

# A prospective audit examining non-attendance at a surgical outpatients clinic in Mater Dei Hospital, Malta, and methods to reduce this problem

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## Abstract

Non-attendance at hospital outpatient clinics is a longstanding issue that has potentially serious clinical implications, and contributes a significant financial burden to health care services. The aims of this study were to identify the rate of non-attendance at a surgical outpatients clinic in Mater Dei Hospital, Malta, ascertain the reasons for non-attendance, and to identify patients' opinions on the implementation of a text-messaging reminder system as a means of reducing the non-attendance rate. Four outpatient clinics were observed over one month and the total number of appointments documented. Non-attenders were contacted via telephone call and asked to explain their non-attendance and whether a text-messaging reminder system may have increased their likelihood of attendance. Of the 266 appointments (217 females, 49 males, mean age 56 + 16 years), 80 patients failed to turn up, representing a 30% non-attendance rate.

The main reasons for non-attendance were forgetfulness (53%), and unawareness of the appointment (26%). 90% of non-attenders stated that a text-messaging reminder might have prevented them missing their appointment, with 97% suggesting that such a system would be an acceptable method of trying to reduce this problem. Thus application of a text-messaging reminder system represents a potential solution for reducing the high rate of missed outpatient appointments, which is both cost effective and well accepted by patients.

## Key words

Non-attendance, Text-message, Outpatients

## Introduction

Non-attendance at hospital outpatient clinics is a longstanding issue that has potentially serious clinical implications for the non-attender, and deprives other patients of the opportunity to receive timely care.<sup>1-2</sup> Furthermore, the financial burden of non-attendance is significant, estimated at over £600 million per year in the UK.<sup>2</sup> This problem has been tackled by various strategies.<sup>3</sup> Overbooking clinics to compensate for the estimated number of non-attenders represents a poor use of resources. However, according to recent studies using automated reminders, in particular text-messaging reminder systems, offer the most promising solution to overcome this problem.<sup>3-4</sup> The major reasons for non-attendance reported in the literature are generally independent of specialty and include forgetfulness, illness, transport problems, patients seen in another clinic or unaware of the appointment, clinic running late, and work commitments.<sup>5</sup>

In addition to identifying the rate of non-attendance at a surgical outpatients clinic in Mater Dei Hospital, Malta, the aims of this study were to ascertain the reasons why patients missed their appointment, and to identify patients' opinions on the implementation of a text-messaging reminder system as a means of reducing the non-attendance rate.

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## Method

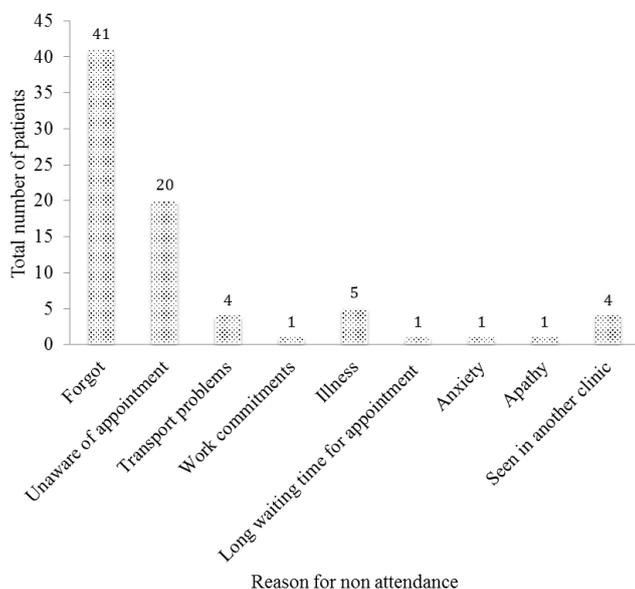
This study was conducted within Mater Dei Hospital, Malta, after being registered with the local audit committee and approved by the data protection management. Over a one-month period, four outpatient clinics of a general surgical firm with a specialist interest in breast surgery were observed. The total number of patients at each clinic was documented, along with the nature of their appointment (follow up or new case), patient age and sex. Patients who failed to attend were contacted via telephone call, and after being verbally consented for participation in a questionnaire, were asked to give an explanation for their non-attendance. Each patient was also asked if a text-messaging reminder system is an acceptable method of trying to reduce non-attendance and whether such a system might have prevented their non-attendance. The confidentiality of their responses was emphasised to all patients.

The results were tabulated and analysed using SPSS Version 20 (SPSS Inc., Chicago, USA). The test to determine differences between two population proportions was used where appropriate. Statistical significance was accepted at  $p < 0.05$ . Values are presented as mean + standard deviation.

## Results

Of the 266 patients (217 females, 49 males, mean age 56 + 16 years old) who were requested to attend one of the four outpatient clinics analysed during this study, 80 patients failed to turn up, representing a 30% non-attendance rate. Follow-up appointments had an increased rate of non-attendance compared to new case referrals (33% vs. 24%, respectively), although this difference was non-significant ( $p > 0.05$ ).

**Figure I:** Reasons for non attendance over four outpatients clinics



78 of the 80 patients who failed to turn up to their appointment were contacted via telephone call, all of which consented to the questionnaire. The reasons for non-attendance are shown in Figure I, with the main explanation being they simply forgot (41 patients; 53%), closely followed by patients not being aware of the appointment (20 patients; 26%). 70 out of the 78 patients contacted (90 %) stated that a simple text-messaging reminder might have prevented them missing their appointment. 76 out of 78 of the patients contacted (97%) suggested that such a system would be an acceptable method of trying to reduce non-attendance.

## Discussion

In 2009 the average non-attendance rate at Mater Dei Hospital, Malta was 29%, similar to the 30% rate of non-attendance noted in this present study and comparable to other studies.<sup>6-7</sup> To the authors knowledge this is the first study that attempts to establish the reasons why patients of the Maltese population fail to attend outpatient clinics within Mater Dei Hospital, Malta. The two main reasons for non-attendance, accounting for 79% of responses, were forgetfulness and unawareness of the appointment, and are similar to those reported in previous studies.<sup>1-5-7-8</sup>

Various solutions to non-attendance at outpatient clinics have been proposed, including the overbooking clinics to compensate for the expected number of non-attenders.<sup>9</sup> However, this represents an inefficient use of resources and may be counterproductive when the non-attendance rate is low, as in such circumstances appointment times would rarely be met.<sup>10</sup> While earlier studies report that telephone and postal reminders can reduce non-attendance rates, recently several studies report an increasing success and popularity of text-messaging reminders.<sup>2-3-4-7</sup> One such study reported a reduction of between 25% and 28% in missed outpatient clinic appointments at four community mental health clinics in London, translating to national cost savings of over £150 million per year in addition to the obvious clinical benefits afforded by patients turning up to their appointment.<sup>7</sup> Furthermore, a recent randomized control trial noted text-message reminders to be equivalent to telephone reminders in reducing the proportion of missed appointments in an academic primary care clinic and are more cost-effective.<sup>4</sup> This study also reported text-messaging reminder systems to be well accepted by all patients, a finding supported by our study.

This study has certain limitations. It was a single centre study involving predominantly female patients attending a general surgical outpatients clinic with a special interest in breast surgery. Thus in spite of our results being comparable to other studies, their application to other clinical settings may be limited. Moreover, although 90% of the patients who did not attend their appointment suggested that a text-messaging

reminder system might have prevented their non-attendance, it can only be surmised that the implementation of such a system may translate to fewer missed appointments. We suggest that more scientifically sound randomized controlled trials within the Maltese population are needed to confirm or refute this finding. To add further support for the need to reduce missed outpatient appointments, future studies should attempt to analyse the clinical significance of missed appointments.

This study focused predominantly on patient-related factors to explain the non-attendance rate. Future studies within Mater Dei Hospital, Malta, should also explore how aspects of the health care provider's service influence non-attendance at outpatient appointments. Indeed studies have shown how such aspects, including the amount of notice patients are given for their outpatient appointments, have a major influence in explaining the non-attendance rate at outpatient clinics.<sup>1-2</sup>

In conclusion, this study indicates that the non-attendance rate at a surgical outpatients clinic in Mater Dei Hospital, Malta, is high and comparable to other institutions. The main reasons why patients failed to attend their outpatient clinic were because they simply forgot or were unaware of the appointment. Application of a text-messaging reminder system represents a potential solution to this problem and is both cost effective and well accepted by patients.

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