THE ROLE OF SMS MESSAGING IN IMPROVING HEALTHCARE PROVISION

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OVERVIEW

This document is designed to provide a review of the available literature as to how SMS text messaging can be used in communicating with healthcare users to improve Healthcare provision.

Introduction

It has been two decades since the first mobile phone text messages were sent and in that time their usage and popularity has exceeded all expectations. Today, text messaging is the most widely used mobile data service. In the UK, 93% of adults own a mobile phone (66% of them are smart phones) and the average UK resident sends 117 SMS or MMS messages per month, indeed 15% of adults in the UK are ‘Mobile-Only’ homes (OfCom, 2015).
The Place for SMS in Healthcare Provision

Traditionally, healthcare providers have communicated with patients about their appointments using postal services and landlines. But what are the options for utilising SMS to innovate and improve healthcare operations?

Q. How do patients respond to text messaging as part of their healthcare provision?

It is imperative to examine how patients respond to being communicated with via their mobile phones about their healthcare provision. The research on this is pretty clear; most people prefer to be communicated with via their mobile phone. 55% of respondents to a survey by OfCom in 2014 said that their mobile was their preferred way to be contacted about their appointment. This falls in line with the general behavioural pattern we see with mobile phones, most people have their mobile phone with them at all times and use it for many varied functions over and above phone calls, such as calendars, email and photographs.
Age and Demographics

There is much anecdotal evidence that certain demographic groups are less receptive to being communicated to by SMS, however the research does not appear to back this up. A study by Hughes and Done, 2011, titled ‘Not 2 Old 2 TXT’ examined this apparent phenomenon and found that older adults actually did not necessarily object to SMS content for patient and appointment information more than any other demographic and 44% were willing to receive their appointment reminder by SMS.

However, this study is four years old and since then mobile phone ownership in those aged 65+ has increased significantly and according to OfCom figures in 2014, 42% of people in the aged 65+ age group now have mobile phones, and so it would make sense that the findings of another study were also more pertinent now. Finkelstein and Liu (2013) found that age and other demographic variables did not predict responsiveness to reminder systems, and instead it was the familiarity with the service provider that predicted responsiveness and effectiveness of text messages. If people know, trust and are engaged with the provider, they will usually respond positively. Most people trust the NHS in the UK, so therefore this study is especially interesting – it may be true that people of any demographic will most likely not object to being contacted by text from an NHS provider because they are seen as a trusted organisation.

These findings back up the experience of Healthcare Communications in sending over 100 million SMS messages to a variety of patient demographics; it is difficult to categorise patients by demographic and whether they will respond to SMS, and older aged patients must certainly not be automatically deemed as unable or unwilling to use text technology.
Other Demographic Considerations

An important consideration in choosing a method of contact is also the socio-economic status of the healthcare user. 26% of the DE socioeconomic group (Working Class / Non-Working) and 27% of 16-24s are mobile-only households.

This statistic is important because mobile is often now the most effective channel of communication to these groups because even when addresses change, the ease with which people can now retain their mobile numbers often means that mobile numbers are retained over long periods of time, and essentially mobile phone numbers remain the only constant communication point for these groups.

A review of all the literature on text message reminders in health care services by Kannisto et al, 2014, found that of the 70 studies they reviewed, ‘text message reminders were easy to use, useful for patients and people were willing to receive them’.

For all of these reasons, it is important to break down some of the apparent stigma in using SMS as a form of communication by the healthcare providers, especially to older aged adults.
Where is SMS an Effective Communication Tool in a Healthcare Setting?

Appointment reminders to reduce DNA rates

Missed hospital appointments are a major source of inefficiency and many healthcare providers now use SMS Text messages to reduce ‘Did Not Attend’ (DNA) rates. Numerous studies and reviews have systemically shown that sending reminders via SMS reduce DNA rates when compared to No Reminder and Postal reminders (Gurol-Urganci et al, 2013). One of the most commonly cited reasons for missing an appointment is ‘forgetting’ and the SMS reminders serve to eliminate this major reason for Not Attending in a proactive and efficient manner. Depending on mobile data capture rates, using SMS as a reminder service can significantly reduce the DNA.

Post-discharge Surveying

A study in 2015 by Kees et al, showed an innovative use of both SMS and IVR (Interactive Voice Messages) in the assessment and management of pain.

In the study, patients were sent a daily SMS or IVM to rate their pain levels and if the pain was rated highly then a nurse contacted the patient and adapted the treatment. The use of IVM/SMS proved to be a reliable assessment of pain intensity and even in these terminally ill patients, all were satisfied with the intervention.

This study proves that so long as the intervention is well-designed and functional, the mode of communicating via SMS and IVM can be a feasible and acceptable way to improve responsiveness and the experience of the patient.
Medication Reminder Services

Poor adherence to taking medication following discharge is a widespread problem in the NHS, causing relapses in conditions at rates that are higher than desired. SMS has been tested as a means to resolve this issue and the results have been promising. Bogart et al, 2014, found that automatic SMS reminders for antipsychotic medication ‘Were acceptable to the majority of survey respondents, regardless of their demographic and diagnostic characteristics, attitudes towards medication and levels of past adherence. The prospect of a flexible, minimally invasive, cost-effective and broadly applicable tool that can potentially improve adherence to antipsychotic treatment is exciting’.

These results are especially interesting because they were undertaken in a Mental Health environment, where anecdotally there is a reluctance to use ‘newer’ technologies because of the perceived or real vulnerabilities of the patients and an anticipated invasiveness of an SMS message. However, it seems to be the case that the technologies may well assist in improving overall care to the patients and the patients most often respond well to this form of communication. It seems, used with thought, SMS can assist in improving care post-inpatient discharge, even in a Mental Health setting.
The Future

Content of Messages

As already established, SMS reminders have been shown to be effective in reducing DNA rates however attention is now shifting to the minutiae of the content of the messaging. Using initiatives from behavioural psychology, it is now emerging that the wording of SMS reminders significantly affect the extent to which patients miss, attend or cancel outpatient appointments (Hallsworth et al, 2015). Specifically tested is a message that states the cost of the appointment should the patient miss it, and using this specific content, DNA rates can be reduced by around a quarter in relative terms.

<table>
<thead>
<tr>
<th>Message</th>
<th>Wording</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Appt at [clinic] on [date] at [time]. To cancel or rearrange call the number on your appointment letter.</td>
</tr>
<tr>
<td>Easy Call</td>
<td>Appt at [clinic] on [date] at [time]. To cancel or rearrange call 02077673200.</td>
</tr>
<tr>
<td>Social Norms</td>
<td>We are expecting you at [clinic] on [date] at [time]. 9 out of 10 people attend. Call 02077673200 if you need to cancel or rearrange.</td>
</tr>
<tr>
<td>Specific Costs</td>
<td>We are expecting you at [clinic] on [date] at [time]. Not attending costs NHS £160 approx. Call 02077673200 if you need to cancel or rearrange.</td>
</tr>
</tbody>
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NB. The Specific Costs message received the lowest DNA rate in the study by Hallsworth et al, 2015.

The implications of this emerging research has clear foundations for future policies within patient communication, however it is also clear from behavioural psychology that this is not something that will stand still. The effect of the message above, for example, will have a limited lifespan before it is normalised and when that happens the effects are reduced. So the challenge for the Healthcare Providers is to constantly innovate their messaging to sustain the ‘nudge’.
Capturing Mobile Phone Data

93% of adults in the UK have a mobile phone. If the NHS were able to capture all this data, the possibilities for reducing costs and increasing efficiencies by using SMS messaging would be clearly maximised. Most Trusts have in excess of 40% of mobile phone data capture rates, however the challenge for Trusts is how they efficiently increase the capture of this data and integrate this form of communication into the culture of the Trust.

Many Trusts rely on either the referral route or receptionists to capture the data, but it is clear that those with the best mobile number coverage have implemented more innovative initiatives and processes to actually capture the data, such as having an enforced prompts on the contact detail screen.

SUMMARY

SMS as a technology has been introduced gradually into our communications within Healthcare provision, and as we culturally accept the legitimacy of using SMS, we will see that the potential for using it can offer cost benefits, service improvements and increases in patient satisfaction. It is a reliable technology with a far reach within the patient community, and when used with integrity can deliver a wide variety of benefits in a healthcare setting.
ABOUT US

We're leaders in patient communications software with systems live in more than 1000 NHS sites including Trusts, Dental and GP Practices. Our platform is designed exclusively for the NHS with direct input from the front line staff using it.

Find out more at http://www.healthcare-communications.com

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