

A Service Improvement Project to Increase Attendance at NHS Health Checks in Primary Care via an SMS Reminder System

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Introduction

- **NHS Health Checks (HCs)** were introduced in 2009 to screen the public for **cardiovascular disease (CVD)** risk factors to **reduce the number** of premature CVD deaths.¹
- A HC is a series of assessments completed on a patient aged **40-74** with no previously identified CVD risk factors. It should be **repeated every five years** with areas of high risk identified and managed.²
- Most recent attendance rates for the GP surgery where this project was run were **18.3%**, compared to a national target of **75%**.³

Methodology

- Patients received a **standard invitation** to their HC by SMS and then a further SMS reminder message after **four and eight weeks**.
- **Any patient aged 40-74** at the GP surgery **without a previous diagnosis of CVD** was eligible for invitation.
- NHS HCs were run out of a local hub; patients were selected randomly to allow for availability of appointments.
- The **measured outcome was patient attendance at their HC**.
- A **2-independent proportions comparison test** was used for analysis.

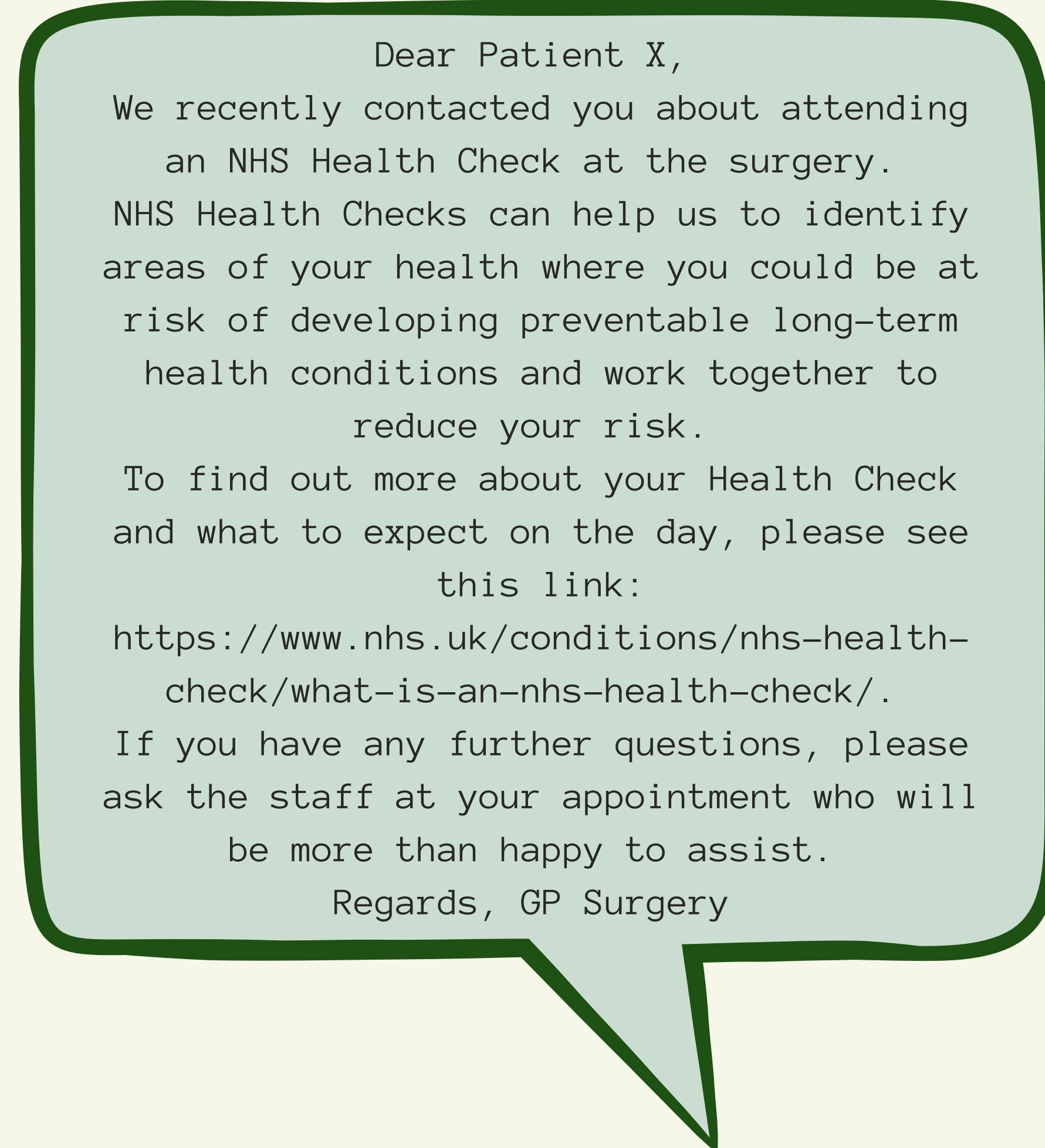


Figure 1: The four week reminder message

Further recommendations

- To complete the same study over a **longer time period** with a **larger sample size** - ideally 12 months with all eligible patients.
- Adjust the **time between invites** to find the **optimum reminder time frame**, eg. a 2-week or 6-week reminder.
- **Collect qualitative data from non-attenders** to understand reasons why people don't attend, and where possible, change the methods to account for some of these.

Measurements taken at an NHS Health Check	
Age	Gender
Ethnicity	BMI
Smoking status	Cholesterol level
Family history of coronary heart disease	Alcohol use disorder identification test (AUDIT) score
Blood pressure	CVD risk score (Q-risk)

Table 1: The assessments completed on patients at their NHS Health Checks

Results

- The **4-week reminder** message proved to **significantly increase** the attendance of patients at NHS HCs (n=83, p<0.05, CI=0.95), with an **increase of 13.3%** attendance (see Figure 2).
- The **8-week reminder** was only sent to one group of patients (n=20) due to the hub closing, however it showed **no effect** on increasing attendance in these patients (p=0.5).
- The **overall attendance** rate was still only **45.8%** compared to the national target of 75%.

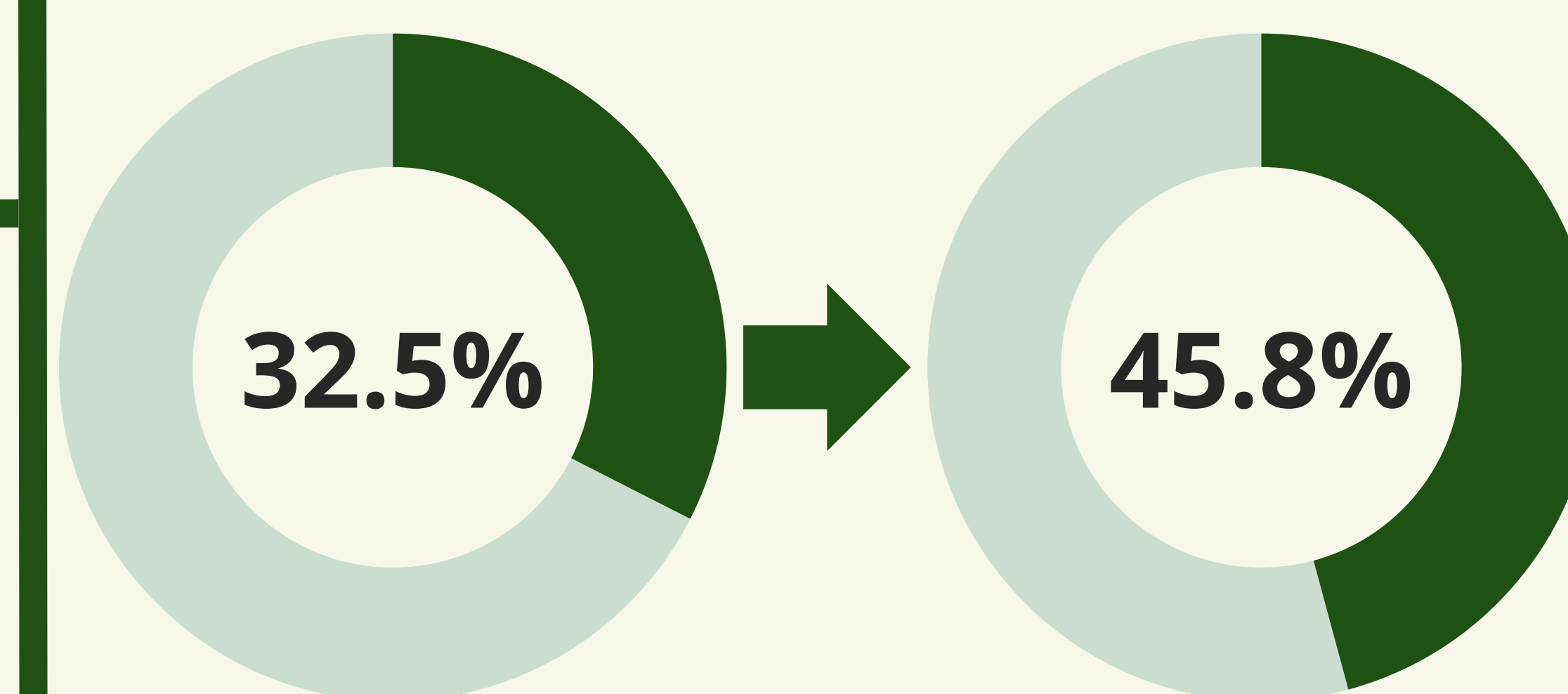


Figure 2: The 4-week reminder message increased attendance from 32.5% after initial invite to 45.8%.

Objective

This project aimed to **increase attendance** at NHS HCs within one GP surgery in East Berkshire by sending a **4-week and 8-week reminder SMS message**.

Existing literature

- **Mixed evidence** behind **behaviourally influenced changes** to increase attendance at NHS HC.⁴⁻⁸
- **Telephone calls** proved to be the most successful intervention at **47.6%** attendance however, it is the most **labour-intensive** intervention studied.⁴
- One study has looked at 1-week **SMS message reminders** as an intervention, which showed a **significant increase** in attendance (+12%, p<0.00).⁸

Discussion

- The aim of this project, was to increase attendance at NHS HCs at one GP surgery. The combined data shows that this **aim was met** with the 4-week reminder (n=83, p<0.05, CI: 95%), with a **significant increase in attendance from 32.5% to 45.8%**. This was a **relatively small study** (n=83) and only completed at one GP surgery so the results may not be generalisable. Therefore, whilst it is not possible to conclude that a 4-week reminder is successful at increasing further attendance from this study alone it does **support SMS reminders as being a successful intervention**.
- Only **one group of patients received the 8-week reminder** message due to the hub closing. However, this message did not encourage any further patients to attend, suggesting that it was **not a useful intervention (p=0.5)**.
- Combining the two points above, it is possible to conclude that an SMS reminder sent within a **short period** of time from invitation can **impact patient behaviour**, however patients who do not respond to the initial reminder are **unlikely to respond to a further reminder**.
- Overall attendance rate was **45.8%**. Whilst this is still not close to the 75% national target, it is much **closer** than the current attendance rates for this borough, **18.3%**, and national attendance, **26.3%**.³