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link to Reader's Digest article [1]



In the 1970s, doctors hailed the telephone as "having become as much a part of standard medical equipment as the stethoscope". During COVID-19, the government warned the nation, via text message, to "stay at home, to protect the NHS and save lives". Used to educate and motivate, to remind and to record, mobile telephones are making inroads into healthcare.

# Harnessing the power of phones

There are more than 8 billion mobile phone subscriptions worldwide; 8 trillion text messages are sent every year.

"Words are, of course, the most powerful drug used by mankind," said poet and novelist Rudyard Kipling in a speech to the Royal College of Surgeons in 1923. Words can, like drugs, change the way that a person thinks or feels, "entering into and colouring the minutest cells of the brain," he said. Can then the text typed in a message, for example, help you to quit smoking? Can their words improve your health through encouragement, education and well-timed reminders?

# **Stopping smoking**

The "MiQuit [2]" Study from the Universities of Cambridge, East Anglia and Nottingham showed that text messages sent during pregnancy could support some in smoking cessation, reducing risk to the unborn baby.

Over the course of 12 weeks women received texts including "motivational messages, advice about quit attempt preparation, managing cravings and withdrawal, dealing with trigger situations and preventing lapses, plus information about foetal development and how smoking affects this". On-demand support was available for combating cravings.



## **Self-management of diabetes**

The "Sweet Talk Intervention [3]" was a text message programme designed for people aged 8-18 wanting to better self-manage their diabetes. The young person would receive daily messages to reinforce and remind them of their goals in blood sugar control. They might, for example, be reminded to change their injection site if it felt lumpy, or to always test their sugar level if they felt unwell.

Users said that the messages helped them to learn new facts, test their sugars more—and gave them "encouragement to keep going".

#### Help for mother and baby

Delivering more than 250 text messages to pregnant women and mothers with infants under the age of one, the "Text4baby [4]" app in the US provides medically accurate health education and lifestyle advice to help keep mum and baby healthy.

"Baby weighs about THREE pounds now. Over the next ten weeks, most babies gain another four or more pounds! More info on baby's growth..."

"If you have any signs of preterm labour-cramps, belly tightening, low back pain, bleeding, or watery, pink/brown discharge, call the doctor right away," read some of the messages. Other advice includes how to wear a seatbelt, and emotional support. One mother said that the messages helped her to know that someone cares.

#### Reminders about meetings and medications

Each year, more than 15 million patients in the UK fail to turn up to general practice appointments, costing the NHS [5] more than £216 million pounds. In one study [6] of more than 16,000 patients, text message reminders made people 23 per cent more likely to attend clinic (though the "no show" rate was still 15 per cent).

In "ARemind" (a "personalised system to remind for adherence"), text messages on a chosen subject(including latest news, weather, jokes, bible verses and sport updates) were sent to people with HIV to remind them to take their antiretroviral therapy. Recipients were asked to respond with a text message when taking the tablets.

The texts achieved their target—at least in the short-term, and were more successful than a simple beeper instead being sounded at tablet time.

## Lifestyle advice

A global collaboration known as "<u>Text2PreventCVD</u> [7]" studied the results of nine clinical trials, involving 3779 participants, where text messages were sent for six months (in seven studies) or for 12 months or 24 months.

Messages provided health information, motivation, lifestyle recommendations and support; modest impacts on blood pressure and <u>body mass index</u> [8] were seen—and both are risk factors for heart disease. "Text messaging offers confidential and unobtrusive support" write the authors.

## Privacy and potential

Some patients will not be comfortable with mobile messaging, concerned about breaches of confidentiality and privacy. Writing in the <u>British Medical Journal</u> [9], student in digital health Laura Martinengo explains the need for a login by way of password or biometric authentication (such as face or finger print recognition), and a mobile messaging service that complies with data protection laws.





#### How texting could improve your health

Published on HCHC (https://helencowan.co.uk)

The World Health Organization [10] describes how, in many places, people are more likely to have access to a mobile telephone than to clean water. Their "Be he@lthy, Be mobile" initiative harnesses the power and reach of mobile phones to help people across the world make healthier lifestyle choices, with the aim of preventing and managing diseases such as cancer, diabetes and heart disease.



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