

INTRODUCTION

On the back of high levels of mobile phone penetration in this country, Short Message Service (SMS) messages have developed into a hugely popular communication method in Australia. Telstra claimed that over 33 million messages were handled by their network last New Years Eve, with an average of 50,000 per minute sent between 11pm and midnight!

While for many, "SMS" conjures up thoughts of ear piercing beeps and captivated teenagers, the technology has had a history of innovative business uses. These have ranged from reminders to pay phone bills, to sophisticated electronic ticket solutions that utilise the graphical capabilities of modern mobile phones.

The acceptance by Australian businesses of SMS technology has risen dramatically in recent years, with MessageNet, Australia's largest business SMS gateway reporting volume increases of 58% from the 04/05 to 05/06.

Tanya Aranov, MessageNet's Marketing Manager claims that "There's a far greater social acceptance in receiving SMS messages now and people are more responsive than they are with

SMS PATIENT REMINDERS

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phone calls because it is less of an interruption".

In a medical practice setting, SMS technology is most commonly used to remind patients of future appointments. While there are other possibilities, this application will be the article's focus.

SMS GATEWAYS

It would certainly be possible to send SMS appointment reminders to patients using a dedicated mobile phone, however this would become tedious very quickly. Enter the SMS gateway.

An SMS gateway is a service that converts a computer-based communication to an SMS message for delivery to the recipient's mobile phone. Typically this message originates as a simple email, however there are other options available to both end users and software developers.

Because of the simple format of email messages, many practice software vendors have been able to incorporate SMS services with little effort by leveraging the existing email functionality in their products. By virtue of this fact, email based appointment reminder functionality is typically bundled along side SMS services with some solutions allowing the user to send both SMS and email reminders at the same time.

CHOOSING A GATEWAY

Many software vendors have exclusive arrangements with an SMS provider which means the decision about which gateway to use may have already been made for you.

Genie, Oasis, Practice2000 and Profile are among the products that allow the

practice to decide which gateway to use, although all have a preferred provider set by default.

Given that SMS gateway providers can only purchase their network access from a few top-tier telcos, costs tend to be fairly similar among the Australian based providers per message. Therefore, if your software allows you to choose a gateway, ensure you consider all set-up costs and support options before making a decision.

Most gateways quote per message prices ranging from 16 cents to 25 cents depending on the volume purchased. Support and setup costs vary greatly, however some providers, including MessageNet, bundle these at no additional charge.

While there are overseas operations that do have lower per message entry points, many insert advertising into the body of the SMS message and don't use a localised timestamp. More significantly however, overseas providers have lower transmission success rates that may lead to more phone call follow-ups being required.

SOFTWARE INTEGRATION

The past two years have seen many practice software vendors add SMS integration to their products, or enhance the functionality of an existing solution. The extent of SMS integration in popular Australian practice software can be classified in 3 ways:

a) No integration

Under this scenario, the practice software does not make a provision for SMS patient reminders. While obviously not ideal, this doesn't preclude practices using such software from exporting the

relevant patient demographics and appointment details and processing these with a combination of external software (e.g. Excel then Outlook), or tools provided by the SMS gateway.

Most SMS gateways rely on a specially constructed email address to indicate where the message should be sent. This would usually have the recipients mobile number followed by the 'at' symbol (@) and the SMS provider's domain name. As such, for ad hoc messages, simple emails using the gateway's prescribed address format may suffice.

b) Basic 2-Way Functionality

There is variation between the ways practice software vendors have implemented SMS functionality, however the basic steps for sending SMS reminders are usually:

1. Selecting the patient or patients to send the reminder to.
2. Select whether the reminder will be sent via SMS, email or both.
3. Optionally personalise the body of the reminder message.
4. Optionally enter a password to authorise the reminder broadcast.
5. Send the reminders or schedule them to be sent at a later time.

While many practices currently sending SMS reminders are not yet utilising the functionality, most SMS gateways allow the recipient of the SMS to send back a response via their mobile phone. Typically this is returned to the practice as an email and can be collected using an email client or the email module built into the practice software.

Practices seeking to close the acknowledgement loop can manually process these incoming emails and change the appointment status to "confirmed".

Depending on how aggressive the practice wants to be with its reminder system, traditional phone follow-ups can then be conducted for the patients who haven't responded to the SMS.

c) Enhanced 2-Way Integration

This level of integration extends beyond the previous scenario with the software *automatically* updating the appointment status when a response is

received by the system from a patient, negating the need for staff to manually process replies. Achieved without relying on email to carry the appointment reminder, MedilinkXP (via the integration of 2Hippo) is the only Australian practice software solution currently offering this level of SMS functionality.

THE BENEFITS

Less "No Shows"

By definition, the main purpose of an appointment reminder is to ensure that the patient arrives when the practice expects them. By reducing "no shows", both practice revenue and patient care can be maximised.

Despite the lower costs and time involved, research¹ has shown that SMS reminders are just as effective as traditional phone or postal reminders.

Greater Efficiency And Cost Control

Unlike traditional telephone reminders, SMS allows large batches of messages to be sent simultaneously.

In much the same way as a mail-merge can be performed by combining a database with a form letter, SMS messages can be personalised using any relevant database field (although for simplicity, your software vendor may have restricted this).

Because staff time involvement in the reminder process is minimised and SMS usage is easily tracked, detailed cost-benefit analysis can be performed which can assist practices to best target the use of the technology.

An Audit Trail Is Created

By removing most of the human interaction from the reminder process, comprehensive audit trails are created with little or no additional effort required by the practice staff.

Managing Director of Mediflex, Phil Kirby explained that "When an SMS message is sent, MediFlex captures this information into the patient notes. This is to give the medical practice as much evidence as possible that they made an attempt to contact the patient."

He went on to say that "Unfortunately, the medico-legal issues surrounding the doctor-patient relationship are

such that if a patient fails to turn up for an appointment, the doctor is deemed responsible for any medical issues arising that were not diagnosed and/or treated. So the more evidence that can be collected to demonstrate that medical practice made every reasonable attempt to contact the patient, the better."

Patient Good Will

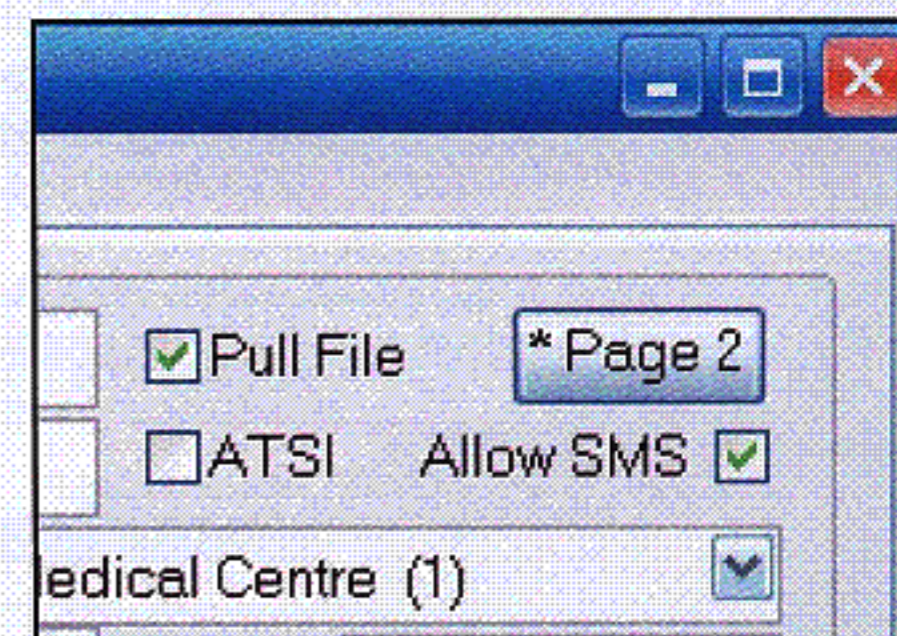
Increased attendance rates by patients has obvious benefits for practices, however patients also value the service as Ken Khoa Ho-Le, Managing Director of Abaki explains, "patients appreciate courtesy appointment reminders and doctors benefit from less patient non-attendances."

CONSIDERATIONS

1. Privacy Issues And Consent

While confidentiality and privacy need to be given consideration, it should be noted that SMS does not introduce new privacy issues that don't already exist with traditional communication systems. Like phone calls, faxes and letters, it is possible that an SMS message may be viewed by an unauthorized 3rd party. As such, practice staff need to have procedures in place that ensure SMS messages are only sent to patients who have consented to such communications.

As shown in the screenshot below, Zedmed has included a consent checkbox field in their patient demographics screen to ensure that these procedures are enforced, a simple measure that other practice software solutions would benefit from.



2. SMS Sent To The Wrong Number

While a simple appointment reminder would typically only include the most basic of details, the possibility of SMS messages being sent to the wrong mobile number should be considered.

FEATURES

Extra care needs to be taken when recording the mobile phone number to minimise the chance of this scenario eventuating.

3. Message Length

SMS messages are limited to 160 characters, however text can span multiple messages if the gateway is configured to perform this operation. Be mindful however, that you will be billed for each 160 character block, so keeping your reminder messages as concise as possible is recommended.

4. Timing The Reminders

Research¹ has suggested that sending reminders 2-4 days prior to the appointment is the optimal timeframe as it usually leaves enough time to schedule another appointment if the patient cancels, but is close enough to the appointment date that most patients won't forget about the reminder.

¹ - Downer SR, Meara JG, Da Costa AC. Use of SMS text messaging to improve outpatient attendance. MJA; 183 (7): 366-368.

CONCLUSION

While busy practices tend to enjoy the odd "no show", most have long had measures in place to try to prevent their occurrence.

With low setup and ongoing costs, practices can trial SMS patient reminder workflows with minimal time and financial investment. Unlike many efficiency initiatives, the benefits to both the practice and its patients are likely to be both realised and measurable immediately.

Compared to other communication methods, business usage of SMS has had a relatively short history in Australian medical practices. As practices and software developers identify other opportunities for the medium, tighter integration and greater practice efficiency are likely to result.

Simon James is the editor of Pulse IT.

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