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## Effect of NHS walk-in centre on local primary healthcare services: before and after observational study

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### Abstract

**Objective** To assess the effect of an NHS walk-in centre on local primary and emergency healthcare services.

**Design** Before and after observational study.

**Setting** Loughborough, which had an NHS walk-in centre, and Market Harborough, the control town.

**Participants** 12 general practices.

**Main outcome measures** Mean daily rate of emergency general practitioner consultations, mean number of half days to the sixth bookable routine appointment, and attendance rates at out of hours services, minor injuries units, and accident and emergency departments.

**Results** The change between the before and after study periods was not significantly different in the two towns for daily rate of emergency general practice consultations (mean difference  $-0.02/1000$  population, 95% confidence interval  $-0.75$  to  $0.71$ ), the time to the sixth bookable routine appointment ( $-0.24$  half-days,  $-1.85$  to  $1.37$ ), and daily rate of attendances at out of hours services ( $0.07/1000$  population,  $-0.06$  to  $0.19$ ). However, attendance at the local minor injuries unit was significantly higher in Loughborough than Market Harborough (rate ratio  $1.22$ ,  $1.12$  to  $1.33$ ). Non-ambulance attendances at accident and emergency departments fell less in Loughborough than Market Harborough (rate ratio  $1.17$ ,  $1.03$  to  $1.33$ ).

**Conclusions** The NHS walk-in centre did not greatly affect the workload of local general practitioners. However, the workload of the local minor injuries unit increased significantly, probably because it was in the same building as the walk-in centre.

### Introduction

NHS primary care walk-in centres were introduced in 2000 to improve access to health care.<sup>1</sup> However, general practitioners were concerned that the centres might increase their workload by being an additional source of referrals to them, legitimising demands to treat minor self limiting illnesses, and fragmenting a primary care service based on continuity of care.<sup>2</sup> The centres could also alter how people use minor injuries units, accident and emergency departments, and NHS Direct (a nurse-led telephone helpline service).

The national evaluation of pilot NHS walk-in centres<sup>3</sup> relied on retrospective and routinely collected data, which limited its ability to determine the effect of

the centres on other services. We report a prospective study of the effect of an NHS walk-in centre on local primary and emergency healthcare services.

### Methods

We compared the activity of primary and emergency healthcare services for two towns in Leicestershire: Loughborough, which has an NHS walk-in centre, and Market Harborough, the control town. We recruited nine of 13 general practices with patients in Loughborough and three of four practices with patients in Market Harborough. The participating Loughborough practices ranged from one to seven partners and the Market Harborough practices ranged from four to 10 partners. No other initiatives or changes in primary care provision were introduced during the study.

We collected data from participating practices using a combination of daily phone calls, data collection forms, and routine computerised data. We determined the number of emergency consultations, the date and time of the sixth routine appointment that could be booked in advance (a measure of availability of routine appointments<sup>4</sup>), the number of attendances at or visits by out of hours services, the number of attendances at the minor injuries unit in each town, the number of attendances at the three local major accident and emergency departments, and the number of calls to the local NHS Direct call centre.

The NHS walk-in centre opened on 1 July 2000 and we compared data for January to June 2000 and January to June 2001. We compared changes between the two periods in Loughborough with those in Market Harborough to allow for any trends over time.

We calculated differences in attendance rates per 1000 population for each practice before and after the centre opened. We then compared the means of the differences in the practices in each town. We made similar comparisons for daily availability of routine appointments.

We calculated rate ratios for attendance at local minor injuries units and accident and emergency departments with and without adjustment for changes in attendance rates in the control town between the two study periods.

### Results

The participating practices covered about 74% of the population in Loughborough and 91% of the popula-

tion in Market Harborough. Age distributions and the proportion of patients from ethnic minorities (less than 5%) were similar in both towns. Distribution of deprivation payments indicated that the practice populations in Loughborough were more economically deprived (see [bmj.com](http://bmj.com) for details). These characteristics remained constant during the study. During the study, the practice populations increased by 1.2% in Loughborough and 3.3% in Market Harborough.

During January to June 2001, there were 11 693 attendances at the NHS walk-in centre. Of these, 8369 (72%) were by people registered with the study practices, 1049 (9%) by people registered with local non-participating practices, and 2275 (19%) by people from out of the area.

There was no mean difference in daily emergency general practice consultations in Loughborough before and after the walk-in centre opened. Compared with the control practices, intervention practices had 0.02 fewer daily emergency consultations per 1000 population (95% confidence interval -0.75 to 0.71).

Time to the sixth bookable routine appointment increased during the study in practices in both towns. The time was slightly shorter for Loughborough practices than for control practices, but the difference was not significant (-0.24 half days, 95% confidence interval -1.85 to 1.37).

There was no significant difference between the two towns in change in use of out of hours services before and after opening of the walk-in centre (0.07 daily attendances per 1000 population, 95% confidence interval -0.06 to 0.19).

Attendance by the Loughborough population at its local minor injuries unit increased by 14% between the two study periods (rate ratio 1.14, 95% confidence interval 1.09 to 1.19). This contrasted with a decrease in use of 7% in Market Harborough (table). After we adjusted for the change in attendance rate of the control area population, the Loughborough population had an increase of 22% (12% to 33%).

The attendance rate of the Loughborough population at local accident and emergency departments increased by 9% between the two study periods (table). When we adjusted for the slight decrease in attendance by the control area population, the attendance rate increased by 10% (adjusted rate ratio 1.10, 1.00 to 1.21).

When we analysed attendances in which patients did not arrive by ambulance, the rate of attendance fell by 7% (rate ratio 0.93, 0.85 to 1.01) in Loughborough and by 21% in Market Harborough (0.79, 0.72 to 0.87). The rate ratio adjusted for changes in the control population was 1.17 (1.03 to 1.33).

The annual rate of calls to NHS Direct (East Midlands) doubled in both areas, from 20 to 38 per 1000 population in Loughborough (rate ratio 1.88, 1.70 to 2.07) and from 17 to 35 per 1000 population in Market Harborough (2.13, 1.80 to 2.52).

## Discussion

The NHS walk-in centre in our study was well used, averaging almost 2000 attendances a month. However, we found no significant effect on general practice emergency consultations, the availability of routine appointments, use of out of hours services, or the number of calls to NHS Direct. Fears of a huge

Annual rates of attendance (per 1000 population) at local minor injuries units and accident and emergency departments before and after opening of NHS walk-in centre in Loughborough

	Jan-June 2000 (before)	Jan-June 2001 (after)	Rate ratio (95% CI)	Adjusted rate ratio* (95% CI)
<b>Minor injuries units</b>				
Loughborough	138	156	1.14 (1.09 to 1.19)	1.22 (1.12 to 1.33)
Market Harborough	105	95	0.93 (0.87 to 1.00)	—
<b>Accident and emergency departments</b>				
All attendances:				
Loughborough	63	67	1.09 (1.03 to 1.16)	1.10 (1.00 to 1.21)
Market Harborough	79	76	0.99 (0.92 to 1.06)	—
Non-ambulance attendances:				
Loughborough	35	32	0.93 (0.85 to 1.01)	1.17 (1.03 to 1.33)
Market Harborough	52	40	0.79 (0.72 to 0.87)	—

\*Adjusted for changes in attendances in control area (Market Harborough).

increase, or hopes for a decrease, in the use of general practitioner services as a result of NHS walk-in centres therefore seem unjustified.

The increased use of the minor injuries unit in Loughborough is likely to be because it was in the same premises as the NHS walk-in centre. It was therefore affected by the publicity and attendances at the walk-in centre, and our findings cannot be generalised to other towns.

The fall in non-ambulance attendances at accident and emergency departments was greater in Market Harborough than Loughborough. Indeed, after we adjusted for the fall in the control group, attendances increased by 17% in Loughborough. Part of the difference may be explained by the higher baseline rate of attendances in Market Harborough.

Our observational study of one NHS walk-in centre has limitations such as bias and confounding found commonly in observational studies. More powerful techniques, such as randomised controlled trials, are not feasible for the evaluation of rapid changes in the organisation of care in response to government policy.

## Limitations and strengths

The small number of practices in the study means that some of our analyses, including those on emergency general practice attendances, out of hours services, and availability of routine appointments, have limited power to detect important clinical differences. Changes in populations over the study also make it difficult to interpret shifts in use of services.

The strengths of our study are that we collected contemporaneous data, compared the behaviour of specific populations at various points of contact with the NHS, and included a control area and therefore identified two discrete communities rather than parts of a large conurbation. We chose Market Harborough as the control area because it was similar geographically and demographically to Loughborough, apart from its lower level of deprivation. Market Harborough's small number of practices limited the power of our study, but no other local town was a suitable match.

## Implications

Sociological research has recognised for some time that demand for services is influenced by the availability and range of services provided.<sup>5</sup> Our data suggest that NHS walk-in centres are unlikely to have a great effect on demand for general practitioners' services but may have little understood effects on demand for other healthcare services. The walk-in centre was

### What is already known on this topic

Walk-in centres are well established in North America but differ from NHS centres as they are run by doctors not nurses

### What this study adds

Introduction of an NHS walk-in centre did not affect the workload of local general practitioners

Attendance increased at the minor injuries unit, which was in the same building

Non-ambulance attendances at accident and emergency departments decreased but not by as much as in the control area

well used during the study, including by people not registered with a local general practitioner. These centres may therefore have a role in satisfying particular needs for primary care services. Whether this is a cost effective use of primary care resources, in both financial and staff terms, remains to be determined.

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## Impact of NHS walk-in centres on the workload of other local healthcare providers: time series analysis

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### Abstract

**Objectives** To assess the impact of NHS walk-in centres on the workload of local accident and emergency departments, general practices, and out of hours services.

**Design** Time series analysis in walk-in centre sites with no-treatment control series in matched sites.

**Setting** Walk-in centres and matched control towns without walk-in centres in England.

**Participants** 20 accident and emergency departments, 40 general practices, and 14 out of hours services within 3 km of a walk-in centre or the centre of a control town.

**Main outcome measures** Mean number (accident and emergency departments) or rate (general practices and out of hours services) of consultations per month in the 12 month periods before and after an index date.

**Results** A reduction in consultations at emergency departments (-175 (95% confidence interval -387 to 36) consultations per department per month) and general practices (-19.8 (-53.3 to 13.8) consultations per 1000 patients per month) close to walk-in centres became apparent, although these reductions were not statistically significant. Walk-in centres did not have any impact on consultations on out of hours services.

**Conclusion** It will be necessary to assess the impact of walk-in centres in a larger number of sites and over a prolonged period, to determine whether they reduce the demand on other local NHS providers.

### Introduction

Forty NHS walk-in centres have been established as part of the government's commitment to modernise the NHS.<sup>1</sup> One of the aims of these primarily nurse led

centres is to reduce demand on other NHS providers, particularly general practitioners and accident and emergency departments in hospitals. However, critics have indicated that increasing the accessibility of care may increase total demand on the NHS, without reducing the workload of existing services.<sup>2</sup>

Studies of walk-in centres in North America have not shown that they are likely to reduce the workload of other neighbouring health services.<sup>3-4</sup> Research on nurse led units for minor injuries in the United Kingdom (which have some similarities with walk-in centres) has shown that people use the units mainly as an alternative to accident and emergency departments rather than as an alternative to general practice.<sup>5-6</sup> The implementation of NHS walk-in centres has been subject to a comprehensive independent national evaluation. This paper describes one component of this evaluation.

### Methods

We identified a purposive sample of 10 walk-in centre sites (taking into account the geographical spread of locations and the type of services offered) and 10 control sites: towns of similar size, in the same region, but as distant as possible from any existing walk-in centre.

We asked the health authority for each walk-in centre and control town to provide lists of all general practitioners' surgeries within 3 km of the walk-in centre (or town centre in control sites), and to identify the closest accident and emergency department, and the largest general practitioners' out of hours service covering the walk-in centre or town centre. We randomly selected eight general practices in each location, stratified by size (three or fewer partners and four or more