Exploratory on e-Prescription in Scotland

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Exploratory on e-Prescription in Scotland

NSS Workshop 1st April 2016

Report on the Exploratory and workshop for National Services Scotland (NSS) Practitioner Services team on 1st April 2016

Introduction

The DHI hosted an all-day Exploratory event for the National Services Scotland (NSS) Practitioner Services team at our offices on Friday 1st April 2016. The event was split into two parts; a morning session of presentations and discussion delivered by both NSS and the DHI, and an afternoon workshop session delivered by the DHI's Knowledge Exchange & Research (KER) team.

Background

Dr Sanna Rimpiläinen and Aaron Wood of DHI's KER team met with David Knowles, Director of Practitioner and Counter Fraud Services for NSS, at the end of February 2016 to discuss and explore potential collaborative opportunities between NSS and the DHI. David explained that one of his team's priority areas is in removing paper from the Scottish prescription process. It was agreed that the DHI would plan and host an event to show NSS some current DHI projects, demonstrate technologies that the DHI have helped deliver, explore further opportunities for collaboration, and deliver a workshop on e-Prescription; the framework that allows GPs and pharmacists to write and send prescriptions electronically, reducing or eliminating paper from the prescription process. As well as investigating how paper is removed from the prescription process, the KER team was asked to focus on e-prescription security (authentication & digital signatures), identification (of both prescribers and patients), and payment (how pharmacies are reimbursed). David provided the KER team with some preparatory documents on the current state of prescriptions in Scotland to help inform the content of the workshop.

Preparation

The KER team carried out research on existing electronic prescription services around the world; Aaron researched e-prescription in the United States, and Sanna investigated services in Estonia and Finland. The USA, Finland and Estonia were selected as examples as the DHI had previously carried out extensive research on the electronic health records (EHR) systems that are used in these countries. By

drawing on previously gained knowledge and insights surrounding the types of EHR systems that are currently in use around the world, we were able to keep our focus specifically on *how* these systems have supported the development of new e-prescription practices and workflows. The KER team then created PowerPoint presentations to show a clear, step-by-step visual representation of how the electronic prescription process works in each the of the exemplar countries illustrating how and when parties are identified, how the data is kept secure, and how pharmacies are paid for dispensed medication.

Event Timetable

Time	Activity/duration	Aim	Responsibility of:
9.30	Coffee & tea on arrival, registration (30min)	Registration	KR, SR; Catering
10.00	Introduction Show and tell – DHI (70mins)	To introduce the rationale for the day; Intro to DHI and showcasing its work	CC, BF & GR
11.10	Comfort break (10mins)		
11.20	Show and tell – NSS (70 mins)	NSS to showcase their work; time to discuss possible collaboration angles.	NSS
12.30	Lunch (30 mins)		
13.00	Workshop Mixing the groups (pick a coloured pen, find a table) (5mins) Intro – 10 mins	To begin the workshop the participants will be asked to pick a coloured pen/post-it -> seated around the table with the chosen colour. Intro to the workshop	SR & AW
13.15	NSS-intro to the Scottish ePrescription system (15mins)	Expert intro to how the Scottish prescription service functions	NSS
13.30	Three examples of systems that have solved the electronic transfer of prescriptions: Athena (cloud-based; America) Data Exchange Layer: Estonia and Finland; NHS England (30 mins)	Presentation by AW & SR on the different ways in which the ePrescription systems have been solved in different countries	SR & AW
14.00	Task 1) In your groups, please consider: "**What kinds of things are currently preventing the Scottish NHS from adopting a fully paperless prescription transfer system?**" (These can be	Mapping barriers to electronic transfer of prescriptions in the Scottish context	SR & AW

	anything: physical, technical, political, financial, legal, etc.) Draw up a list of 3-5 main barriers. (15 mins) Sharing. (5 mins) (Scribe will take notes of barriers)		
14.20	Task 2: Participants to rank the relevance of identified barriers (two dots per person) (5 mins)	Ranking of proposed barriers	SR, AW & CC
14.25	Coffee break (10mins)	Quick analysis by the team during the coffee break for the next task ->	
14.35	Each group selects one of the highest ranking barriers as their topic. Task 3: With your chosen topic in mind, please consider **what would need to change (in Scotland) in order for the barrier X to be removed**. (The change can be anything: physical, technical, political, financial, legal, etc.) b) Discuss **who or what holds the key for solving this issue**? (i.e. Where does the buck stop?) (20 mins) Sharing (10mins)	Thinking of how to solve the problem.	SR & AW
15.05	Task 4: a) **What practical steps can be taken to remove barrier X in the Scottish context?** Identify, e.g. 3-5 steps (15 mins). Sharing & summary (10mins)	Identifying solutions	SR & AW
15.25 – 16.00	The next steps for the DHI-NSS – collaboration. (30 mins, or less.)	Open discussion	All

Show & Tell

The Exploratory event commenced at 10:00am with an introduction to the DHI innovation model, a PowerPoint presentation of ongoing projects, and demonstrations of technologies brought about through the DHI process. The presentations were delivered by Brendan Faulds (Chief Operating Officer), Chaloner Chute (Programme Manager) & Gary Robinson (Industry Health & Care Engagement Manager).

After a short comfort break, NSS led an open discussion on their work and current challenges while the DHI advised on any relevant, complementary projects or related research. General areas of crossover and potential opportunities were identified stimulating conversation until 12:30 at which time we broke off for lunch. The open conversation with NSS served as a positive foundation for the afternoon's e-Prescription workshop.

Workshop

Currently prescriptions in Scotland require a doctor's signature on a paper prescription form (GP10). This form is used by pharmacists to request reimbursement from the NSS for dispensed medication. The collection, transport, storage and secure disposal of GP10 forms costs Scotland £1.2 million per a year. NSS asked the DHI to host a workshop that looks into electronic prescription services elsewhere in the

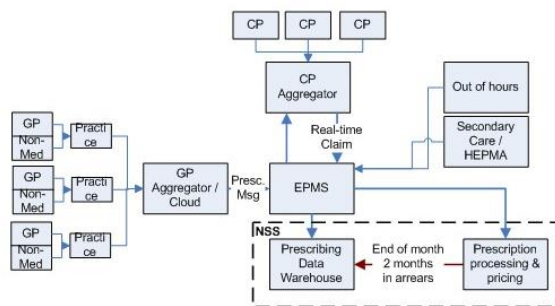*GP10 paper prescription form*

world, and probes how Scotland may implement a fully electronic transfer of prescriptions.

The workshop was attended by 11 NSS participants who were randomly split into three groups of four or three participants each. Sanna welcomed the participants and delivered a brief introduction and explanation on the purpose and method of the workshop: participants would be given an explanation of the prescription process in Scotland as it exists currently, and the "ideal" e-prescription service that should replace this in the future. They would then be shown examples of electronic prescription services that exist elsewhere in the world to highlight the methods by which other countries have moved their prescription service from paper-based to electronic. The groups would then be set four tasks that would require discussion and feedback to the rest of the room before moving onto the next task. The overall
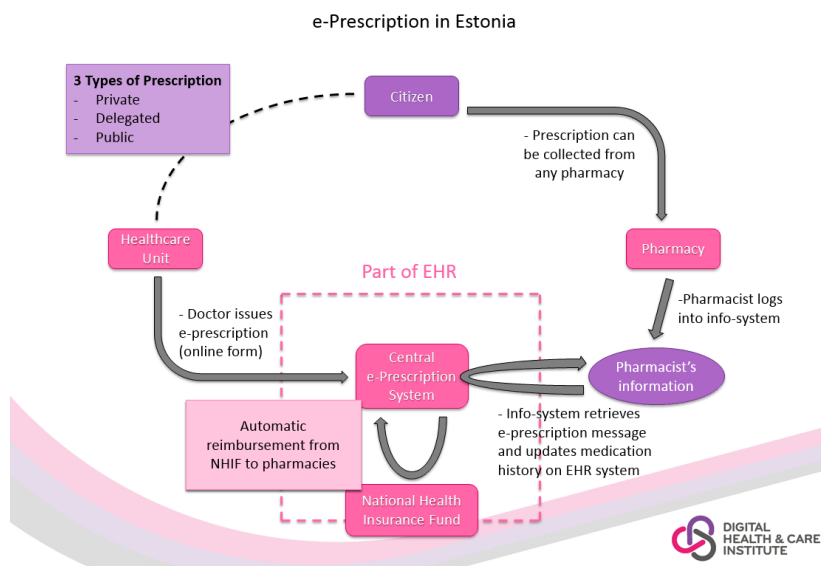
purpose of the workshop was to show how other countries have solved this problem, and to consider what the greatest barriers to achieving the same outcome in Scotland are.

NSS kicked off the presentations by illustrating how medicines are currently prescribed in Scotland, highlighting the associated inefficiencies and challenges, and showing how the NSS would plan for a paperless version of this system to look in the future.

Aaron then showed one method by which electronic prescriptions may be processed on a cloud-based EHR system in the USA where the cost and payment of medicines is heavily reliant on and influenced by health insurance providers. Sanna concluded the presentations with examples of e-prescription in Estonia and Finland. Each of these countries have solved the challenge of e-Prescription in different ways despite both utilising EHR systems with a data exchange layer. The data exchange layer allows

e-Prescription in Estonia

the different types of programmes and systems used, and information generated by health & care staff to communicate and update data into a single patient EHR.

Each DHI example illustrated how the other countries have dealt with the known hurdles of person identification, security and reimbursement of medicine costs in their e-prescription process.

Task 1 – e-Prescription Barriers

Following the presentations, workshop participants were set the first task; in their separate groups, participants were asked to consider the barriers that are prohibiting NHS Scotland from adopting a paperless, fully electronic prescription service, and to list the ones they felt were the most important. The groups had 15 minutes to discuss and compile their lists, and then a couple minutes each to share their conclusions with the rest of the room. The collected findings of the groups were recorded on a whiteboard at the front of the room for all to see:

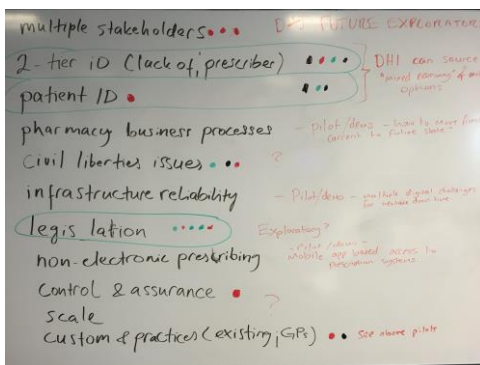*Scotland's e-Prescription Barriers*

- Multiple stakeholders
- 2-tier ID (prescriber's lack thereof)
- Patient ID
- Pharmacy business processes
- Civil liberties issues
- Infrastructure reliability
- Legislation
- Non-electronic prescribing
- Control & assurance
- Scale
- Customs & practices (existing GPs)
-

Task 2 – Barrier Ranking

The first task took the groups us up to the 14:20 coffee break during which the workshop participants were asked to help rank the compiled list to narrow this down to 3 main barriers for the teams to focus on. During the break each NSS member was asked to draw a dot beside the two barriers they felt were

most important to resolve. The dots were then counted to arrive at the 3 most prominent issues. The barriers selected were:

- Patient Identification
- Two-tier Identification
- Legislation

Task 3 – Solving Problems

For the third task each group was asked to focus on one of the three important barriers previously identified, to consider what changes would need to be implemented in Scotland in order to remove or resolve said barrier, and who or what holds the key to do achieving this.

Group 1 focused on Patient Identification and came up with the following required changes or clarifications:

- Change clinical pharmacy (CP) system to support alternative ID mechanism.
- Change electronic Prescription Management Service (EPMS) cloud store.
- Changes at GP practice (to match changes at CP).
- Up the card-issuing service to the <25-60s.
- Sell the re-use of that service to other areas of NHS.

Group 2 focused on the Two-tier Identification and came up with the following required changes or clarifications:

- What is two-tier/two-factor identification?
- Why is needed in health/care services when not required elsewhere?
- Attitudes and behaviour of people (changing existing practices).
- System administration – users/tech support/replacement.
- Infrastructure to support the two-tier ID system.

The third group focused on Legislation and identified the following require changes or clarifications:

- What needs to change? Is legislation a barrier, or do people just not understand it? UK act?
- Political will and parliamentary time.
- Consultation required with multiple stakeholders.
- Civil servants, lawyers, politicians.
- Convincing the government that this is an important/necessary step.

Task 4 – Identifying Solutions

For the final task of the day the workshop members were asked to think about the practical steps that could be taken to make some of the changes noted in the previous task happen, and to identify specific people or governmental departments etc. that could be approached to start removing these barriers from the adoption of electronic prescriptions in Scotland. This task became an open discussion between all members of NSS and DHI around the next steps to achieving this goal. A number of observations and suggestions were made including convincing the Scottish Government that this should be a priority, engaging pharmacists to recognise and support a paper-free prescription system, and getting GPs on board to show a demand, and influence and expedite the uptake of a new prescription process.

The final task generated a lot of discussion that took us up to the end of workshop where it was agreed that there is scope for DHI to host a larger Exploratory, this time including GPs and pharmacists. The requirement for an electronic prescription service complements the DHI's existing work in Next Generation Digital Services, and another Exploratory could perhaps lead to a new project on e-Prescription supported by ongoing DHI work and research.