

Feasibility of Using Text Messaging and Timeline Followback Method to Monitor Patient Compliance to Exercises

CHOI Yue Kwan¹, CHEUK Christina¹, LEE Man Kei¹, LEUNG Kwan Wa¹

1. Department of Family Medicine, the New Territories East Cluster, Hospital Authority

Introduction

Implementation of health behaviour change is a common management strategy used in primary care and an effective mean to monitor patient compliance to health behaviour changes is crucial.



The traditional phone call communication with patients could be time-consuming and labour-intensive. Due to the widespread use of mobile technology, text messaging would be a useful method for patient communication in healthcare. It allows instant transfer of information to large number of patients.

The Timeline Followback (TLFB) is a calendar that retrospectively assess a target behaviour daily over a specified time. It has been shown to be useful for monitoring addictive behaviour and exercise compliance in both clinical and research settings.

Method

Target patients:
patients with trigger finger, who had received steroid injection at the Prince of Wales Hospital family medicine specialist clinic

invited to perform regular finger gliding exercises twice per day (Figure 1)

exercise compliance were monitored by TLFB method (Table 1)



Online Calendar Sent by SMS

- It required the participant to have retrospective exercise record for the past 1 week
- The exercise calendar was sent weekly for the first 4 weeks and then at the 8th week

Figure 1. The Finger Gliding Exercises:

Perform each exercise 10 times, twice per day



Table 1. The Timeline Followback:

Online calendar sent by SMS for exercise record

請選擇你在*過去一星期*有進行「手指肌腱滑動運動」的時段 (drop down your exercise record for the past 1wk)

	早上 am	下午 pm
星期四 (今天) Thurs	<input type="checkbox"/>	<input type="checkbox"/>
星期三 (昨天) Wed	<input type="checkbox"/>	<input type="checkbox"/>
星期二 Tue	<input type="checkbox"/>	<input type="checkbox"/>
星期一 Mon	<input type="checkbox"/>	<input type="checkbox"/>
星期日 Sun	<input type="checkbox"/>	<input type="checkbox"/>
星期六 Sat	<input type="checkbox"/>	<input type="checkbox"/>
星期五 Fri	<input type="checkbox"/>	<input type="checkbox"/>

Twenty-five trigger finger patients, mean age 61.3, were recruited from the period of August 2021 to January 2022 and two dropped out from the study.

Results

Total participants
23

115 online
exercise
calendars sent

Response rate
96%

The weekly exercise compliance rates



Conclusion

It is feasible to use text messaging to monitor patients compliance to exercises in a family medicine clinic. The TLFB can serve as a tool to assess behaviour change and a reminder to enhance patient compliance. The online calendar is user-friendly and has high response rate. It is an efficient and cost-effective means for remote monitoring of patient compliance and helps to improve health outcomes.