UK Healthcare needs to embrace mobile technologies to improve the patient experience
Introduction

One of the most striking revelations in recent research shows that the shift in individuals accessing healthcare information via mobile devices is happening at an incredible pace. The ‘digital patient’ is becoming ever more tech savvy. However, very few UK hospitals see this as an opportunity to improve the overall patient experience, with a worrying number not even having the reporting infrastructure in place to analyse their existing online patient activity.

How can healthcare learn from other market sectors who have seen similar shifts in consumer online behaviour? Could the industry now be set to change? The introduction of new plans launched in November 2014 by the Department of Health to improve health outcomes and the quality of patient care through digital technology by 2020 could be the starting point.

There is much that could indeed be learnt from consumer-focussed sectors in terms of how they react to constantly evolving and increasingly sophisticated consumer behaviour when it comes to using mobile technologies. Embracing the increasingly digital world in which we live has not only benefitted various sectors in financial terms, it has actually resulted in radical changes in consumer behaviour. For example, in retail, consumers’ shopping habits have changed drastically – they now research products, find out where to buy them and make the final purchase, all on their mobile devices.

Those retailers that weren’t mobile compatible found themselves missing opportunities to enhance their customer experience and meet, let alone exceed, the service levels and consumer engagement offered by their competitors.

While there may be many lessons the UK healthcare industry can take from the retail sector, the following question remains: Is it really ready to make mobile a mainstream method of engaging with patients, as well as a tool to reduce the paperwork and inefficiencies that exist in the healthcare system right now?

The UK healthcare industry can learn some lessons from the retail sector

“Patients spend more than 99.95% of their lives outside of clinics and hospitals”

John Mattison, MD, Chief Medical Information Officer (CMIO), Kaiser Permanente Southern California

So engagement with patients outside hospitals and clinics will become increasingly important as the requirements of the ‘digital’ patient become more sophisticated. There is a clear case that embracing mobile technologies allows healthcare services to extend far beyond the hospital walls.
The Challenge

However, many still perceive mobile within Healthcare as just a passing trend that has no real benefit for improving the patient outcome. And while that is the common perception, the UK is definitely going to lag behind the model of mobile adoption that is currently taking place in the US. For example, as far back as 2012, almost half of US consumers claimed to be willing to buy mobile health technologies for a broad range of reasons, whilst 85% of US physicians used smartphones in a professional capacity and 37% of these had recommended medical mobile applications to their patients.

New technology brings new opportunities. As we have already established, healthcare organisations in the US are beginning to put mobile technologies to work by improving the patient experience, streamlining everyday process and, ultimately, improving profitability. However, even with this early adoption, their healthcare sector is still lagging far behind others, such as retail and business services. 36% of US healthcare companies have no mobile strategy in place and no mobile application on offer at all, whereas 65% of retail businesses use a combination of mobile apps and websites to engage customers. The gap has been identified and the US healthcare industry is reacting, with 52% of healthcare organisations expected to make use of mobile apps and mobile websites in the near future. The UK must follow suit.

Integrated Change is one of the few digital agencies that is dedicated to the UK’s healthcare industry, so we understand better than most that there are very real opportunities to be seized by individuals and organisations operating within this sector. There are, however, very few UK-focussed statistics available to illustrate these opportunities and this is the primary reason for us carrying out our research programme to gain a real understanding of the extent to which UK healthcare organisations are currently embracing mobile technologies.

85% of US physicians have used a smartphone in a professional capacity

Adopting mobile, as with any new forms of technology in healthcare, certainly doesn’t come without its barriers to change. These include security and privacy issues, integration with existing data driven systems and lack of understanding of the technologies available, all of which can be enough for many organisations to steer clear of mobile technology entirely. In fact, Integrated Change recently published a blog post on the 12 barriers that exist to mobile health adoption.

85% of US Physicians used smartphones
36%/65%/52% figures (second paragraph, all the same source)
http://vigoratehealth.com/healthcare-industry-lags-mobile-app-development/
The Research

The use of mobile apps in healthcare is twofold – there are of course going to be different apps for patients than for healthcare professionals. Or are there? Whilst these two groups have different requirements from a mobile app, ultimately both are customers of the healthcare system itself. Our research focused on the patient targeted proposition of mobile technology and how UK patients’ attitudes to this have changed in recent years.

We set out to find out how UK individuals are accessing information from NHS trusts

In order to gain an accurate picture of the current state of the UK’s adoption of mobile healthcare technologies, we contacted a number of NHS trusts in all English regions. Under the Freedom of Information Act we requested the following data for 2012 and 2013:

- The total amount of traffic to their website
- The split of visitors viewing their website on desktop compared to mobile (tablet and smartphone)
- The bounce rates (the % of visitors who leave a website after viewing only one page) on desktop compared to mobile.

Not all of the NHS trusts were able to provide the requested information, as some do not use an analytics package to gather website data. In essence, they don’t have access to any visitor data whatsoever. However, the majority of NHS trusts (17) were able to provide the required information.

In addition, 159 NHS trusts across the UK, (900+ individual websites) were analysed to identify whether hospital-branded mobile apps were available. This was an intensive, manual process and locating any apps that were available was not a simple process as, in many cases, they were well hidden and not promoted throughout the site.

Research was also conducted within the private sector, with 100 orthopedic patients covering an age group ranging from 15 to 65. Whilst this on a much smaller scale, the research was tightly focused and conducted face to face with the patients whilst waiting to be seen. This was to give an overview of how they felt about using mobile apps as a tool to assist them with their healthcare needs.
Key Findings

Less than half (43%) of UK hospitals’ websites are mobile-ready, despite a 118% increase in mobile traffic to those websites.

This makes for extremely difficult navigation using a mobile device, as content is often too small to read without zooming in, buttons too small to click etc. The majority of NHS trusts are not taking steps to meet the increase in demand.

Sites experienced a 141% increase in tablet traffic and a 96% increase in mobile traffic between 2012 and 2013.

Mobile and tablet traffic in the UK is increasing rapidly, with reports suggesting that upwards of 90% of the UK population now owns a smartphone. Between January and December 2013, the proportion of all web traffic in the UK from mobile and tablet devices increased from 22.8% to 37%. These figures are reflected in the data retrieved from the websites included in the study.
Key Findings

More than half of mobile visitors click off the site after viewing just one page
Of the websites that we analysed, 52% of visitors viewing on mobile devices did not look at more than one page. A reasonable assumption here could be down to poor usability of the sites on mobile devices. This might also suggest that users are looking for alternative websites to find their information.

Bounce rates increased across all platforms, most notably tablet users with an 18% increase
Between 2012 and 2013, bounce rates increased, which indicated a shift in attitudes/expectations from mobile users. If information is hard to find on a website, users are becoming less patient and choose an easier/quicker alternative.

The table below shows the cu figures from 9 hospitals in the North and 8 hospitals in the South of England between 2012 and 2013.

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total visits</strong></td>
<td>11,549,493</td>
<td>15,979,303</td>
<td>38%</td>
</tr>
<tr>
<td><strong>Desktop</strong> *</td>
<td>8,602,462</td>
<td>9,973,714</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Tablet</strong> **</td>
<td>669,688</td>
<td>1,612,579</td>
<td>141%</td>
</tr>
<tr>
<td><strong>Mobile</strong>* **</td>
<td>1,822,128</td>
<td>3,578,941</td>
<td>96%</td>
</tr>
<tr>
<td><strong>BR Desktop</strong>**</td>
<td>31</td>
<td>37</td>
<td>19%</td>
</tr>
<tr>
<td><strong>BR Tablet</strong>**</td>
<td>38</td>
<td>45</td>
<td>18%</td>
</tr>
<tr>
<td><strong>BR Mobile</strong>**</td>
<td>51</td>
<td>52</td>
<td>2%</td>
</tr>
</tbody>
</table>

* Desktop – the number visitors arriving at a website via a desktop computer or laptop device.
** Tablet – the number of visitors arriving a a website via tablet devices, such as an iPad.
*** Mobile – the number of visitors arriving at a website via smartphone devices, such as an iPhone.
**** BR = Bounce rate - the percentage of visitors to a particular website who navigate away from the site after viewing only one page.
Excluding London, the southern regions of England are reacting more slowly to the increase in mobile visitors. London, the North East and the East Midlands have shown to be responding more aggressively to the shift in mobile usage for the digital patient. This reveals that although the various trusts are unified under the NHS brand, they appear to be operating completely independently in terms of online strategy. This could be a potential flaw in how NHS trusts are marketed. If mobile technologies work for some trusts, then why not apply to all?

Just 15% of NHS trusts have invested in branded apps

Examples of the types of mobile apps that are in existence:

- Staff communications
- Weight loss programs
- Patient scheduling/appointment booking
- Informational/educational
- Navigational for use by paramedics
- Exercise/medication scheduling
- Dosage calculators for practitioners

The apps that were identified were mostly poorly marketed, if at all

App discovery is hugely important for any organisation to reap the full benefits of investing in developing one. If an app can’t be found, it is effectively useless with no ROI. The NHS trusts that have adopted mobile technologies clearly understand the associated benefits, but there appears to be rather poor execution of any overall mobile strategy.

Of the 100 patient respondents, almost half said it would be very helpful to be able to make an appointment via a mobile device

Almost half also said it would be very useful to:

- View/amend/delete appointments via a mobile device
- To gain access to a list of things to do prior to treatment
- To be notified of items to bring along for their treatment
Key Findings

36% of NHS website visits in August 2014 were from mobiles or tablets

Private orthopaedic patients in this survey couldn’t understand why such services are not readily available already.
Features they would like to access via mobile include:
- Post-operation information
- Contact details of relevant consultants
- Information about the use of medications
- Recovery timelines
- Diabetic patients information
- Available appointment dates

Other external research findings of note include:
comScore reveals that UK consumers are increasingly turning to digital channels to seek health information, with 9.1 million users accessing NHS websites in August 2014, 36% of which accessed those websites via mobile or tablet devices. This underpins the importance of ensuring that websites are accessible across multiple devices.

Research carried out by Accenture earlier in 2014 confirmed that senior citizens in England are turning to digital channels for health information more than ever before. According to the research, 27% of senior citizens in the UK are already self-tracking some aspect of health and an overwhelming majority desired access to more digital health services, such as online appointment scheduling or electronic reminders.

27% of UK senior citizens are already self-tracking some aspect of health

Based on an exhaustive search of Apple’s AppStore and the Google Play store in September 2013, MobiHealthNews found 205 apps that were “hospital-branded” and intended for use by consumers or patients. These apps covered a wide range of functions, from emergency room appointment booking to fitness tracking.
Recommendations

We know only too well that many patients have evolved in recent years into increasingly demanding and technologically sophisticated ‘digital patients’. Both the research conducted by Integrated Change, as well as other independent organisations, has shown that digital patients now readily expect mobile technologies to be provided to improve their healthcare experience; to aid appointment-scheduling, communication with practitioners, medication reminders and as a way of retrieving medical information too.

However, we must remember that the digital patient is still in the minority. They are an important but still small number of the overall total when taking the UK healthcare industry into account. However, while the analogue patient currently still rules, the world is generally becoming ever more digitally focused, so it is inevitable that even these patients will demand more mobile options in the not too distant future.

1. Get the basics right with already established technologies

From the data obtained, despite the continuous shift in patients wanting to access healthcare information via mobile devices, very few hospitals appear to be reacting to this. We know the NHS in the UK simply doesn’t have the money to fulfil all of the needs of the digital patient, so a realistic view of what can be implemented should be the immediate goal. However, what has been identified is a lack of focus on some of the absolute basics and these clearly must be addressed.

A sobering revelation from our research is that some NHS trusts have zero visibility over their website data. With no analytics packages being utilised, webmasters have no idea of user behaviour, website popularity, amongst others, meaning that any adjustments made to the web offering will be done so with no statistical backing. Addressing this factor really is going back to absolute basics but needs to be addressed before any other action is taken.

Every business or organisation should make full use of the data they have available, in order to improve the user experience and to identify the successes or failures of marketing efforts to drive visitors to their website. Without this data, every action is down to guesswork and any marketing activity will have limited or no ROI.

There are numerous tools available to measure the success of mobile technologies, but before they can be put to use, a full understanding of which metrics to measure is imperative. Whether its telephone or email enquiries, file downloads or newsletter sign-ups, there are countless tools out there to allow tracking of almost any metric.

Analytics tools are becoming increasingly sophisticated, with the likes of Google’s Universal Analytics providing users with the ability to combine online and offline statistics in one place. Google Analytics for apps (see our post here on app analytics) is also extremely useful for getting the full picture of how users interact with mobile applications. Unfortunately, it would appear that these tools are seriously under-utilised currently within the UK’s healthcare industry.

2. Get buy-in to mobile technology across the organisation

In order to measure the effectiveness of mobile technologies against revenue will require ‘buy-in’ from several other departments in order to get the full picture. The marketing department must have access to all available data and this often requires increased communication between departments.
Recommendations

Once tracking is in place, careful data analysis can reveal where strengths and weaknesses exist.

One key point that needs to be put across to the entire organisation is that every mobile user is unique and just as valuable as any other type of customer. They deserve the highest quality experience that your resources and budget allow, just as your patients deserve the best treatments and care available.

Mobile isn't the solution for every single healthcare organisation right now and, even if they are, digital strategies can only go so far. However if they are used as an important part of the overall marketing mix, they can provide an extremely influential and powerful channel in patient communications.

3. Understand the Mobile Apps market within UK Healthcare

Of the hospital-branded apps that we discovered, very few were promoted effectively. As with any product, a mobile app should be launched with a clearly defined marketing strategy behind it, in order to maximise ROI. The NHS Choices apps library, a site where healthcare apps are vetted and then listed, is a great facility for the general public to discover, gain trust in and download apps. But, how many people in the UK know that this site exists? From our experience, not many, so this would clearly suggest that a massive marketing opportunity is being missed.

Once an app is launched, that by no stretch of the imagination means that ‘the job is done’. A strategy should be implemented for as long as you want users to download and engage with your app. Three key points to think about when employing your mobile strategy are:

- Recognise that mobile users have different requirements – Don’t just condense the content from your desktop site on to a mobile site, as the requirements of your mobile users is often very different to those of your desktop users. Make the most of the new mobile technologies available to you and make them work for your users. As these technologies change, so should your strategy.

- Don’t make a disposable app – Apps cost money and that money needs to be spent well. Deploying an app that doesn’t keep users interested is a waste of everybody’s time. Think about how to keep the user engaged – one of the most effective ways of doing this is by refreshing your content on a regular basis. Make sure that your app has the agility to do this.

- Mobile is just the beginning – Mobile applications are the first of many technological advances that are heading our way and it is imperative that your investment into mobile allows you to scale out to the next big craze, when it inevitably comes along.

App marketing is a rapidly growing industry. A good example of this can be seen with the launch of the iPhone 6 and the iPhone 6 Plus, which pushed app marketing costs to an all-time high. According to data from Fiksu (who developed FreeMyApps®, now the world’s largest app discovery and rewards platform), adoption of the iPhone 6 and iPhone 6 Plus was 116% greater than the iPhone 5, in the 30 days post launch. This influx of new users wanting to install new apps pushed advertising costs via various channels higher than ever seen before.
Recommendations

How Do Users Find Apps In the First Place?
The way in which users find apps is changing quickly, as more marketing channels are being created. There have recently been big developments in paid search advertising with click-to-install and click-to-open advertisements now available through Google, Facebook and Twitter, to name a few, and there are regularly new forms advertising being developed and made available to advertisers across a whole range of platforms.

Recent research shows that around half of Android and iOS users first discover apps by searching the app stores. But where does the other 50% of app discovery derive from? Research carried out by MobileDevHQ revealed the following details about the US mobile app market:

Although there are often measures that can be taken to heighten visibility of an app within an app store, the other channels offer a much greater amount of control over them, in particular paid advertising. As the advertising products offered by key online channels become more sophisticated, the results above are expected to change drastically in the coming years.

<table>
<thead>
<tr>
<th>How Users Found Apps</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>I searched for it in the app store</td>
<td>47%</td>
</tr>
<tr>
<td>My friends / family told me about it</td>
<td>15%</td>
</tr>
<tr>
<td>I read about it on the web</td>
<td>11%</td>
</tr>
<tr>
<td>In a category top chart (examples: top free productivity app, top free games)</td>
<td>10%</td>
</tr>
<tr>
<td>The app was featured by Apple under the featured screen</td>
<td>9%</td>
</tr>
<tr>
<td>The app was featured by Apple in a category (example: featured business apps)</td>
<td>2%</td>
</tr>
<tr>
<td>I searched on the web</td>
<td>2%</td>
</tr>
<tr>
<td>I clicked an ad within another app</td>
<td>2%</td>
</tr>
<tr>
<td>I clicked an ad on Facebook, Twitter or another social network</td>
<td>1%</td>
</tr>
<tr>
<td>A friend on Facebook, Twitter or another social network shared it</td>
<td>1%</td>
</tr>
</tbody>
</table>

Based on a survey with 350 iPhone respondents. Margin of error: 5.24%
The outlook for 2015 and beyond is positive

November 2014 saw the launch of new proposals to improve health outcomes and the quality of patient care through digital technology and innovation. Established by the Department of Health and chaired by NHS England’s National Director for Patients and Information, Tim Kelsey, the National Information Board has set out a vision for how technology should work harder and better for patients by 2020.

The framework sets out how real time data will be available to paramedics, doctors and nurses, ensuring patients receive safe and effective care at the point of care. All NHS funded care services are expected to have digital and interoperable systems that remove the limitations of paper records and slow bureaucratic systems.

The proposals, including an “NHS app store”, will be laid out in a strategy document called Personalising Health and Care 2020. Speaking at the EHI Live 2014 conference in Birmingham, Tim Kelsey said NHS England would launch a “voluntary kitemark scheme” – a quality standard for apps – although he indicated plans were not yet finalised.

In the press statement issued 13 November 2014, Tim Kelsey said: “We must embrace modern technology to help us lead healthier lives, and if we want - to take more control when we are ill. Our ambition is to make the NHS a digital pioneer for our patients and citizens.”

Integrated Change is working with a number of organisations who are looking to transform how healthcare is delivered to patients and striving to improve the patient outcome.

“When working with the various departments of the NHS we are seeing a real appetite for mobile, be it web or apps. There are enough ideas being generated from within the NHS to last a lifetime, which is very exciting. These ideas need to be nurtured, listened to and crafted so that they present a real business case for their investment and development.”

Scott Hague, Development Director, Integrated Change

Here are just a few examples:

- Parkinson’s UK was one of the first to have their mobile app added to the NHS Choices apps library
- The Anna Freud Centre are exploring how mobile technology can be used to help young people with mental health issues
- The work of HANDI in the UK is going someway to change how healthcare is delivered through the power of technology.
Get in touch

If you would like to learn more about how mobile and digital can work for your healthcare organisation, then please get in touch with the team at Integrated Change today.

We are specialists in digital healthcare. From mobile application development, medical website design and online digital marketing, we have all the bases covered.

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