been beneficial affording flexibility in terms of when to access their medications, control of their medication and also choice, in terms of choice of pharmacy:

“It’s really quite straightforward. I think you can log in and see what stage your prescription is at because I use the same pharmacy and it’s attached to the same
practice, it’s quite quick as well so in my experience it’s much faster than the paper based request system.” (Female participant, 36-45 years)

“If I was to meet somebody else that was also a member of the same practice I would suggest that to make life easier for them they should use the technology to book their appointments and to do their prescriptions as well because it is simply easier and it means that you stay in control of what is going on.” (Female participant, 66-75 years (III))

Other benefits of eRD reported by participants included accuracy and also speed, with one participant stating that it was “Quicker than when it used to come through on paper” (Female participant, 36-45 years). Two participants explained how receiving a text notification about when medications were ready was helpful, whilst another explained the usefulness of a comment box on the electronic repeat dispensing system, enabling them to query a dosage of a medication.

Several participants reported challenges using the electronic eRD system. A couple of participants reported that there had been instances of errors concerning the display of dosages. For instance, one participant had used a comment box function on the eRD system to report an incorrect dosage. They found that whilst the dosage was not changed on the electronic system, the request had been actioned, as they then received the correct dose of medication upon collection. Another participant explained how due to a change in the IT supplier by their GP practice, they were no longer able to access their child’s repeat medication, which they had previously. They suggested how consistency in the functionality between different electronic systems could help to address this problem:

“I think some consistency between the systems, so our GP practice, changed supplier of [their] IT system and when they did that it meant they were no longer allowing you as a parent to access your child’s repeat prescription list” (Female participants, 36-45 years)

Another participant explained how they had a medication which was for ‘use as required’. Because the medication was not being taken on a regular basis, with the patient not needing to use it for a few months, it had dropped off the list of their repeat medications.

4.2.4 Experiences with healthcare professionals whilst using eRD

Participants generally reported positive experiences of being in contact with healthcare professionals (including GPs, pharmacists, and other GP and pharmacy staff) whilst using eRD. Many expressed they had found staff within GP and pharmacy very helpful:

“The current chemists are very helpful when you phone them” (Female participant, 66-75 years)

“They’ve all been really helpful, really good, when I went to pick up my tablets last week, the person that was working behind the counter was really lovely, she knew exactly where they were, and everything else so I have to say my experience of all of them has been really good, they’re a really good team.” (Male participant, 26-35 years)

“I use the same pharmacy each time because it is convenient for me, because they are open late, and they have got parking. I could nominate any local pharmacy to receive the
Some participants identified specific instances where they had experienced difficulties. For example, one participant reported that the pharmacy had repeatedly administered the wrong dose of a medication. However, after the participant spoke to the receptionist at the pharmacy, this issue had now been resolved. Whilst two other participants explained how when they had gone to collect medications from the pharmacy, they were not there. One of these participants identified how this issue had since been resolved, as they receive a text message alerting them when their medicines are ready for collection. However, the other participant had since changed pharmacy:

“Sometimes though the first pharmacy did not have the drugs in store, so I hunted around where I could get the drugs and then I changed to a different smaller pharmacy where I could get the drugs... In the new smaller pharmacy, they are very helpful, both when you phone and request and when you get the new medication. I have only been with the new pharmacy for six months or so.” (Female, 66-75 years)

For one participant they stated it would be helpful to know who to contact if they had a problem with the eRD system, though anticipated they would contact the reception team of the GP surgery.

4.2.5 Considerations in the development of eRD

Mainly related to the theme of technological functionality, a number of factors emerged as considerations for the development of eRD. These include i. Electronic notifications/alerts, ii. Comment box feature, iii. Consistency in the functionality of electronic systems, iv. A person to contact if experiencing issues with eRD. Each of these can be considered.

Electronic notifications/alerts

Two participants reported how receiving a text notification about when medications were ready were helpful. One participant recognised the potential development of text alerts to i. alert the patient if due for a medication review, so that they can arrange an appointment, ii. to provide advance notification if the pharmacy does not have medication in stock or there is another problem, iii. to provide advance notification of when a medication is available for collection. The same participant requested if this alert or notification could be made available through an application on their electronic device.

“I think getting some feedback from the system would be helpful, some kind of alert would be really useful just to tell you what stage your request has got to or even if it’s just the final it’s ready to pick up. I don’t know if there’s an app which would be an interface to the system at the moment I just go through a browser but if it was on an app that would probably make it easier to set up things like alerts and so on, I think that’s probably all. It looks, online you can understand what you are supposed to do so the interface is quite straightforward but as I say you don’t really get any feedback,
as I say you put in your request and you don’t get any feedback from the system.”
(Female participant, 36-45 years)

Comment box feature

As previously discussed, a ‘comment box’ feature on the electronic system, was also reported useful by one participant, providing them with an opportunity to feedback about a medication dose error.

Consistency in the functionality of electronic systems

Inconsistencies in the functionality of the electronic repeat dispensing system across different IT systems was also reported by one participant, who was unable to access their child’s prescriptions after their GP surgery changed IT supplier.

A person to contact if experiencing issues with eRD

Two participants also suggested that there should be an opportunity for the patient to be able to contact someone should they experience difficulty with the electronic system. An additional factor was a suggestion by one participant, that those patients who are unable to collect their prescriptions should be offered a delivery option if available:

For those who require delivery, the delivery should be offered if available ...because if they forget to ask, you lose your slot in getting the delivery for that week and you have to ring back and request if one is available. (Female, 66-75 years (II)
5. Discussion and Conclusion

The main aim of this evaluation is to explore the perceptions and experiences of using electronic repeat dispensing from the perspective of those working in General Practice and Community Pharmacy and people who receive their medication by electronic repeat dispensing (eRD) services in Wessex. A mixed methods approach using electronic surveys and interviews was adopted to explore the perceptions and experiences of these two cohorts. Surveys involved those working in General Practice and Community Pharmacy (n= 31) and those receiving medication by eRD (n=7). Interviews included those working in General Practice and Community Pharmacy (n=6) and those receiving medication by eRD (n=5). Analysis of survey and interview data were guided by the main aims and objectives of the study. These two sources of data were analysed separately for each cohort in the first instance, and then synthesised for each cohort in the discussion. This is to enable a comprehensive understanding of the main themes, barriers (what has not helped or worked well), enablers (what has helped or worked well) and considerations for the development of eRD services.

Consistent to analysis of survey and interview data for those from the General Practice and Community Pharmacist cohort were the following themes:

- Impact of eRD upon professional practice
- Interprofessional working relations whilst using eRD
- Organisational processes around implementing eRD
- Technological functionality and eRD
- Perceptions of patients and eRD
- Considerations for the development of eRD services

Synthesised themes from the analysis of survey and interview data from those receiving their medication by eRD include:

- Impact of eRD upon everyday life
- Experiences with healthcare professionals whilst using eRD
- Considerations for the development of eRD services

Areas consistent to both the perceptions and experiences of those working in General Practice and Community Pharmacy and people who receive their medication by electronic repeat dispensing (eRD) services in Wessex are also discussed.

5.1 General Practice and Community Pharmacy Cohort

5.1.1 Impact of eRD upon professional practice

The impact of eRD upon professional practice emerged as a key theme, with the majority (84%) of those working in General Practice and Community Pharmacy reporting eRD had been helpful, with strong support from both those with roles as GPs (85%) and those working in a
pharmacy professional role (86%). Enablers related to reduced workload, saving time and the accuracy and reliability of eRD. Equally a high percentage (78%) reported eRD had been challenging, again strongly supported by those who are GPs (70%) and those who are pharmacy professionals (85%). Key barriers or challenges identified included increased workload and finding eRD complicated.

5.1.2 Interprofessional working relations whilst using eRD

Just over half (55%) of those working in General Practice and Community Pharmacy, reported that they had made changes to how they work with other health professionals whilst using eRD. Enabling factors influencing these relations include communication, joined up working, closer working relationships, trust and understanding the process of eRD from beginning to end. Communication also featured as a barrier when not working well. For example, difficulty contacting healthcare professionals in another organisation or where patients are not reminded if they are on their last issue.

5.1.3 Organisational processes around implementing eRD

Organisational procedures and processes involved in the implementation of eRD also featured as a key theme. These included administrative processes (e.g. numbering each token so that the stage of the dispensing cycle is identifiable and also to provide details of the dispenser) and also dispensing practices (for instance seeing a patient’s dispensing history at the point of processing a prescription). Enabling factors for implementation included a transitionary period of ‘hand-holding’, where implementation occurred at a moderate pace, involving someone available to help, guide and feedback queries from the organisation implementing eRD.

5.1.4 Technological functionality and eRD

Technological functionality relating to eRD was a key area of focus. Challenges to functionality included, making amendments/cancellations on the electronic system and incompatibility of different IT systems across surgeries and pharmacies. These factors also featured as areas for development and are considered more closely in Section 5.1.6.

5.1.5 Perceptions of patients and eRD

Overall, respondents strongly supported that patients are benefitting from electronic repeat dispensing, with 77% of respondents agreeing with this statement. This statement was strongly supported by both those with roles as GPs (75% of all GPs) and with those in a pharmacy professional role (86% of all in a pharmacy professionals). Though there were differences in the type of factors influencing which patients may benefit most or least from eRD, there was acknowledgement that it is helpful for specific patients. There was also recognition of convenience and time saving for patients.
5.1.6 Considerations in the development of eRD services

The final theme focused upon participants views and expectations regarding improvements or developments regarding eRD. This theme pulled together various aspects of the other themes. These include training, resources, guidance, processes and staff perceptions of eRD. It was recognised how their needs to be training for all staff about eRD, including the benefits to staff, to the NHS and patients, as well as localised training and sharing learning across organisations. Also acknowledged is the need for a clear reference guide and access to information, as well as consistent implementation processes across organisations, and increased technological functionality of eRD (identifying items, editing, amending or cancelling items).

5.2 People who receive their medication by eRD

5.2.1 Impact of eRD upon everyday life

A core theme related to the impact of eRD upon a patient’s life. In the survey, 72% of respondents agreed that eRD had changed their life, with 86% either agreeing or strongly agreeing that eRD has had a positive impact on how they live their life and 86% strongly agreeing that receiving medications by eRD had made their life easier. Nearly half (43%) recognised challenges in using eRD. eRD was recognised as bringing the following enabling changes to respondents lives; convenience, access to medication, saving time, flexibility, and enabling greater control through access to online records, as well as texts and alerts, ease of use and speed. Challenges reported included errors concerning the display of dosages and inconsistency in the functionality of the electronic repeat dispensing systems due to a change in the IT supplier by their GP practice.

5.2.2 Experiences with healthcare professionals whilst using eRD

On the whole, qualitative findings from the survey and telephone interviews, indicated that participants had generally found the healthcare professionals whilst using eRD very helpful. In the survey, 71% of participants either agreed or strongly agreed that they have been able to ask their pharmacist any questions they have about eRD and 57% either agreed or strongly agreed that they have been able to ask their GP any questions about eRD. In the instances where participants had experienced challenges these related to miscommunication of information about medication between GP and pharmacy, not being able to reach the pharmacy on the phone and medication sometimes not being available.

5.2.3 Considerations for the development of eRD services

The final theme relates to areas for consideration of the development of eRD services. It draws upon aspects of the other themes, but mainly relates to improvements regarding eRD technological functionality. Improvements suggested were i. consistent functionality in access to children’s records if there was a change in the IT supplier for a surgery/pharmacy, ii. a request to receive alerts regarding the status of medication and alerts for medication reviews iii. interoperability with other patient systems (so can synchronise to book an appointment).
Additionally, one participant also mentioned the helpfulness of a ‘comment box’ feature on the online system, enabling them to query or feedback any queries. Though they noted action had been taken on account of this feedback, this was not reflected in an update on the electronic system. Another participant reported on value of having a point of contact, who they could speak to if they did have difficulties with the electronic system.

5.3 Summary of discussion from each cohort

5.3.1 Overall perceptions of eRD

In summary, across both cohorts, the majority of respondents from both surveys perceived eRD as helpful, with 72% of those receiving their medication by eRD and 84% of those using eRD working within General Practice and Community Pharmacy. Key themes or overlaps relate to convenience and saving time. On the other hand, a high proportion (78%), of those working in General Practice and Community Pharmacy reported eRD to be challenging, and 43% of those receiving their medication by eRD. Challenges consistent to both cohorts relate to the technological functionality of eRD, a need to improve the interoperability of systems and miscommunication. Survey responses from each cohort also showed strong recommendation for eRD, with all patients recommending eRD to family and friends. From the General Practice and Community Pharmacist cohort, 87% recommended eRD to colleagues, 87% to patients, and 77% to family and friends.

5.3.2 Impact on patient’s life

On the whole, in both cohorts, the majority of respondents from both surveys perceived eRD to be beneficial to the lives of patients, with 86% of patients either agreeing or strongly agreeing that eRD has had a positive impact on their life and for those working in General Practice and Community Pharmacy, 77% agreeing or strongly agreeing that patients are benefitting from eRD. Enabling factors consistent to both cohorts including convenience and saving time.

5.3.3 Perceptions of other healthcare professionals whilst using eRD

With reference to experiences of healthcare professionals whilst using eRD, both cohorts reported how communication can be both an enabler and where not working effectively, a barrier to these experiences. For those receiving their medication by eRD, 71%, either agreed or strongly agreed that they have been able to ask their pharmacist any questions they have about eRD. Just over half, 57%, either agreed or strongly agreeing that they have been able to ask their GP any questions about eRD. Just over half (55%) of those working in General Practice and Community Pharmacy, indicated that they had made changes to how they work with other healthcare professionals whilst using eRD.
Conclusion

Evidence from the evaluation has shown that the majority of respondents from both cohorts reported eRD to be helpful, specifically with reference to the themes of convenience and time saving. On the other hand, a high proportion of respondents from those in the General Practice and Community Pharmacy cohort reported challenges in using eRD, and nearly half from the patient cohort. To address these challenges, examples of considerations for the development of eRD services include training of all staff about eRD, guidance, improved consistency in the implementation of eRD across organisations, as well as a need for improved technological functionality for staff (e.g. editing, changing or cancelling items). The need for improved technological functionality, also featured as an area for the patient cohort, helpful existing functions including text alerts, a comment box, but also recognition for consistency and improved interoperability of different systems (e.g. if an IT supplier should change in a surgery).

There was strong recognition across both cohorts of the beneficial contribution of eRD to patient lives, with the main benefits relating to convenience and saving time. Communication also featured as a theme across both cohorts. On the whole, those receiving their medication by eRD, reported positively on their interactions with general practice and pharmacy.

Potential areas for future research

Potential areas for future evaluation and research are considered as follows:

1. To evaluate the impact of the recommendation by NHS England to transfer all suitable patients to eRD where possible (NHS England, 2020), upon the perceptions and experiences of relevant patients and those working in General Practice and Community Pharmacy across the UK.
2. To gain greater variability in the representation of the professional role of those working in General Practice and Community Pharmacy. For example, the majority (64%) of those participating in the staff survey were from GP roles, though there were more participants from a pharmacy professional role, participating in telephone interviews (60%).
3. To gain the perceptions and experiences of those working in general practice and community pharmacy involved in implementing eRD over time, to identify the longer-term enablers and barriers to implementing eRD.
References


Wessex AHSN (2017a). *Case Study: Setting up Electronic Repeat Dispensing in One GP Practice*. Received by email correspondence from Vicki Rowse, Senior Programme Manager for Medicines Optimisation and Atrial Fibrillation, Wessex AHSN [26th June 2017].

Appendix 1. Q. Have you made any changes to your practice since using electronic repeat dispensing? Please explain your answer.

<table>
<thead>
<tr>
<th>Main qualitative items (n= 28)</th>
</tr>
</thead>
</table>
| Perceived general benefits (n=4 or 14%) | • Polypharmacy has been reduced. (GP 16)  
• Patient satisfaction. (GP 16)  
• Batch- can sign lots [of] scripts more quickly (GP 11)  
• Ease for patients/carers/surgery team. (GP 14) |
| Increased usage (n=3 or 11%) | • Used eRD more but not for all yet. (GP 1)  
• Not sure what you mean- we are using eRD more (GP 3)  
• We have embraced this process fully in surgery (GP 4) |
| For certain patients (n=3 or 11%) | • We have only started using it for defined groups of patients to get used to it. I am using for OCP patients to get 12 month supplies. The practice also use for our blister pack patients which are dispensed by the in practice pharmacy (Ph 3)  
• But we need to roll out to more long-term stable patients (Ph 4)  
• I use for specific conditions (GP 5) |
| Reviews of patients (n=3 or 11%) | • Improving arrival medicine review and blood checks to ensure safety in putting patient onto eRD for up to 12 months (GP7)  
• It has allowed/prompted us to check patients who needed a blood test have had it done (GP18)  
• Minor changes is that reviews are more frequent. (GP16) |
| Organisational processes and procedure (n=3 or 11%) | • Ensures we renew, update and synchronise meds (GP6)  
• Tried to ensure all patient repeat templates are kept more up to date so that the RD represents their real requirements (Ph 5)  
• Protocol for eRDs made (GP 14) |
| Future use (n=3 or 11%) | • We gave up as our pharmacy couldn't manage. Would love to do eRD and tried but [name of organisation] is never stable enough for us to set this up. (GP 8)  
• Moving forwards getting more prescribing done this way (GP20)  
• Hoping to improve efficiency and save time on repeat prescribing (GP19) |
| Problems whilst using (n=3 or 11%) | • More administration requiring more resources to sort out all the problems (Ph 1)  
• I have to deliberately print prescriptions when I want patients to get them in a timely manner (GP 16)  
• Tried to use repeat e dispensing but considerable problems with it that causes delays and dissatisfaction with surgery and pharmacies (GP 8) |
| Healthcare professionals involved in eRD (n=2 or 7%) | • One GP initially and now clinical pharmacist deals with all eRDs (NS)  
• Implemented system of HCAs? Asking patients if they would like it at BP check if stable set up for patients (NS) |
| Less work (n=2 or 7%) | • A few less scripts to handle. GP14  
• Less repeats are needed (NS) |
| Other (n=2 or 7%)x 2 (n=2 or 7%) | • Introduced variable dispensing. (Ph 2)  
• There was no need to change our process. The prescriptions are dispensed when they appear on the screen, ready for patients to collect. (Ph 6) |
Appendix 2. Q. Has the electronic repeat dispensing service been helpful? Please explain your answer.

<table>
<thead>
<tr>
<th>Category</th>
<th>Items mentioned (n=29)</th>
</tr>
</thead>
</table>
| Helpful for specific patients         | • For OCP patients it has helped standardise supply (Ph 3)  
• The pharmacy feels it has helped them manage the blister pack patients (Ph 3)  
• For weekly dispensing patients it enables us to issue all the prescriptions together (Ph4)  
• Other patients who have 6/12 repeats only need to request infrequently (Ph.4)  
• Very good for patients on stable medication regimes (GP.14)                                                                                                                                                                                                                           |
| Reduced workload                      | • Probably reduces workload (GP 20)  
• Reduces some of the repeat prescriptions (GP 9)  
• No need to send repeat requests to the GP surgery (Ph6)  
• It reduces reception workload (Ph 5)  
• Ease of use (GP 16)                                                                                                                                                                                                                                                                 |
| Time saving                           | • Hopefully reduces amount of time prescribing (GP)  
• Can reduce GP time (GP 15)  
• Time saving for GPs, receptionists, pharmacists and patients (GP 6)  
• Once pharmacy has understood the process it reduces/negates delays in requesting script from practice (GP 7)                                                                                                                                                                                                                     |
| Accuracy and reliability              | • Accurate (GP 6)  
• Reliable audit trail (GP 6)  
• Monitoring/audit (GP 16)                                                                                                                                                                                                                                                                                                                     |
| Patient Benefits                      | • Enables patients to manage medicines better (Ph 5)  
• Can get an early request for holidays etc. without GP surgery input (Ph 5)  
• Will act as a reminder to patients to book an annual pill check (Ph 3)                                                                                                                                                                                                            |
| Mixed perception                      | • Can either limit or cause waste (+ve and -ve) (GP 6)  
• Partially helpful, it has also created a lot of work where it has not worked as expected (GP 1)  
• It reduces the number of prescriptions that need signing each month but the relentless push to increase numbers does result in some patients being put on it inappropriately. (GP 3)                                                                                                                                 |
| Future use                            | • Would be [helpful] if we could get it off the ground (GP 13)  
• Though I should do more of it (Role not stated)                                                                                                                                                                                                                                                                                               |
| Better access                         | • Better access for patients (GP 5)  
• Better access for community pharmacists (GP 5)                                                                                                                                                                                                                                                                                                     |
| Other                                 | • It’s very logical. (GP 5)  
• Number of requests (Ph 7)                                                                                                                                                                                                                                                                                                                      |
Appendix 3. Q. Has the electronic repeat dispensing service been challenging? Please explain your answer.

<table>
<thead>
<tr>
<th>Category</th>
<th>Items mentioned (n= 28)</th>
</tr>
</thead>
</table>
| Difficulty making changes on electronic system (e.g. dosage, re-issuing repeat medication) and/or cancelling medications n=7 or 25% | - Awkward to alter single item in list (GP 6)  
- When medication changes the effort to change/cancel batches and then put the next issue can be complicated (Ph 5)  
- Difficult if prescriptions change through the year-the cancellation is not always easy and understood (GP 9)  
- I don’t really understand how it works-particularly changing any meds (also coded under ‘Staff Understanding’) (GP 20)  
- Changing medication dosage or stopping starting medication during the RD cycle remains difficult (GP 3)  
- Many problems mainly with the inability to cancel and re-issue repeat medicines e.g. if a new med is started trying to get it lined up with other meds (Ph 2)  
- Cancellations are often confusing (Ph 4)  |
| Communication between different parties (n=6 or 21%) | - Still a lot of miscommunication between chemist, patients, reception, problem with requests and chemist pulling down Rx that have been sent (GP 10)  
- GP surgeries do not understand or maintain the system correctly and I do not have any authority to sort out the problems without contacting the surgery (Ph 1)  
- Surgeries generally force pharmacies to use the same line as the public, so we spend unnecessary hours waiting on the phone (Ph 1)  
- The pharmacy does not always remind patients that they are on their last issue which means we have to issue as emergency. (Ph 4)  
- Synchronising start time and explaining to patients about system is difficult (Ph 4)  
- Patient thinks they need urgent (need to be told that routine is ok) (GP.11)  |
| Staff Understanding of eRD (n=5 or 18%)       | - We have not yet managed to get all clinical and reception staff to understand the benefits but also the dangers of eRD. (Ph.3)  
- I don’t really understand how it works-particularly changing any meds (also coded under ‘Making Changes’) (GP.20)  
- Perception that pharmacies have struggled with accessing some of the scripts it would appear. Perhaps there is a training need there? (GP.1)  
- Community pharmacies have struggled, and patients then left without meds and going back and forward between GP and pharmacy (GP.2)  
- The practice is helped by the community pharmacy, but the practice has struggled with the changes to know which patients are on ERD and not stopping medications properly on ‘S1’. This would have potentially caused harm due to medication errors if the pharmacy had not been so switched on. (Ph.3)  |
| Complicated (n=5 or 18%)                      | - Pharmacists have struggled lots of time (GP.6)  
- It is over complicated (Ph.1)  
- Awkward, time consuming to alter single item in list (GP.6)  
- Causes too many problems for the benefits it brings (GP.8)  
- Considerable issues with ‘batch’ prescribing (GP.8)  |
| Waste (n=3 or 11%)                            | - Waste when items are not collected (NS)  
- Excess supply to patient (if pharmacies pulling down all scripts in one go or pulling down 28 day supply every 21 days) (GP.7)  
- When medicines are not collected on time (Ph.7)  |
| Other (n=2 or 7%)                             | - Pharmacy do not have a lot of space to store prescriptions (GP.8)  
- Requires a high degree of maintenance at considerable cost (Ph.1)  |
Appendix 4. Q. Do you think patients are benefitting from electronic repeat dispensing? Please explain your answer.

<table>
<thead>
<tr>
<th>Category number (%)</th>
<th>Items mentioned (n=23)</th>
</tr>
</thead>
</table>
| Convenience for patients (n=6 or 26%) | - Many [patients] like the convenience, but many prefer the personal control of ordering online (GP.6)  
- Regularity and convenience of patient prescriptions (GP.14)  
- Can ring chemist to request their medication (GP.15)  
- Fewer unnecessary visits to the practice (GP.18)  
- Probably a bit easier for them (GP.20)  
- Better access (GP.5)  |
| Dependent upon it working (n=4 or 17%) | - Where it works as it should. (GP.1)  
- When it works patients like it but at least %50 ask to go back to old system (GP.2)  
- Overall, just! (GP.3)  
- Most of time except when pharmacies are unable to draw down next Rx from the spine which seems to occur quite frequently. (P2)  |
| Time saving (n=4 or 17%)          | - Time taken to receive medications (chemist) after patient rings (Not stated)  
- Saves them and us time (Role not stated)  
- Batch shortens time to get script (GP.11)  
- They are happy not to have the hassle of sorting our prescriptions every few weeks (GP.19)  |
| For specific patients (n=3 or 13%) | - For the right patients (Not stated)  
- But only if the right patients are selected. It is not suitable for all. (P.4)  
- For OCP patients it has helped standardised supply (P.3)  |
| Small numbers of patients on eRD (n=2 or 9%) | - But a lot of hassle for the few (GP.8)  
- Not enough enrolled at present (GP.10)  |
| Delays with electronic system (n=2 or 9%) | - It can take longer to get to the pharmacist electronically than it does for them to walk there (GP.12)  
- The IT system is very slow. The pharmacists blame the GP, but we have done it. (GP.12)  |
| Other (n=2 or 9%)                 | - Yes, they are more likely to book a GP medication review once the batch of prescriptions have come to an end (Pharmacy professional) (Ph.6)  
- Occasionally useful to be able to send out to distant pharmacies (GP.6)  |
Appendix 5. Q. Have you made any changes to how you work with other health professionals whilst using electronic repeat dispensing? (e.g. Community Pharmacist/GP/other)

<table>
<thead>
<tr>
<th>Category number (%)</th>
<th>Items mentioned (n=19)</th>
</tr>
</thead>
</table>
| **Closer working with pharmacies (n=7 or 37%)** | • We work closely with our local pharmacy to make it work (GP.9)  
• Liaised more with the pharmacist (GP.18)  
• Have liaised with community pharmacies more (GP.19)  
• We have dedicated prescription clerks into liaise with pharmacy (GP.20)  
• Even closer liaison with community pharmacy (Pharmacy professional) (Ph.3)  
• Need to speak to Comm. pharmacies more freq. to resolve Rx issues e.g. returning Rxs to the spine for the surgery to re-issue etc. (Ph.2)  
• It has been a great help also for pharmacist? (GP.16) |
| **Procedural changes (n=5 or 26%)** | • We have needed to agree how cancellations are dealt with and how to ensure reminders of last issue are handled. The pharmacy has asked us not to do 13 months of px as they must submit within 12 months to obtain payment. (Ph 4)  
• Repeat dispensing is part of the pharmacists’ contract and I use it improve access to prescriptions as well as patients. Such as Nomads/Dossett boxes (Pharmacy professional). (GP.5)  
• Med review sharing info on eRD and gaining consent to set up (GP.17)  
• Pharmacy Audits (Not stated)  
• More time on the phone to surgeries (Pharmacy professional). (Ph.1) |
| **Issues (n=4 or 21%)** | • Ongoing issues (Role not stated)  
• Asked our practice pharmacist to try and sort but continued headache (GP.8)  
• We benefit from an in-house pharmacist who helps us monitor eRDs patients (GP.14)  
• More reluctant to my prescribing team I think (GP role) (GP.8) |
| **Other (n= 3 or 16%)** | • Have to inform pharmacy if eRD change (GP.7)  
• There is no need to. (P.6)  
• More joint training and opportunities for discussion would be useful. Our new pharmacy care network pharmacists will facilitate this. (GP.6) |
Appendix 6. Q. Do you have any recommendations about how you would improve the electronic repeat dispensing service?

<table>
<thead>
<tr>
<th>Category number (%)</th>
<th>Items mentioned (n=24)</th>
</tr>
</thead>
</table>
| Technological functionality (n=15 or 63%) | *Identifying items*  
  - Make it easier to identify how many issues are left to make it easier to add to an existing batch (Ph.5)  
  - Make it easier to read the patients notes whilst you are prescribing so that you can flick to EMIS and read why the drug is prescribed (GP.12)  
*Changing and/or cancelling items*  
  - Easier to alter single items on [name of clinical computer system] (GP.6)  
  - Improve ability to change treatments during the RD cycle|allow CDs to go by electronic prescription (GP.3)  
  - Make it possible for GP surgeries to ALWAYS be able to cancel issued but not dispensed Rxs so they can be altered (Ph.2)  
  - I also worry a lot about the risk of medication errors when doses are changed, or medicines stopped. (Ph. 3)  
  - The cancellation system in EMIS is too time consuming and the audit trail too difficult to see (Ph.4)  
  - Interface with [name of clinical computer system] needs improvement so that it is much clearer that patients are on ERD so that all changes are completed as per protocol to prevent the risk of medication errors. (P.3)  
*General comments about IT systems*  
  - Better IT system (GP.2)  
  - Sort out the IT issues behind it. (GP.8)  
  - Really it is the practice that needs to change its systems to ensure it works safely as well as effectively (P.3)  
*Other changes*  
  - Variable use would be helpful for paracetamol, salbutamol etc. If this box is ticked on EMIS the chemist just issues every month regardless of patient waiting (GP.17)  
  - Remove ability to call down all 6 or 12 scripts at short intervals (GP.7)  
  - I’d like to know if pharmacist sees the up to date repeat list (GP.11)  
  - How will I know the patient taking the drugs-may be having dispensed but not taking (GP.20)  
| Training for staff, but specifically community pharmacy (n=6 or 25%) | More training for community pharmacy (GP.2)  
  - Train the pharmacists and get feedback from them as to where the problems lie (GP.1)  
  - Get the pharmacies to have to do it and trained (GP.13)  
  - Engage pharmacies (Role not stated)  
  - More pharmacies (GP.15)  
  - Get the community pharmacies to embrace and UNDERSTAND the process (GP.4)  
| Increase usage and engage staff (n=2 or 8%) | Help in engaging any staff that are resistant to change (GP.19)  
  - More GP surgeries need to use this. It will reduce their daily workload. The batch can be set to how/when the doctor wants the patient to book |
| Other (n=1 or 4%) | • Not yet but will no doubt expand once merged (GP.16) |

their medication review i.e. 3, 6, or 12 monthly. It's also ideal for weekly prescriptions (Ph.6)
Appendix 7. Q. Is there anything else you wish to say about electronic repeat dispensing?

<table>
<thead>
<tr>
<th>Main qualitative items (n=19)</th>
<th>Items mentioned (n= 19)</th>
</tr>
</thead>
</table>
| **Type of medication** (n=4 or 21%) | • Control drugs not going electronically can cause confusion with scripts (GP 17)  
• Never sure if being used well for as required medication. (GP6)  
• Does not take into account medication which is not taken routinely (variable use) which need to be requested manually (Ph 4)  
• I prefer repeat prescribers-I feel I have more? To monitor control-but ultimately it is probably less work. Better for patients who don’t control their meds very well (GP 20) |
| **Potential use** (n=3 or 16%) | • Its capable of being good and a complete...The downside currently outweighs its upside (GP 8)  
• It has lots of potential. (GP 17)  
• There is potential for it to work well but patients have struggled (GP2)  
• It has the potential to save time for the GPs but it is far from perfect as it stands at the moment. (Role not stated) |
| **General benefits** (n=3 or 16%) | • Good, time saving (GP 11)  
• As a patient it is brilliant for me as never run out of my meds (GP 13)  
• Very happy with it (GP 19) |
| **Issues** (n=3 or 16%) | • It should work well but there appear to be gremlins in the system. (GP 1)  
• it can take (name of pharmacy) system up to 3 hours to get eRS so useless for urgent scripts - we still have to reprint which defeats object of exercise... (GP 4)  
• It has increased the risk of prescription errors (Ph 1) |
| **Training** (n=2 or 11%) | • Need some training on it (NS)  
• I think adequate training needs to be put into practises pharmacies and to patients (GP 5) |
| **More work** (n=2 or 11%) | • The system has created more work than it saves, and no funding support has been forthcoming (Ph 1)  
• It takes a lot of time to set up and (Ph 4) |
| **Other** (n=2 or 11%) | • I one fundamental change which I believe needs to happen to make it more user friendly is the ability for GPs to cancel not yet dispensed Rxs. (Ph 2)  
• My patients still prefer having a script in their hand (GP 12) |
Appendix 8. Q. Has the electronic repeat dispensing service been helpful? Please explain your answer

<table>
<thead>
<tr>
<th>Category</th>
<th>Items mentioned (n= 21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience (n=8 or 38%)</td>
<td>• [Enables] weekly stock check of medicines</td>
</tr>
<tr>
<td></td>
<td>• Convenience (no need to visit GP premises)</td>
</tr>
<tr>
<td></td>
<td>• Very helpful to not have to go back and forth to the GP</td>
</tr>
<tr>
<td></td>
<td>• Very helpful for the pharmacy to tell me when my next prescription is ready to be collected</td>
</tr>
<tr>
<td></td>
<td>• Convenient (transport problems)</td>
</tr>
<tr>
<td></td>
<td>• Collect prescriptions at the pharmacy</td>
</tr>
<tr>
<td></td>
<td>• Convenience</td>
</tr>
<tr>
<td></td>
<td>• Very convenient</td>
</tr>
<tr>
<td>Saves time (n=3 or 14%)</td>
<td>• Saves time</td>
</tr>
<tr>
<td></td>
<td>• Efficient</td>
</tr>
<tr>
<td></td>
<td>• Saves delivery service time</td>
</tr>
<tr>
<td>Ease of use (n=3 or 14%)</td>
<td>• Intuitive</td>
</tr>
<tr>
<td></td>
<td>• Ordering repeat prescriptions easy</td>
</tr>
<tr>
<td></td>
<td>• Straightforward</td>
</tr>
<tr>
<td>Saves work (n=3 or 14%)</td>
<td>• Saves GP work</td>
</tr>
<tr>
<td></td>
<td>• Saves effort and expense</td>
</tr>
<tr>
<td></td>
<td>• Saves effort</td>
</tr>
<tr>
<td>Speed (n=2 or 9.5%)</td>
<td>• Ordering repeat prescriptions quick</td>
</tr>
<tr>
<td></td>
<td>• Quicker than doing it by paper when I physically had to drop the request into the surgery</td>
</tr>
<tr>
<td>Generally helpful (n=2 or 9.5%)</td>
<td>• Hopefully helping the NHS too</td>
</tr>
<tr>
<td></td>
<td>• Helpful</td>
</tr>
</tbody>
</table>
Appendix 9. Q. Has the electronic repeat dispensing service been challenging? Please explain your answer

<table>
<thead>
<tr>
<th>Category</th>
<th>Items mentioned (n= 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability and appropriateness of alternative</td>
<td>Some problems with items no longer manufactured</td>
</tr>
<tr>
<td>medicines (n=2 or 50%)</td>
<td>Alternatives to items not necessarily adequate</td>
</tr>
<tr>
<td>Other (n=2 or 50%)</td>
<td>Emis site is often down</td>
</tr>
<tr>
<td></td>
<td>It appears that the ‘system’ cannot be wrong. However, my age determines I am!</td>
</tr>
</tbody>
</table>
Appendix 10. Q. Has using the electronic repeat dispensing service changed the way in which you live your life/the person you are representing live their life? Please explain your answer

<table>
<thead>
<tr>
<th>Category</th>
<th>Items mentioned (n= 7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience (n=3 or 43%)</td>
<td>• Less pressure on remembering (e.g. when to go to pharmacy, take time off work for a review, call ahead)</td>
</tr>
<tr>
<td></td>
<td>• Convenience</td>
</tr>
<tr>
<td></td>
<td>• Arranging repeat prescriptions easier (not life changing)</td>
</tr>
<tr>
<td>More time (n=2 or 29%)</td>
<td>• More time for self</td>
</tr>
<tr>
<td></td>
<td>• More free time (don’t have to visit doctor to collect prescription and take it to chemist and wait to get medication)</td>
</tr>
<tr>
<td>Other (n=2 or 29%)</td>
<td>• Surgery has moved and service would be beneficial. However, with errors, have to visit surgery to discover if problems</td>
</tr>
<tr>
<td></td>
<td>• More organised at ordering prescription on time</td>
</tr>
</tbody>
</table>
Appendix 11. Q. Are there any ways electronic repeat dispensing could be improved in the future?

<table>
<thead>
<tr>
<th>Category</th>
<th>Items mentioned (n= 4)</th>
</tr>
</thead>
</table>
| To ensure accurate and clear information (e.g. communication of information between doctor and dispenser and correct description of items, dose and strength) (n=2 or 50%) | • The current description of the prescription in terms of number of items the strength and the timescale covered eg. 200 x xmg for y months’ supply can be a bit confusing and contradictory. There looks like an error on mine, but I get the right amount of pills so I've not challenged this.  
• Ensure the information between doctor and dispenser is easy to use, clear and a ‘straight road’. |
| Other (n=2 or 50%)                                                      | • Better reliability of the underlying system  
• Occasionally I have slipped through the 'system' and it's not worked but this was only on a couple of occasions |
Appendix 12. Q. Do you have any other comments about electronic repeat dispensing?

<table>
<thead>
<tr>
<th>Category</th>
<th>Items mentioned (n=3)</th>
</tr>
</thead>
</table>
| Text reminders or alerts (n=2 or 67%)   | • I don’t often log back in to see progress and usually just assume that the prescription has gone though and is being processed. Text reminders would be great e.g. to say it’s ready for collection for example or that there has been a problem.  
• Sometimes my pharmacy doesn’t have supply in stock so to be notified of this rather than making a journey to the pharmacy to be told to wait another day or two would be really helpful. |
| Other (n=1 or 33%)                      | • Why do you assume it is my fault and I don’t understand? It may be the system/people using it! |
Appendix 13

Suggestions for improvement of eRD services by respondent (Pharmacist 2, April 2018), following telephone interview

1. [Suggestion for improvement to the Spine]. Prescriptions to be delivered to pharmacy in a timely manner – soon enough to allow the pharmacy time to process but not so early that the pharmacy has to store dispensed prescriptions for more than a week. (At the moment, many pharmacies are receiving and dispensing prescriptions significantly (several weeks or even months) in advance of when the patient calls to collect them.) Next prescription to be released 7 days before it is due based on previous Dispense Notification. Note: DNs will need to be sent soon after medication has been supplied (same day preferably)

2. [Suggestion for improvement to the Spine and Pharmacy]. Prescriptions that are downloaded early (for example to cover a patient going on holiday) adds one prescribing period before triggering the next automatic download. Pharmacy marks early download as a “one-off event” which then increases the automatic download period by one prescribing period

3. [Suggestion for improvement to Pharmacy]. Allow prescriptions that need more than 7 days to process (Nursing Homes, DMDS, etc) to automatically download early. Sending of DN triggers the request for the next prescription to be downloaded straight away. Nursing Home and DMDS patients should be the only ones that default to this setting automatically (assumed need)

This should also be an optional setting within the pharmacy for any patient.

4. [Suggestion for improvement to Surgery]. Medications intended to be taken regularly and with predictable usage (i.e. One to be taken Every Day) should be prescribed together. All other medications (PRNs, varying dose, topicals, etc) should be prescribed separately. Already an option within one prescribing system. Separating regular from non-regular medications makes management of both much easier for the pharmacy.

5. [Suggestion for improvement to Spine and Surgery] Stop prescriptions for regular medications that are intended to be taken contemporaneously coming through at different times. This should happen regardless of whether the medications were prescribed at different times. (Currently there is a clinical risk of patients not getting all of their necessary medications).

Regular and predictable medications as described (in 4 above) to be linked together. These should then always download together as the patient’s complete set of current medications.
6. [Suggestion for improvement to Spine, Surgery and Pharmacy]. Total number of medications expected to be taken regularly is shown on every eRD prescription for regular and predictable medications. Pharmacy needs to know the total number of regular medications that have been prescribed for a patient and therefore how many they should be ordering at each supply.

7. [Suggestion for improvement to Spine and Surgery]. Allow existing eRD prescriptions to be edited by the prescriber, rather than having to delete an item from The Spine and then reissue separately the same item with a small change applied to it.

Delete and reissue causes prescriptions to become separated and therefore to be received by the pharmacy at different times, leading to the risks listed at 5. above. Allow prescribers to change the strength, quantity or dose of prescribed items on existing prescriptions that have already been sent to The Spine.

8. [Suggestion for improvement to Spine and Surgery]. Make sure sufficient prescriptions are always issued to last the intended prescribing period. Note: 13 x 28-days or 7 x 56-days are needed to last one year

(12 x 28-days or 6 x 56-days will only last 336 days = 1 month short of a full year)

Expected date of next medication review is flagged up on prescriber’s system at time of prescribing.

When the prescriber confirms this (or defines how long the current prescription should last) the system then generates sufficient prescriptions to cover the period until the next review.

(NB: current logic prevents 7 x 56-day prescriptions from being issued as the total prescribed then exceeds 365 days. This needs to change)

9. [Suggestion for improvement to Pharmacy]. Adjust (reduce) quantity of medications supplied so that in future all regular medications run out at the same time. If a patient has an excess of any medication, reduce quantity supplied so that they all run out at the same time in future. Pharmacy to label with the quantity actually supplied which then feeds through into making the correct endorsement and claim for payment

10. Being able to “park” prescriptions until they are needed is extremely useful when trying to manage eRD prescriptions but this is not a facility that is available on all pharmacy systems.

On other pharmacy systems, filtering is not available and although some limited sorting of downloaded prescriptions is often possible, all prescriptions appear within the same processing screen, which then rapidly becomes far too busy to be able to manage well.
11. Pharmacies need to be able to filter and sort between different types of prescription so that they can prioritise which prescriptions get dispensed first. Electronic prescriptions need to be designated as

1. Urgent
2. Acute
3. Repeat Prescribing
4. Repeat dispensing

So that they can be filtered and dispensed in the order of priority as shown.

Urgent prescriptions would be dispensed first, acute prescriptions next, Repeat Prescriptions next, with eRD prescriptions being stored until they are actually needed.
Appendix 14: Example of advertisement poster for people who receive medication by eRD

Version 2-10/08/2018

Centre for Implementation Science
Wessex Academic Health Science Network
University of Southampton

Do you use electronic repeat dispensing services in Hampshire, Dorset, South Wiltshire or Isle of Wight?

UoS Ethics reference: 40166
Poster to be taken down: 21st December 2020

Why are we conducting this research?
There is presently limited understanding of the experiences of people who receive medication by electronic repeat dispensing (eRD). This is also sometimes called batch prescriptions.

Who will it involve?
People who are aged over 18 and who use electronic repeat dispensing services in Hampshire, Dorset, South Wiltshire or Isle of Wight.

What will it involve?
You will be asked to take part in a survey and/or telephone interview to discuss your experiences of using electronic repeat dispensing.
Appendix 15: Survey for those working in General Practice and Community Pharmacy

Background

1. Do you work in a General Practice or Pharmacy?
   □ Yes
   If yes, please specify your role:

   [Blank]

   □ No

2. Where do you undertake your work?

   □ GP practice
   □ Community Pharmacy
   □ Hospital
   □ Residential/nursing care
   □ Other (please specify)

   [Blank]

3. Is your practice/pharmacy based in Dorset, Hampshire, Isle of Wight or South Wiltshire?
   □ Yes
   If yes, please specify where:
   □ Dorset
   □ Hampshire
   □ Isle of Wight
   □ South Wiltshire

   □ No
4. Have you been using the electronic repeat dispensing service a minimum of 1 month?

☐ Yes

   If yes, please specify how long:
   ☐ 1-6 months
   ☐ 7-12 months
   ☐ 13 months- 24 months
   ☐ Over 24 months

☐ No

5. Have you made any changes to your practice since using electronic repeat dispensing?

☐ Yes

☐ No

Please explain your answer


6. Has the electronic repeat dispensing service been helpful?

☐ Yes

☐ No

Please explain your answer


7. Has the electronic repeat dispensing service been challenging?

☐ Yes

☐ No

Please explain your answer

8. Do you think patients are benefitting from electronic repeat dispensing?

☐ Yes

☐ No

Please explain your answer

9. Have you made any changes to how you work with other health professionals whilst using electronic repeat dispensing? (e.g. Community role/GP/other)

☐ Yes

☐ No
10. Do you have any recommendations about how you would improve the electronic repeat dispensing service?

☐ Yes
☐ No

Please explain your answer

11. Is there anything else you wish to say about electronic repeat dispensing?

Please explain your answer

12. Would you recommend the electronic repeat dispensing service to?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your colleagues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patients</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Family and friends</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
13. Would you consider taking part in a telephone interview to talk about your experiences of electronic repeat dispensing services?

☐ Yes
☐ No

If yes, please provide your email address or telephone number in the box below so that the researcher involved in the study may contact you. Your responses to the above questionnaire will remain anonymous.

Thank you for your participation
Appendix 15

Telephone Interview schedule for those working in General Practice and Community

Telephone interview schedule and prompt questions:

➢ When did you start using electronic repeat dispensing?

➢ Tell me about your experience of using the electronic repeat dispensing system?
  • What has been helpful?
  • What has been challenging?

➢ Have you changed your practice since using the electronic repeat dispensing system? If yes, in what way?

➢ How does your experience of using electronic repeat dispensing now compare to when you started using electronic repeat dispensing? (Additional question for follow-up telephone interview with GPs, other practice staff and Community Pharmacists and other pharmacy staff conducted at a later stage)

➢ Which patients do you think have benefited the most/least from eRD?

➢ Tell me about your experience of working with other health professionals whilst using electronic repeat dispensing? (e.g. Community Pharmacist/GP/other)

➢ How would you like to improve the electronic repeat dispensing service?

➢ Is there anything else you wish to say about electronic repeat dispensing?

➢ Would you recommend the electronic repeat dispensing service to your colleagues/to patients/family and friends?

Thank you for your time.
Appendix 16: Survey for person using eRD services

Screening questions 1-3 (Only respondents who answer yes to these questions will be able to proceed with the questionnaire).

1. Are you aged 18 years and over?
   □ Yes
   □ No

2. Have you been using the eRD service (also known as batch prescriptions) a minimum of 1 month?
   □ Yes
   □ No

3. Do you collect electronic repeat dispensing medicines from one of the following areas (Hampshire, Isle of Wight, Dorset and South Wiltshire)?
   □ Yes
   □ No

4. Are you completing this questionnaire on behalf of?
   □ Myself
   □ Someone else

5. How did you learn about this study?
   □ Social media
   □ I received a leaflet in the prescription pack

Other (please specify)

6. How would you describe your gender /the gender of the person you are representing?
7. Please indicate your age/ the age of the person you are representing from the following age classification boxes

- [ ] 18-25
- [ ] 26-35
- [ ] 36-45
- [ ] 46-55
- [ ] 56-65
- [ ] 66-75
- [ ] 76-85
- [ ] 86-90
- [ ] 91+

8. Where do you collect your/person you are representing electronic repeat dispensing medicines from?

- [ ] Dorset
- [ ] Hampshire
- [ ] Isle of Wight
- [ ] South Wiltshire
- Other (please specify)

9. How long have you been using the electronic repeat dispensing service?

- [ ] 1-6 months
- [ ] 7-12 months
- [ ] 13 months- 24 months
- [ ] Over 24 months

10. How many medications do you/person you are representing currently receive by the electronic repeat dispensing service?

- [ ] 1
11. Has the electronic repeat dispensing service been helpful?

☐ Yes
☐ No

Please explain your answer

12. Has the electronic repeat dispensing service been challenging?

☐ Yes
☐ No

Please explain your answer

13. Has using the electronic repeat dispensing service changed the way in which you live your life/the person you are representing live their life?

☐ Yes
☐ No

Please explain your answer
14. To what extent do you agree with the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Score (indicate one box)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• I have been able to ask my/the pharmacist any questions I have about</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>electronic repeat dispensing</td>
<td></td>
</tr>
<tr>
<td>• I have been able to ask my/the GP any questions I have about electronic</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>repeat dispensing</td>
<td></td>
</tr>
<tr>
<td>• Electronic repeat dispensing has made receiving medications easier</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>• Electronic repeat dispensing has been convenient for me</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>• Electronic repeat dispensing has had a positive impact on how I live my</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>life /person I am representing live their life</td>
<td></td>
</tr>
</tbody>
</table>

15. Are there any ways electronic repeat dispensing could be improved in the future?

16. Do you have any other comments about electronic repeat dispensing?

17. Would you recommend the electronic repeat dispensing service to your family and friends?
   - [ ] Yes
   - [ ] No

18. Have you completed this questionnaire before?
   - [ ] Yes
□ No

19. Would you consider taking part in a telephone interview to talk about your experiences of using electronic repeat dispensing services?

□ Yes

□ No

If yes, please provide your email address or telephone number in the box below so that the researcher involved in the study may contact you. Your responses to the above questionnaire will remain anonymous.

Thank you for your participation
Appendix 17

Telephone Interview Schedule-Semi-Structured Interviews (Person using the electronic repeat dispensing service)

Telephone interview schedule and prompt questions:

Each telephone interview will start with a short briefing, providing an overview of its purpose and making it clear that anyone wishing to withdraw from the study, can do so at any point.

➢ Can you tell me how you first found out about electronic repeat dispensing (also sometimes called batch prescriptions)?

➢ When did you start using electronic repeat dispensing? (Identify if use for self, or on behalf of someone else)

➢ Tell me about your experience of using electronic repeat dispensing

➢ Tell me about your experiences of being in contact with any health care professionals about electronic repeat dispensing? (E.g. GPs, pharmacists)

➢ Has electronic repeat dispensing changed the way in which you/person you are representing live your/their life?

➢ Are there any ways electronic repeat dispensing could be improved in the future?

➢ Is there anything else you would like to say about electronic repeat dispensing?

➢ Would you recommend the electronic repeat dispensing service to other people who may need to use eRD/family and friends?

Thank you for your time.