webGP: the virtual general practice

Pilot Report (May 2014)
Executive summary

Over the course of 6 months, the Hurley Group piloted a suite of online patient services to 20 London GP practices (including 5 non-Hurley Group practices). The service was available to 133,000 patients through their practice websites. This paper describes the pilot and its outcomes.

Objective

To explore how we can use technology, commonplace in other industries, to safely improve patient access, continuity, health outcomes and practice efficiency.

There were 5 online services on each practice website:

- **Symptom checkers** help patients confirm their GP is the right service for their situation
- **Self-help** guides and videos about the commonest general practice conditions
- **Sign-posting** to alternate offers e.g. pharmacy and online counselling
- **24/7 phone advice** within 1 hour by requesting a call back using a web form on the practice website (arranged through the local 111 provider)
- **E-consults** in which patients use their practice website to submit condition-based questionnaires to their own GP for a response within 1 working day, potentially avoiding the need to attend the practice. (See: [http://www.docklandsmedicalcentre.com](http://www.docklandsmedicalcentre.com))
Contents

webGP: the virtual general practice Pilot Report (May 2014) ......................................................... 1

Executive summary .......................................................................................................................... 2
  Objective..................................................................................................................................... 2

Introduction ....................................................................................................................................... 4
  How does the website work? ........................................................................................................ 4
  What is an e-consult? .................................................................................................................. 4
  Why not just use email? .............................................................................................................. 5

Pilot Results ...................................................................................................................................... 6
  Service uptake and outcomes ...................................................................................................... 6
  Service usage: who, what, when? ............................................................................................... 7
  Feedback from patients ............................................................................................................... 8
  Did it improve health outcomes? ................................................................................................ 9
  Does it add to practice workload? ............................................................................................. 10
  Are we generating supply-led demand? .................................................................................. 10
  How are GPs finding the system? .............................................................................................. 11
  What could we have done better in the Pilot? ......................................................................... 11

Set up and return on investment ................................................................................................. 12
  What was involved in setting up a practice? ............................................................................ 12
  Patient Benefits ....................................................................................................................... 13
  Clinician Benefits ..................................................................................................................... 13
  Commissioner Benefits ........................................................................................................... 13
  Return on Investment ............................................................................................................... 13
  Dissemination ............................................................................................................................ 13

Summary ......................................................................................................................................... 14
  Contact Details: ....................................................................................................................... 14
Introduction

How does the website work?
Practices either used the website format below, or created a link to it from their existing practice website.

What is an e-consult?
An e-consult is the process in which patients complete any of over a hundred condition-based questionnaires on the practice website to request advice or treatment from their own GP.

The completed web form is automatically sent from the website (as an email pdf attachment) to the practice generic email box. This summarises the patient’s answers to the website questionnaire. This is either printed off, or attached to the patient record and work flowed to the GP.

The pdf summary is designed to allow GPs to analyse the information quickly and decide whether to ask the admin team to ring the patient to collect a prescription (40%) or offer an appointment (40%). Sometimes GPs undertake a phone consult instead (20%). It is helpful to GPs in triaging need, avoiding face-to-face appointments or the collating of information in advance of seeing the patient e.g. depression.
Why not just use email?
This approach offers a number of advantages over email:

- Email allows patients to make requests of the GP based on incomplete information which means GPs are drawn into ongoing dialogue which is time consuming and inefficient. Some US evidence also suggests that many email discussions with patients never quite close. E-consults involve some effort from patients but ensure that a full and comprehensive history of the issue is elicited in one go, and turned into a format that is easy to analyse for GPs.

- GPs cannot verify the identity of the person emailing them. This may result in incorrectly divulging information from another person. In our model, every patient is telephoned back (usually by a receptionist), so we can confirm their identity and avoid the need for cumbersome passwords.

- GPs cannot always confirm the patient has received their email response. Telephoning patients back also ensures the communication loop is closed.

- There are no governance arrangements over when emails are looked at in practices. Therefore patients can email with potentially serious symptoms out of hours. Our questionnaires are bespoke to each condition and elicit serious symptoms. These patients are then automatically redirected to the appropriate urgent care service. This is why our process has been approved by the MDU, MPS and MDDUS.
Patients often view email as a quick and easy way to seek advice from their GP. This is often in addition to face-to-face care. Our approach is to **replace a proportion of the more minor requests for appointments** with e-consults, thereby turning a cause of increasing GP workload into a way of reducing it. It also harvests QOF data for the practice e.g. smoking and alcohol status.

The processing of e-consults is easily accommodated within existing practice processes (e.g. workflow to duty doctor, or print and add to repeat prescription requests). Twenty per cent of patients receive GP phone advice, and 80% are telephoned by administrators to offer a prescription or appointment, following GP approval.

**Pilot Results**

The website was developed with the involvement of 30 GPs and specialists working over 18 months.

A core team of senior GPs (Lecturers in general practice, GPSIs, text book authors) worked closely with software programmers and operational managers delivering GP care over multiple sites. The clinical governance elements were co-designed with clinical advisers from the medical defence organisations and the service was successfully operationalised across a variety of practice types (e.g. different practice sizes, clinical software systems and appetite for using technology).

**Service uptake and outcomes**

- Over 36,000 visits to website (average 1,000/wk, 27,000 unique visits)
- 9,000 users of self-help and sign-post information
- 1,000’s of click-throughs to symptom checkers
- 400 calls / month to 111 clinician call-back
- 1,600 e-consults closed remotely
- 60% of e-consults closed remotely
- 80% of clinician call-backs closed remotely
- Ensures the right service the first time
- 18% of users planned to book an appointment then didn’t
- Popular with patients
Service usage: who, what, when?

Use of the service was highest on weekdays between at 9am and 2pm, with a small spike at 9pm, finally tailing off at 11pm. Twenty per cent of users used the service through their mobile phones or tablets.

Equality impact analysis

<table>
<thead>
<tr>
<th>Category</th>
<th>Usage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian or Asian British</td>
<td>1.57%</td>
</tr>
<tr>
<td>Chinese</td>
<td>3.14%</td>
</tr>
<tr>
<td>Mixed race</td>
<td>3.14%</td>
</tr>
<tr>
<td>Asian or Asian British</td>
<td>4.19%</td>
</tr>
<tr>
<td>Other</td>
<td>4.19%</td>
</tr>
<tr>
<td>Black or Black British</td>
<td>5.24%</td>
</tr>
<tr>
<td>White</td>
<td>78.53%</td>
</tr>
<tr>
<td>Retired</td>
<td>4%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>11%</td>
</tr>
<tr>
<td>Employed</td>
<td>75%</td>
</tr>
<tr>
<td>Students</td>
<td>7%</td>
</tr>
<tr>
<td>Men</td>
<td>38%</td>
</tr>
<tr>
<td>Women</td>
<td>62%</td>
</tr>
<tr>
<td>Over 65</td>
<td>2%</td>
</tr>
<tr>
<td>Age 45-64</td>
<td>32%</td>
</tr>
<tr>
<td>Age 25-44</td>
<td>62%</td>
</tr>
<tr>
<td>Age 18-24</td>
<td>62%</td>
</tr>
</tbody>
</table>
Top 10 e-consult conditions

<table>
<thead>
<tr>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cystitis (female)</td>
</tr>
<tr>
<td>Depression</td>
</tr>
<tr>
<td>Contraception</td>
</tr>
<tr>
<td>Knee pain</td>
</tr>
<tr>
<td>Earache</td>
</tr>
<tr>
<td>Asthma</td>
</tr>
<tr>
<td>Sore throat</td>
</tr>
<tr>
<td>Rectal bleeding</td>
</tr>
<tr>
<td>Shoulder pain</td>
</tr>
<tr>
<td>Coughs</td>
</tr>
</tbody>
</table>

Feedback from patients
The online service was popular with patients. Approximately 18 percent of all registered patients used it in 6 months. Other feedback included:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>95%</td>
<td>Patients rated their experience on the site as &quot;Excellent&quot; or &quot;good&quot;</td>
</tr>
<tr>
<td>91%</td>
<td>Patients &quot;extremely satisfied&quot; with consulting online</td>
</tr>
<tr>
<td>78%</td>
<td>Patients said the service saved them time</td>
</tr>
<tr>
<td>83%</td>
<td>Patients were extremely likely to recommend the service</td>
</tr>
</tbody>
</table>
Did it improve health outcomes?

Giving patients immediate 24/7 access to online resources and the ability to e-consult their own GP within 1 working day meant they were able to gain advice sooner than usually available through a GP appointment.

By accessing care sooner, we can infer that they were likely to get better health outcomes. We also noted that particular problems seemed to surface sooner e.g. mental and sexual health concerns and a number of patients triggered automated advice to seek urgent medical attention for more serious symptoms which may have otherwise been ignored (e.g. rectal bleeding, fever following visiting a malaria zone). We have had no significant events and the only patient complaint with the system occurred when a practice failed to process an e-consult within the (promised) one working day.
Does it add to practice workload?
As a provider of direct GP care, the offer was specifically designed to deliver workload reductions. This is through:

- Encouraging patients to self-manage more minor conditions
- Sign posting content and Symptom Checkers diverting patients to alternate services
- 400 patients a month using 111 clinician call back from the GP website
- Pop-up surveys revealed that 18% of patients using self-help and sign posting content stated that they no longer needed to book a GP appointment they had planned to book
- 60% of e-consults were managed remotely with 40% managed on the basis of the e-consult summary alone (average 2.9 minutes) and 20% phoned by their GP (average 5.5 minutes)
- Whilst 40% of patients still needed to come in, the e-consult summary helped divert more minor cases to the practice nurse and all clinicians to “hit the ground running” in the consultation itself

The net total GP appointment time saved in the pilot was over 400 GP hours (after deducting time taken to process e-consults and their outcomes e.g. GP phone advice and 10 minute appointments for the 40% who still needed seeing). The rate of return on e-consult time saved is also increasing monthly as GP confidence grows and we develop each new enhancement aimed at assisting safe remote management.

Are we generating supply-led demand?
We asked patients: What would you have done if the online service had not existed?

<table>
<thead>
<tr>
<th>What would you have done if the online service had not existed?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Requested a face-to-face appointment with my GP</td>
<td>79%</td>
</tr>
<tr>
<td>Requested a telephone consultation with my GP</td>
<td>4%</td>
</tr>
<tr>
<td>Gone to walk in centre or A&amp;E</td>
<td>14%</td>
</tr>
<tr>
<td>Nothing, wait and see</td>
<td>3%</td>
</tr>
</tbody>
</table>

Given that only 3% of patients would not have approached a medical service, we do not believe we are creating supply-led demand. This may increase over time but we are focussed on ensuring an overall capacity gain for practices. The pilot revealed that 27000 unique users generated 1600 e-consults. This is because the process was deliberately designed to walk patients past the other remote options allowing patients to safely self-select their own solution. In addition, we have developed a time efficient way to process the e-consults that were submitted.

We are therefore confident that patient flows can be controlled by adjusting the relative emphasis we give to different offers on the website in each new version e.g. self-help versus e-consult. This will
allow us to ensure practices continue to make overall capacity gains despite any supply-led demand we may generate in the future.

Another reported advantage of the service over NHS Choices and NHS Direct’s symptom checker alone is that patients can receive actual treatment, rather than just information about their condition or where to go next. This combines both access and continuity with their own GP who has a higher chance of managing the patient safely and remotely, as they have access to the medical records and knowledge of the patient or family.

How are GPs finding the system?

We sent out a survey to 100 GPs using the system.

- Despite some GPs only having only processed a small number of e-consults, 100% of them reported feeling fairly or very confident in doing so
- (GPs typically had 10 minutes training - one blocked appointment)
- 73% stated that the e-consults provided sufficient information
- 63% reported being able to process an e-consult in under 3 minutes (average 2.9 minutes) and a call back in under 5 minutes
- (Remote closure rate rose and time taken to process an e-consult fell during the pilot)
- The main reason patients were called in was for a physical examination
- 83% of GPs were confident that it benefitted their patients and 63% actively encouraged their patients to use the service
- 78% of GPs wanted their own personal GP to adopt the system.

What could we have done better in the Pilot?

Patients were enthusiastic about the online service. However, some practices in the pilot were understandably fearful of supply-led demand. Whilst this concern seemed to diminish once the evidence of overall workload reductions emerged, it was not helped by some practices deciding not to reduce face-to-face appointments to accommodate them within a GP’s session. This gave the impression that extra work had been generated on top of the work in a routine surgery. In those practices the willingness of GPs to encourage patients to use the service was understandably lower. The important insight that influenced uptake was that overall appointment demand reduction. The Hurley Group practices block one face-to-face appointment for each three e-consults processed and have confirmed with NHS England that our version of e-consults (unlike email) will have an equivalent standing to a face-to-face and phone consults for any GP contractual requirements. This approach has also been shared with the BMA who are supportive.

We learned that we needed to send a clearer message about how the benefits of each e-consult are amplified across a large number of patients who either successfully, or at least tried, to help themselves or use alternate resources before e-consulting. This way of describing the offer was more meaningful to staff and anxieties around workload eased.
So for every 10 minute face-to-face appointment slot blocked, GPs not only processed the requests of those three patients who sent in e-consults, they knew that a further 27 patients had successfully, or at least tried to help themselves first with other resources. This way, relatively small numbers of e-consults per day, were able to influence the behaviour of large numbers of patients.

Our ambition is to therefore increase the numbers of patients using the website and e-consults, so that we can reduce unnecessary face-to-face appointments per session. For example, family physicians in the US working for Group Health see 7 patients face-to-face, 7 phone consults and 7 conventional emails.

### Set up and return on investment

**What was involved in setting up a practice?**

There are three elements to setting up a practice on the system:

- **Marketing to patients**
  - Word of mouth – all staff, patient group, waiting room
  - Written materials – staff badges, leaflets, posters, pop-ups, appointment cards, prescription slips
  - Media – link from practice website and NHS Choices page, surgery phone message, Jayex board, emails and texts to patients, waiting room media screen.

- **Training of Staff**
  - Attend 30 minutes of a practice meeting to explain the model
  - Train lead admin/reception to check generic email box twice a day for e-consults and print for GP or workflow (aligned with existing practice process).
Also they need to call patients to communicate the outcome (appointment or prescription)

- 10 minutes with each GP to explain how they should respond to the pdf file summary of the on-line consultation (ring patient, prescribe or suggest appointment).
- Technical hook up
  - Create bespoke web version for each practice with identifiers (practice name, details, logo, picture etc.)
  - Insert link on existing practice home page by liaising with existing web designer (or create practice a website from our template)
  - Send test email from website to practice generic email box and connect link.

**Patient Benefits**

- 24/7 access to online resources, some of which provide immediate support
- 78% of patients said it saved them time as they only attend when they need to attend
- Access and continuity with own GP practice
- Better health outcomes due to earlier intervention

**Clinician Benefits**

- Empowers patients and enables patient education
- 18% of those using self-help go on to self-manage, rather than book an appointment they had planned to book with the GP
- GPs only see the patients they need to see and the history is collected in advance
- E-consults themselves are quicker to analyse than face-to-face consults
- Productivity gains for the practice, which can be realised by reducing GP supply, or by generating increased revenue from improved care (e.g. enhanced services and QOF - later versions will integrate with clinical software systems to allow patients to auto-populate their electronic record when completing an e-consult e.g. smoking and alcohol status).

**Commissioner Benefits**

- Better health outcomes result from earlier intervention in the natural history of the illness, which in turn reduces the overall healthcare burden and cost
- More GP capacity available for complex patients results in better control of LTCs
- Redirection of patients to GP from urgent care settings (14% of patients reported that they would have attended Walk-in Centre if service hadn’t existed).

**Return on Investment**

NHS London (as was), Tower Hamlets CCG and the Hurley Group sponsored the pilot. It was rolled out across the 20 practices in batches learning from each stage. If we annualise the current monthly savings the pilot would save a total of £420K of which approximately half would accrue to practices (subject to them sculpting their workforce) and half would accrue to Commissioners from less patients attending urgent care. This is for a population of 133,000 patients in 20 practices. This equates to a saving of £11,000 per average size practice (of 6,500 patients), in addition to a saving of £414K per CCG of 250,000 patients.

**Dissemination**

There has been widespread interest in adopting the service from around the country during the pilot phase. We are now in the process of working with individual practices and CCGs wishing to
purchase the service. The pricing structure is based on a price per patient however we are offering early adopters significant discounts to assist with dissemination. For further information see contact details below.

**Summary**

The current model of general practice is unsustainable in terms of demand management, but few evidence-based solutions to this have emerged. In this pilot we have used existing technology, commonplace in most industries, to safely manage patient expectations for access to primary care. Better access has been achieved alongside improving the patient experience of GP care. In addition, we have improved GP efficiency and created significant savings for commissioners.

**Contact Details:**
Dr Arvind Madan  
Hurley Group Partner | CEO  
Docklands Medical Centre  
Mobile: 07956 217974

[Arvind.madan@nhs.net](mailto:Arvind.madan@nhs.net)