The impact of NHS walk-in centres on A&E services

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1 Executive summary

Background

A new wave of NHS walk-in centres opened during 2004, with many of them co-located with Accident and Emergency (A&E) departments. These A&E focused walk-in centres are intended to provide greater choice in how people access health care, reduce pressure on A&E departments in order to help them reach the 4-hour target for access to emergency care, and provide a more appropriate environment for people attending with less serious health problems.

This study was commissioned to evaluate whether these new centres achieve their aims. Opening a walk-in centre next to an A&E department may provide greater access, leading to increased patient throughput, but without relieving pressure on the A&E department. It is unclear whether patients treated in a nurse-led walk-in centre would have a similar experience and achieve similar outcomes as those seen in traditional A&E departments. There may be consequences on other parts of the NHS if those seen in a walk-in centre are more likely to reconsult in the near future with the same problem. It is important to examine separately the effects of these new centres for those with minor and more serious health problems. Finally, it is important to consider whether establishing a walk-in centre leads to changes in costs per patient treated.

Aims of the study

To evaluate the impact of new A&E focused walk-in centres on patient satisfaction with regard to access to care, consultation rates, waiting times, process of care, outcome of care and costs of care.

Research objectives

1. To describe the local context, structure and process of implementation of new A&E focused walk-in centres.
2. To determine the impact of developing an A&E focused walk-in centre on the total number of patients attending the hospital for care at the A&E department and/or the new walk-in centre.
3. To assess the visit duration for patients attending A&E departments before, and combined A&E/walk-in centre sites after, the implementation of adjacent NHS walk-in centres compared with control A&E departments.
4. To assess the process of care and treatment provided for patients attending A&E departments before, and combined A&E/walk-in centre sites after, the implementation of adjacent NHS walk-in centres compared with control A&E departments.
5. To assess resource utilisation and costs of care for patients attending A&E departments before, and combined A&E/walk-in centre sites after, the implementation of adjacent NHS walk-in centres compared with control A&E departments.
6. To compare visit duration, resource utilisation and costs of care separately for patients with 'minor' problems and 'major' problems when managed in a walk-in centre, an A&E department with an adjacent walk-in centre, or a control A&E department without an adjacent walk-in centre.
7. To compare clinical outcomes, re-attendance rates, patient satisfaction and costs of providing care for people with 'minor' problems four weeks after they attended a combined A&E/walk-in centre or a matched control A&E department.

Overview of design

A controlled before-and-after study was conducted. All eight of the sites with a new walk-in centre established in 2004 and co-located with an A&E department were compared with matched A&E departments with no co-located walk-in centre facilities.

At the outset it was assumed that the new walk-in centres would work in a closely integrated way with their co-located A&E departments and that patients would be assessed and allocated to

either the walk-in centre or the A&E department according to the nature of their problem. Therefore, it was not appropriate to compare patients seen in walk-in centres with those seen in their adjacent A&E departments as there would be systematic differences between these patient groups. The more appropriate comparison is between patients attending an A&E/walk-in centre site (i.e. the walk-in centre and A&E department combined as an 'intervention' site) versus those attending similar A&E departments which do not have a co-located walk-in centre (i.e. a 'control' site).

Methods

The evaluation was based on information from a number of sources:

- ***Site visits or telephone interviews:*** All of the sites with walk-in centres were visited to collect information about the local context, aims of the centre, staffing, policies, services provided and infrastructure. For 'control' sites, similar information was obtained via telephone interviews with local managers.
- ***Data about monthly patient throughput and admissions:*** Each 'intervention' site provided details of the number of patients consulting in their facility on a monthly basis for a period spanning six months prior to walk-in centre opening and six months after. Details of the number of patients admitted or discharged were also obtained. Similar data was collected over the same time periods at 'control' sites.
- ***Detailed data from anonymised patient records:*** Each 'intervention' site provided detailed anonymised data from patient records for 200 patients consulting *before* and 200 patients consulting *after* the walk-in centre opened. Similar data was collected for the same time periods at 'control' sites. These patients were randomly selected by the research team from a list of ID numbers of patients consulting in a two-week period at least three months after the walk-in centre opened, and the same period a year earlier, before the walk-in centre opened. Data extracted from patients' records included whether they attended the walk-in centre or A&E department, age and sex, investigations, treatments, professional staff consulted, times of arrival, consultation, admission or discharge, and type of disposal including details of onward referrals.
- ***Postal questionnaire survey***: From the above samples of 200 people consulting in each site before and after the walk-in centre opened, all those who were not admitted to hospital were sent an anonymous postal questionnaire four weeks after their consultation. Patients admitted were not included because the focus of this research was on the less seriously ill patients, many of whom were treated in walk-in centres. The questionnaire was based on that used in the NHS National Survey of Emergency Departments 2003, but with additional questions about patient choice, convenience and re-consultations with the same health problem since attending the hospital.
- ***Economic data:*** All sites provided data about resource use before and after the opening of the walk-in centre, including clinical staff, fixed and semi-fixed costs. Estimation of variable costs was based on data obtained from the anonymised patient records and the questionnaire survey described above. Because the clinical staff costs were particularly relevant to this study, a 'time and motion' study was conducted in four sites to obtain data about the proportion of time spent by different types of staff with different types of patient.

Results

Implementation

The latest wave of eight walk-in centres co-located with A&E departments has implemented the walk-in centre concept to a more limited extent than previous waves. Generally speaking, from the perspective of patients, the service appears little different from the way it was provided before. Three of the new facilities were not known locally as walk-in centres, and in several sites the walk-in centre was effectively a re-badging of a pre-existing service. There was resistance in some sites to the concept of providing a more convenient walk in service, due to concerns that increasing accessibility would lead to an increase in demand. The main function of the walk-in

centre was seen as being to reduce demand on the A&E department. At most sites, patients could not directly walk in to the new centre, but were directed there by a receptionist or following nurse assessment.

Impact on patient throughput

Patient throughput increased during the study, both at hospitals with and without walk-in centres. Whilst the point estimate suggested that there was a greater increase in throughput at 'intervention' sites i.e. those with walk-in centres, this estimate had a wide confidence interval including zero, indicating that this finding may have possibly occurred due to chance. The limited impact on patient throughput may be related to the fact that most walk-in centres did not have a distinct identity and none had advertised their existence to the local population. There was also considerable variability between walk-in centre sites e.g. at the hospital site with the most distinct NHS walk-in centre there was a 38% increase in total patient throughput over one year.

Impact on visit duration

The mean visit duration (time from arrival to being seen, treated, admitted or discharged) reduced during the study at both sites with and without walk-in centres, although there was no significant difference between these types of site. The proportion of patients managed within the target time of four hours was 94.8% at both 'intervention' and 'control' sites.

Process of care

The process of care appears to be similar in sites with and without walk-in centres, although patients attending a walk-in centre are more likely to be managed by a nurse, without involvement of a doctor, than those seen in A&E departments at either 'intervention' or 'control' sites. The value of this comparison is, however, limited since patients were, in most cases, being allocated at 'intervention' sites to the walk-in centre because they were suitable for nurse care, so were not broadly comparable to those seen in A&E departments.

Resource utilisation and costs

The cost of running a site with a walk-in centre was greater than that without a walk-in centre, although, since patient throughput also increased on average in walk-in centre sites, the cost per patient was very similar between 'intervention' and 'control' sites.

Patient experience

The survey findings are limited by the modest response rate of 36%. This raises some concerns regarding the representativeness of the experiences of respondents to the wider patient population.

Relatively few people made an active choice to attend a walk-in centre. Most of the people recorded as having been seen in a walk-in centre had chosen initially to attend the A&E department and had subsequently been re-directed to the walk-in centre. More than half those attending a walk-in centre did not even realise that they were seen in a walk-in centre, stating in their survey response that they had been seen in an A&E department. When asked where they would have preferred to be seen, a third of those seen in a walk-in centre would rather have been seen in an A&E department and a further third did not mind where they were seen. Only 22% of patients seen in walk-in centres, and only 12% of patients seen in A&E departments at control sites, expressed a preference to be seen in an NHS walk-in centre.

Few differences were observed in patients' perceptions of their care. Patients attending sites with walk-in centres did not find their care any more convenient and they were no more likely to state overall satisfaction with their visit to the hospital.

Those consulting in walk-in centres did express fewer problems than those consulting in the co-located A&E departments with regard to a number of aspects of their care and their consultation. This included their visit duration, the cleanliness of the hospital, the time they were given to discuss problems, discussion of their fears and anxieties, whether their views were listened to and whether they were given sufficient privacy. However, these comparisons should be treated with caution because of the case-mix differences between patients seen in a walk-in centre or

A&E environment. The more appropriate comparison is between all patients consulting at A&E or a walk-in centre in hospitals with walk-in centres versus those seen in A&E in hospitals without walk-in centres. On this basis, there were no significant differences in relation to these aspects of care.

Re-attendance rates and patient outcomes

Almost half the people in the study had a re-consultation about the same problem in the four weeks after they attended the hospital, and the majority of these consultations were with doctors or nurses in general practice. There was no evidence of any differences between patients seen at hospitals with or without walk-in centres. Neither was there any evidence of differences in patient outcomes.

Conclusions

The overall conclusion is that most of these new walk-in centres are providing a slightly different organisational environment, with a greater role for nurse management of patients, compared with standard A&E departments. In most cases, the walk-in centre concept appears to have been implemented to only a limited extent, although there are considerable differences between individual sites. This is reflected in the variability in the findings of this study at different sites.

On average, outcomes and costs per patient were similar in hospitals with and without walk-in centres. Therefore, these walk-in centres appear to have achieved the aim of diverting some activity from A&E departments to walk-in centres, with no evidence of detriment or benefit to patients or health service costs.

It is difficult to determine if they have achieved the aim of helping A&E departments meet access targets. Visit durations improved at sites with and without walk-in centres, and it is likely that those sites without walk-in centres may have used other strategies to reduce waiting times.

There is no evidence that walk-in centres co-located with A&E departments achieved the aim of increase patient choice and the accessibility of care. This is likely to be related to the finding that, at present, these centres have a low public profile, with most activity arising through re-direction from the co-located A&E department. Few people expressed a preference to attend a walk-in centre, with most people choosing to attend an A&E department.

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2 The impact of NHS Walk-In Centres on A&E services

2.1 Background

Following on from the experience gained in earlier pilot NHS walk-in centres, a new wave of walk-in centres was funded by the Department of Health to be opened during Spring 2004. Many of these were to be sited in close proximity to an A&E department, with the explicit aim of helping the nearby A&E department to deliver the NHS Plan target that patients all should be seen, treated, admitted or discharged within four hours.[1-4] A number of other walk-in centres were due to open on hospital sites without an A&E department or in primary care premises. These centres are mainly aiming to improve access to local primary care, and are less likely to have a direct effect on access to A&E services, so are excluded from this study.

The expansion of the walk-in centre initiative reflects the policy determination to increase choice in access to primary health care, by providing convenient alternatives which meet the needs of different sectors of the population.[1;3]

A new policy determinant for establishing these new walk in centres was to assist in reducing attendances at A&E departments and, hence, improve waiting times. Several other policy initiatives were also instigated at the same time to help achieve this aim, including changes in provision of services by various other health sectors[5] including ambulance services.[6] A recent systematic review has reviewed the initiatives to reduce attendances and waits in A&E departments.[7] Patients breaching the four-hour target have been identified as those requiring admission, those arriving by ambulance, those arriving at night, increased age and deprivation,[8] none of which are features associated with those who may utilise walk-in centres. However, the theory is that a reduction in total workload would allow more resources to be devoted to these groups.

It is important to determine whether the new A&E focused walk-in centres achieve their stated objectives of reducing waiting times in A&E departments and improving the accessibility of care, and also important to consider the resource implications of achieving these aims. It is likely that the investment in walk-in centres will deliver some improvements in care, but it is essential to measure the costs as well as the benefits of the policy.

Establishing walk-in centres near to A&E departments may have other effects which must be assessed in order to understand the full implications of the policy. Introducing a walk-in centre near to an A&E department may represent an increase in total health service capacity, or it may represent a different use of the same number of staff, or a combination of these. Traditionally, A&E departments have generally attempted to discourage attendance with conditions that are not considered to be 'accidents' or 'emergencies'.[9;10] Improving accessibility of care at A&E sites (or adjacent to an A&E department in a walk-in centre) may lead to an increase in overall attendance rates, which may tend to counteract any potential reduction in waiting times.

Many A&E departments already employ nurse practitioners to assess patients. There is evidence that such nurses, working in this setting, can provide care for patients with minor injuries that is equivalent to that of junior doctors.[11] However, it is necessary to examine whether the care that patients receive in a nurse-led walk-in centre environment is similar to that received by patients in the A&E department, since this may have implications for patient outcomes and use of resources. There is also evidence that general practitioners working in an A&E department use fewer resources than hospital doctors.[12;13] The same may be true for nurses working in a walk-in centre environment, which is more geared towards dealing with minor injuries and primary care type problems.

Changes in the process of care may in turn lead to differences in patient outcomes and in future patterns of consulting. It is important to determine whether people attending a walk-in centre experience a similar improvement in their clinical condition to those attending an A&E department. In addition, it is necessary to determine whether they are more or less likely to re-attend either in the A&E department, in the walk-in centre or in another health care facility such as general practice.

In a traditional A&E department, triage has been used to try to ensure that patients with serious problems are seen quickly, which means that patients with minor problems may have long waits. Separating the services by introducing a co-located NHS walk-in centre may lead to particular benefits for one or both patient groups (i.e. those with minor or major problems) and this should be considered separately.

The concept of a walk-in centre has evolved since the first wave was established in 2000-2. The original concept included the following characteristic features: [14-20]

- wide opening hours (normally 7.00 a.m. to 10.00 p.m. every day).
- walk-in access, without the need for an appointment.
- convenient location.
- providing information and treatment for minor conditions.
- offering health promotion, supporting people in caring for themselves.
- centres should build on, not compete with or duplicate existing services.
- they should maximise the role of nurses.
- nurses would be supported by computerised decision support systems.
- good links with local general practices.
- services which meet the needs of their identified population.

There are some specific issues which are particularly relevant to the fact that this latest wave of walk-in centres are co-located with A&E departments. Early walk-in centres were almost entirely led and staffed by nurses and this concept may be implemented differently in co-located sites. A&E departments, as previously noted, have a long-standing culture of trying to deter people from 'walking in' with minor illnesses,[10;21] so it will be important to consider how they manage the tension between this philosophy and the new approach to providing services when and where people choose to use them. The early waves of walk-in centres experienced some problems in using computerised decision support software for face to face consultations,[22] so it is interesting to consider whether the new wave of walk-in centres implement such systems. Finally, earlier walk-in centres were established in locations where there was perceived to be a particular need for a new service, with a view to reaching sections of the population not well served by existing provision. There was some evidence that these walk-in centres were used more by young adults and people who were better educated and more affluent than users of general practice as a whole, rather than those groups of patients with the greatest health needs.[23] This phenomenon is apparent internationally.[24] Therefore, it is important to consider the socio-demographic characteristics of people using the latest wave of walk-in centres co-located with A&E departments.

Earlier work did not demonstrate that walk-in centres relieved the pressure on A&E services,[22;25] although one study demonstrated an increase in a co-located minor injury service after the establishment of a walk-in centre.[26]

3 Methods

3.1 Research aim

To evaluate the impact of new A&E focused walk-in centres on patient satisfaction with regard to access to care, consultation rates, waiting times, process of care, outcome of care and costs of care.

3.2 Research objectives

1. To describe the local context, structure and process of implementation of new A&E focused walk-in centres.
2. To determine the impact of developing an A&E focused walk-in centre on the total number of patients attending the hospital for care at the A&E department and/or the new walk-in centre.
3. To assess the visit duration for patients attending A&E departments before, and combined A&E/walk-in centre sites after, the implementation of adjacent NHS walk-in centres compared with 'control' A&E departments.
4. To assess the process of care and treatment provided for patients attending A&E departments before, and combined A&E/walk-in centre sites after, the implementation of adjacent NHS walk-in centres compared with 'control' A&E departments.
5. To assess resource utilisation and costs of care for patients attending A&E departments before, and combined A&E/walk-in centre sites after, the implementation of adjacent NHS walk-in centres compared with 'control' A&E departments.
6. To compare visit duration, resource utilisation and costs of care separately for patients with 'minor' problems and 'major' problems when managed in a walk-in centre, an A&E department with an adjacent walk-in centre, or a 'control' A&E department without an adjacent walk-in centre.
7. To compare clinical outcomes, re-attendance rates, patient satisfaction and costs of providing care for people with 'minor' problems four weeks after they attended a combined A&E/walk-in centre or a matched 'control' A&E department.

3.3 Overview of design

A controlled before-and-after study, comprising all sites in England with newly established walk-in centres co-located with A&E departments, compared with selected A&E departments with no co-located walk-in centre facilities.

At the outset, it was assumed that the new walk-in centres work in a closely integrated way with their co-located A&E departments and that patients would be assessed and allocated to either the walk-in centre or the A&E department according to the nature of their problem. Therefore, it was not appropriate to compare patients seen in walk-in centres with those seen in their adjacent A&E departments as there would be systematic differences between these patient groups. The more appropriate comparison is between patients attending an A&E/walk-in centre site (i.e. the walk-in centre and A&E department combined as an 'intervention' site) versus those attending similar A&E departments which do not have a co-located walk-in centre (i.e. a 'control' site).

Throughout this description of research methods, when the term 'site' is used in relation to hospitals with a NHS walk-in centre and an A&E department, 'site' is used to mean both the walk-in centre and the A&E department as one combined facility.

3.4 Ethics and Research Governance approval

Ethics committee approval for the evaluation was sought from the Metropolitan Research Ethics Committee in April 2004, with a favourable opinion being given in July 2004.

Following ethics committee approval, each of the individual Trusts (acute and primary care) managing the proposed study sites was approached for research governance approval, along with honorary contracts as appropriate. This application process took several months but final approvals were forthcoming for all sixteen study locations by November 2004.

3.5 Selection of sites with NHS walk-in centres

Eight hospital sites were due to open a walk-in centre co-located with an A&E department within the time-frame necessary for data collection for the evaluation i.e. before December 2004. All eight of these were asked to take part in the research as 'intervention' sites and all agreed to participate.

Three further walk-in centres became operational during early 2005 and, whilst this was too late for them to be included in the evaluation, all three sites were visited to enable the research team to have a wider appreciation of the issues facing A&E focused walk-in centres. However, no details of the three 'late-opening' sites were included in this report since these sites were not involved in any formal data collection process or outcome measurements.

3.6 Matching of 'intervention' sites with 'control' sites

Eight A&E departments, without a co-located walk-in centre, were recruited to the study to act as 'control' sites. Each 'control' site was individually matched, as far as possible, to an 'intervention' site in relation to three factors: performance on the four-hour access target, size of department and case mix. This process is described in more detail below.

The main matching criteria was performance on the four-hour target i.e. the proportion of people seen, treated, admitted or discharged within four hours of arrival at A&E. It was anticipated that the new co-located walk-in centres were being specifically set up in A&E departments which reported longer waiting times than the average for all A&E departments, so it was important to use this as a primary matching criteria, to minimise imbalance between 'intervention' and 'control' sites.

The number of attendances at the A&E department was used as a measure of size of department whilst the proportion of these cases which were admitted to hospital was used as a proxy for case mix. Both measures were used as secondary matching criteria.

Data on these variables were provided by the Department of Health for Quarter 3 in 2003/4, as this was the most recent data available at the time of site recruitment. It is important to note that these data relate to entire Trusts rather than to individual A&E departments and it did not prove possible to obtain equivalent data at departmental level. Therefore, it was necessary to assume that, where a Trust included more than one A&E department, the largest A&E department contributed most to the Trust level data and, consequently, this hospital was considered as a potential site for the study.

All Trusts in England were ranked into quintiles for each of the relevant variables i.e. performance on the four-hour target, number of attendances and admission rates. Then each of the eight 'intervention' sites was individually matched with Trusts in the same quintile for the four-hour target and the same or adjacent quintile for the other two matching criteria. If a number of Trusts were equally well matched with an 'intervention' site then the most geographically proximate Trust was approached initially, but if a particular Trust declined to participate, the next best match was approached.

The table below shows the walk-in centres and A&E departments recruited to the study and the relevant Trusts. In some cases, walk-in centres were managed by PCTs and their co-located A&E department by a hospital Trust so, in such cases, both Trusts are shown.

Appendix 1 provides further details of the matching of 'intervention' and 'control' sites by key variables.

Table 1: 'Intervention' sites and their matched 'control' sites by location and Trust

Intervention site	**Control site**
Guildford NHS walk-in centre & Royal Surrey County Hospital *Guildford and Waverley PCT / Royal Surrey County Hospital NHS Trust*	Queen Elizabeth Hospital *Kings Lynn and Wisbech Hospitals NHS Trust*
Homerton Primary Urgent Care Centre & Homerton Hospital *City and Hackney PCT / Homerton University Hospital NHS Trust*	Kings Mill Hospital *Sherwood Forest Hospitals NHS Trust*
University Hospital Lewisham Primary Care Suite & University Hospital Lewisham *Lewisham PCT / Lewisham Hospital NHS Trust*	Birmingham Heartlands Hospital *Birmingham Heartlands and Solihull (Teaching) NHS Trust*
Maidstone Urgent Treatment Centre & Maidstone Hospital *Maidstone Weald PCT/ Maidstone and Tunbridge Wells NHS Trust*	Frenchay / Southmead Hospital *North Bristol NHS Trust*
Redbridge NHS walk-in centre & King George Hospital *Barking, Havering & Redbridge Hospitals NHS Trust*	Northwick Park Hospital *North West London Hospitals NHS Trust*
Sunderland NHS walk-in centre & Sunderland Royal Hospital *City Hospitals Sunderland NHS Trust*	Wythenshawe Hospital *South Manchester University Hospitals NHS Trust*
Whipps Cross NHS walk-in centre & Whipps Cross Hospital *Waltham Forest PCT/Whipps Cross University Hospital NHS Trust*	Queen Alexandra Hospital *Portsmouth Hospitals NHS Trust*
Whittington NHS walk-in centre & Whittington Hospital *The Whittington Hospital NHS Trust*	Royal Berkshire Hospital *Royal Berkshire and Battle Hospitals NHS Trust*

3.7 Data sources

The evaluation was based on information from a number of sources:

- site visits or telephone interviews for each study site
- data about monthly patient throughput and admissions
- detailed data from anonymised patient records
- a postal questionnaire survey of people using the sites
- 'time and motion' data from a sample of study sites
- financial data obtained from study sites

The final two data sources are discussed separately under the heading of economic analysis.

3.7.1 Site visits

Each of the A&E departments which planned to develop a co-located walk-in centre was visited soon after the establishment of the new walk-in facility. Walk-in centre managers were asked to set up a site visit, inviting representatives from all the key stakeholder organisations to contribute to the session. A detailed topic guide was used to conduct an 'informal interview' which explored a range of issues relating to the walk-in centre's establishment and operation, but particularly its:

- objectives
- opening times
- target population and anticipated throughput
- setting
- staffing
- written policies and procedures
- range of services
- use of information technology

A brief tour of the site and, where possible, observation of the facility in operation were conducted. All data collected during the 'informal interviews' and observations were recorded as hand-written notes and were later translated into typed, descriptive summaries for each centre. These summaries were returned to the centre manager for checking, with any additional information being collected subsequently via telephone and e-mail contact.

A series of telephone interviews were made to the A&E departments acting as 'control' sites, in order to collect similar descriptive data, with a particular focus on describing measures that the 'control' site may have implemented or have planned in order to reduce waiting times.

The above site visits and interviews had several purposes. Firstly, they provided important contextual information about the setting, facilities and operation of each site which would be useful in helping to understand patterns in the data arising from other components of the evaluation. Secondly, they enabled the collection of data about use of resources e.g. staffing, which was necessary for the economic evaluation. Thirdly, they provided some insight into the issues that had to be faced when implementing a walk-in centre next to an A&E department. Given the small number of sites participating in the study, the findings should best be understood as a series of case studies, and the site visits made an important contribution to this.

3.7.2 Monthly patient throughput / admissions data

Each of the A&E departments and walk-in centres were asked to provide a series of data about the number of people consulting in their facility (walk-in centre and/or A&E department) on a monthly basis, by disposal category i.e. admission or non-admission. These data were obtained from each 'intervention' site for a period spanning 6 months prior to walk-in centre implementation and for a period 6 months after walk-in centre implementation, whilst each 'control' site was asked for the same information mapped to the time-frame of its matched site.

3.7.3 Detailed data from anonymised patient records

Each site was asked to supply anonymised data relating to the patients consulting their facility during a designated two-week period between January and May 2005. This represented the 'after' period of data collection in the controlled before-and-after study design. Data were also requested for patients consulting in the same two-week period in the previous year i.e. 2004, representing the 'before' period. The same two-week periods were used at each set of paired 'intervention' and 'control' sites, so that data were collected over the same time-periods to negate any seasonal effects.

Because the various walk-in centres opened at different times, the 'intervention' sites were at different stages of development during the evaluation. In order to minimise the effect of this, the data collection time periods were chosen so that each walk-in had been open for at least three months prior to any data being extracted. The 'after' period of data collection therefore occurred between three and twelve months after opening, depending on location.

Based on the number of patients consulting during each of these two-week periods, the research team identified a random selection of patients for more detailed data extraction. Patients were selected for inclusion using similar methods to those used in the 2003 CHI survey of patients in emergency departments.[27] Patient identification was based only on the patient-specific ID number generated by the site.

In each 'intervention' and 'control' site, 200 patients were randomly selected from each 'before' and 'after' data collection period. For the 'after' period in 'intervention' sites, l00 patients were randomly selected from those attending the walk-in centre and 100 from the linked A&E department.

Overall, this provided some 3200 records relating to the period 'before' walk-in centres were opened and 3200 'after' they opened.

The following data were requested for each patient:

- attendance / ID number
- facility visited
- age
- sex
- postcode
- presenting complaint
- triage category
- date of arrival
- day of arrival
- time of arrival
- time when triaged / assessed
- time main consultation began
- time main consultation ended
- healthcare professional(s) consulted
- investigations undertaken
- treatments provided
- drugs supplied / prescribed
- time of disposal
- type of disposal
- diagnosis on disposal
- onward referrals

These data were sent in anonymised form to the research team. Trust staff also recorded the names and addresses of patients selected, so that they could subsequently be sent a questionnaire, but did not pass this patient-identifying information to the research team.

3.7.4 Survey of users

Each site was asked to administer a questionnaire survey of patients, as a means of gaining information about the characteristics of service users, their reasons for attending, their expectations, their satisfaction with the service they received and their intentions following the consultation. The survey was conducted only amongst patients within the 'after' sample of 200 at each site who had been randomly selected for detailed data extraction, as detailed above. Further inclusion criteria were that these patients had to have presented with a 'minor' condition i.e. had subsequently been discharged rather than admitted and be aged 16 or over.

The questionnaire was identical for users of walk-in centres and A&E departments, although some questions had alternate wordings as necessary. As far as possible, questions were used directly from the CHI national patient survey 2003,[27] in order to enable comparisons with the data previously collected and validated.

The questionnaire is shown in Appendix 2.

3.7.4.1 Survey administration

Each person listed as eligible for inclusion in the survey was given a unique identifying number for the purposes of the study, computed from their own patient-specific ID number and their study site number. Relevant patients were sent the questionnaire directly from the study site, approximately four weeks after their original consultation, along with a covering letter explaining the reasons for their inclusion and a pre-paid return envelope in which they could send their reply direct to the research team.

In order to maintain patient confidentiality, the questionnaire was sent on behalf of the research team by Trust staff who legitimately had access to patient information. Questionnaires were marked with the patient's identifying number, but were otherwise anonymous. Each user was sent a reminder three weeks after the original questionnaire, again direct from the Trust, if their response was still outstanding at that time. On the advice of the Multicentre Research Ethics Committee (MREC), no further approach was made. In order to minimise any seasonal effect, the survey ran in the 'intervention' site at the same time as at its matched 'control' site.

3.7.4.2 Translation

The issue of translating the questionnaire into languages other than English was discussed with the MREC during the approval process, in view of the fact that the CHI national survey of Emergency Patients did not use translations. Whilst the questionnaire was, similarly, not translated for this research, a response slip was enclosed with the questionnaire, at the request of the MREC which included information in several different languages. Potential respondents who would have preferred to receive the questionnaire in a language other than English were asked to return this slip indicating which language they would have preferred. Thus, it was possible to monitor the languages which would be most in demand, and to provide an indication of the extent to which the final response rate might have been boosted if translations had been available.

3.7.4.3 Content of the questionnaire

The draft questionnaire was piloted at a local A&E department, slightly modified and re-piloted at the same A&E department. The final questionnaire aimed to collect data about:

- socio-demographic characteristics
- presenting complaint
- where the patient said they would have gone if the walk-in centre/A&E department had not been available
- improvement in presenting complaint
- consultations with any health service facility since the initial consultation
- satisfaction with access to care, the waiting time, facilities, treatment and advice received at the A&E department or walk-in centre
- the extent to which people felt the facility was a convenient way of obtaining care
- whether the service they attended accorded with their choice of facility.

3.7.4.4 Patient choice as an outcome variable

Considerable thought was given to how best to capture the extent to which attending a walk-in centre provided patients with greater choice in obtaining health care, since this was a major policy driver for the implementation of walk-in centres. It proved difficult to operationalise 'choice' in a form which could be encapsulated within a survey of this type. It was decided to assess choice in several ways. It is likely that people do not so much seek choice as an abstract notion, but that they seek to obtain care in a way which is convenient for their lifestyle. Therefore, a question was included about the extent to which the walk-in centre or A&E department was a convenient way of obtaining care, and *a priori* this was chosen as the primary indicator of patient choice. Further questions explored whether patients attended walk-in centres through their own choice, whether they were directed to a walk-in centre by another health care provider or via a process of triage/assessment.

3.7.4.5 Dichotomising 'problem scores' on the patient survey

The patient survey was based on the NHS Acute Trust Emergency Department Survey 2003 developed for the NHS by the Picker Institute. This survey is based on obtaining detailed reports of patients' experience related to specific dimensions of care which previous qualitative research had highlighted as being particularly important to patients. The questionnaire is designed so that it can be analysed using 'problem scores'. Where appropriate, responses to questions are dichotomised to indicate responses which may indicate a 'less than satisfactory' response. Picker recommend that a relatively high threshold is set, given the recognised tendency for people to express satisfaction in health surveys. So, for example, in response to the question 'In your opinion, how clean was the hospital?' an answer of 'fairly clean' would be marked as a 'problem score'. The whole questionnaire is shown in Appendix 2. Responses coded as a 'problem score' are indicated with a solid box.

3.7.4.6 Definition of 'minor' and 'major' cases

One objective of this evaluation was to distinguish between the experience of 'minor' and 'major' cases. This arises from the idea that walk-in centres are only likely to have an impact on patients with minor conditions and any such impact may be diluted and not detected if all cases were considered. In addition, if walk-in centres provide a better process of 'streaming' patients with minor problems, the experience of patients with major conditions may also improve, so it was important to consider the experience of each group separately in some analyses. However, it became apparent that there is no widely accepted understanding or use of the terms 'minor' and 'major', and relying solely on the data provided routinely by A&E departments was potentially misleading as there may be systematic differences in how these terms were used.

Therefore, an 'expert group' was convened to discuss how best to overcome this problem for the purposes of this research. On the advice of this group, it was decided to define a 'major' case as one which leads to hospital admission, directly or indirectly from the A&E department or walk-in centre, without the patient going home first. This decision was based on the fact that admission status was probably the only robust piece of data which would be reliably and comparably collected in all sites. To avoid confusion therefore, we have used the terms 'admitted' and 'discharged' rather than 'major' and 'minor'.

3.8 Economic analysis

3.8.1 Aim and objectives for economic analysis

The aim of the economic evaluation was to compare the cost of care before and after the opening of the new A&E-focussed walk-in centres, and relate any change to the number of patients treated, waiting time, and patient satisfaction.

Three research objectives relate to the economic evaluation:

- to assess resource utilisation and costs of care for patients attending A&E departments before, and combined A&E/walk-in centre sites after, the implementation of adjacent NHS walk-in centres compared with 'control' A&E departments.
- to compare visit duration, resource utilisation and costs of care separately for patients with 'minor' problems and 'major' problems when managed in a walk-in centre, an A&E department with an adjacent walk-in centre, or a 'control' A&E department without an adjacent walk-in centre.
- to compare clinical outcomes, re-attendance rates, patient satisfaction and costs of providing care for people with minor problems four weeks after they attended a combined A&E/walk-in centre or a matched 'control' A&E department.

3.8.2 Methods for economic analysis

The economic evaluation was conducted from the viewpoint of the NHS. Resource use before and after the opening of the adjacent walk-in centres was identified, measured for each site separately, and valued. As many of the 'intervention' sites operated a shared budget for the walk-in centre and the adjacent A&E department it was not possible to estimate the cost of the walk-in centre alone hence the economic analysis treats the two facilities (walk-in centre and adjacent A&E) as one unit.

Resources relevant to the study were identified as belonging to three broad categories as follows:

- clinical staffing - doctors, nurses, 'other' e.g. physiotherapists
- fixed and semi-fixed costs - administrative and clerical staff, buildings and premises e.g. rent, maintenance, capital charges, utilities, postage and stationery, medical and surgical equipment, office equipment and materials
- variable costs - investigations and treatments, medication, admissions[i], onward referral and re-consultations

The analysis was carried out using a pragmatic stance, so all operating costs were included but start-up costs were excluded, thus enabling a realistic comparison to be made of the cost of running the different types of unit in an on-going situation.

[i] admissions account for a high proportion of the overall total cost per patient. As the opening of adjacent walk-in centres was not expected to affect admission rates these were excluded in the main analysis but included later in the sensitivity analysis.

3.8.3 Data collection: total operating costs

Data on resource use were obtained for the participating sites in four separate ways:

- financial data on clinical staffing and fixed and semi-fixed costs were obtained from each individual site for the financial quarters January – March 2004 (before opening) and January – March 2005 (after opening).
- data on the number of patients attending each site (throughput) and the number of admissions were provided by each site for the six-month period immediately before and immediately after the opening of the walk-in centres, as described in section 3.7.2.
- data on the volume of investigations and treatments, medication and onward referrals were obtained from the random sample of anonymised patient records (refer to section 3.7.3). Data on 200 patients from each site were collected during a two-week period before and after the opening of the walk-in centres. This information was combined with total throughput data, as described above, to obtain estimates of volume for a typical three-month period before and after walk-in centre opening. Investigations were categorised (as described later in section 4.4.3) and these categories were also used in the economic analysis. The use of drugs was treated in a similar way with categories of the most commonly used drugs being formed and all drugs in that category costed at the same rate (see Table 2)
- data on re-consultations to a GP, practice Nurse, walk-in centre or NHS Direct within one month of the original visit were collected in the postal survey of users.

Unit costs were obtained either from the sites directly or from a variety of published sources as shown in Table 2.

3.8.4 Identifying and measuring the cost relevant to discharged patients

The aim of objective 6 was to identify the portion of total operating costs that related to discharged patients and thus estimate a cost per discharged patient before and after opening of the walk-in centres. The method of identifying the portion of total costs relevant to discharged patients was handled in different ways, according to the type of costs.

- fixed and semi fixed costs (excluding clinical staff costs) were estimated on the basis of the total time spent in the unit by discharged patients, compared to those admitted. For each site, the mean duration of discharged patients' visits was multiplied by the number of discharged patients and compared to the mean duration of patients' visits subsequently admitted, multiplied by the number admitted. This provided an estimate of the proportion of fixed and semi-fixed costs that could be attributed to discharged i.e. 'minor' cases.
- variable costs were allocated directly according to the patient-level data collected from the anonymised records as detailed above.
- clinical staff costs were believed to be crucial in this analysis, and the estimate of clinical staff time spent on discharged patients was estimated using a more rigorous method. To allow for the difference in the skill mix required to treat admitted and discharged patients, and to obtain accurate estimates of clinical staff cost per discharged case in each setting, we conducted a 'time and motion' study. After the opening of the new walk-in centres, a selection of clinical staff in both 'intervention' and 'control' A&E departments were directly observed and timed, to determine the average time spent caring for admitted and discharged patients.

Table 2 Resource use by category showing the data source, valuation method and unit cost

Type	Source	Valuation method	Unit cost (£)[1]
Clinical staff	Site financial records	Cost reported directly	
Fixed and semi-fixed costs	Site financial records	Cost reported directly	
Investigations	Patient records	Individual unit costs reported by sites. For missing data, NHS Reference Costs [www.dh.gov.uk/PolicyAndGuidance/OrganisationPolicy/FinanceAndPlanning/NHSReferenceCosts/fs/en].	*Mean* X-ray: 22.64 ECG: 34.30 Bloods: 5.96 Cross match: 6.15 Urine: 8.23 Ultrasound: 31.79 CT scan: 103.16 MRI scan: 223.94
Drugs	Patient records	British National Formulary [www.bnf.org/bnf/].	Analgesic 0.21 Antibiotic 2.32 Anti-inflammatory 4.02 Bronchodilator 1.46 Anaesthetic 6.93 Steroid 1.07 Antiemetic 1.44 Antacid 2.25 IV fluid 2.01 Vaccine 2.48 Laxative 0.30 Clexane 25.20 Antihistamine 0.19 Antiepileptic 3.46 Antibacterial 20.74 Diuretic 1.00 Antituberculoid 12.00 Antipoisoning 5.12 Cardio 2.71 Antispasmodic 1.00 Antiviral 5.98 Sedative 1.03
Admissions	Patient records	NHS Reference Costs. Weighted average of all non-elective admissions.	1251.03
Onward referral	Patient records	NHS Reference Costs. Weighted average of the 20 most common outpatient first attendances.	126.93
Re-consultations with GP	Patient survey[2]	Curtis and Netten [http://www.pssru.ac.uk/uc/uc2004.htm]	21.00
Re-consultations with practice nurse	Patient survey	Curtis and Netten	9.00
Re-consultations at walk-in centre	Patient survey	National Evaluation of NHS walk-in centres [www.phc.bris.ac.uk/phcdb/pubpdf/pubs/257.pdf]	30.76[3]
Re-consultations with NHS Direct	Patient survey	Evaluation of NHS Direct [www.shef.ac.uk/content/1/c6/02/40/50/nhsd3.pdf]	12.18[3]

Notes to Table 2

[1] Unit costs reported here are those used in the 'before' analysis and are for 2004. These were adjusted using the RPI [http://www.statistics.gov.uk/STATBASE/expodata/files/3159353851.csv] to obtain unit costs for the 'after' analysis. The exception to this is the drugs costs, for which 2005 costs were used in the 'after' analysis and adjusted accordingly for the 'before' analysis. These adjusted costs are reported here.

[2] The patient survey covered the 'after' period only. Numbers of re-consultations for the 'before' period were estimated using the assumption that the per patient rates in the control sites would not have changed and that rates in the intervention sites before opening were the same as those in the control sites.

[3] The published cost estimate relates to 2000. This estimate was inflated to 2004 for the before analysis (reported here) and to 2005 for the after analysis.

3.8.5 Time and motion study

Three members of the research team (CS, MC, SH) visited the Whittington, Royal Surrey County, Royal Berkshire and Birmingham Heartlands A&E departments at different times of the 24-hour period to shadow clinical staff of different grades and record the time spent on admitted cases, discharged patients, 'working but no identifiable patient' and 'not working' e.g. tea break. A total of 64 hours of observation took place. Six different types of staff (nurses and doctors; senior, middle-grade, and junior for each) were observed at some time during all three shifts (early, late, night).

In order to estimate the proportion of staff time spent dealing with discharged patients, the observed times were adjusted to allow for differences observed across shifts and the individual levels of staffing, by shift, in each of the units. The observed time that could not be allocated directly to a specific patient ('working but no identifiable patient' and 'not working') was re-allocated to admitted or discharged in a similar way to other fixed and semi fixed costs i.e. on the basis of time spent in the unit by each type of patient.

3.8.6 Sensitivity Analysis

Two principal areas of uncertainty were identified during the analysis and were subjected to a sensitivity analysis.

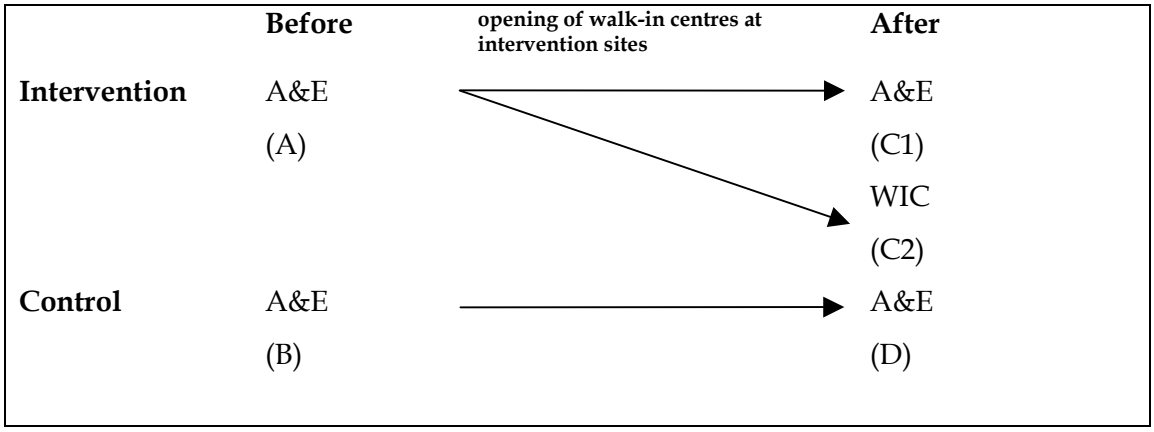
Admissions account for a high proportion of the overall total cost per patient and therefore minor (possibly random) changes between sites in the number of admissions dominate the analyses. As the opening of adjacent walk-in centres was not expected to affect admission rates, these were excluded in the main analysis but sensitivity analysis was conducted to assess the impact of any differential admission rates.

Throughput in both Lewisham and Whipps Cross increased by over 30%. This is considerably higher than at any other site in either group. At Whipps Cross, a separate new facility was provided and it is likely the increase in patient numbers is due to this extra provision. In Lewisham however, the walk-in centre replaced an existing primary care unit. No data about patient throughput were available about this unit, implying that the apparent increase in patient numbers here could be artefactual. The effect of this was tested in the sensitivity analysis.

3.9 Approach to analysis

The overall approach to analysis can be considered as follows:

Figure 1 Approach to analysis



It is important to reiterate that for 'intervention' sites, although detailed data about consultations and survey data was collected for patients attending the walk-in centre (C1) or the co-located A&E department (C2), the most important comparison is between these two groups of patients combined (C1+C2) vs. patients attending 'control' A&E departments (D). Attempting to compare patients attending a walk-in centre (C1) vs. an A&E department (C2) in an 'intervention' site is of little value because some patients attended both, and many patients were triaged to attend one or the other, so there were systematic differences in patient selection for these two facilities within an 'intervention' site.

3.9.1 Research objective 1

Analysis of the data from the semi-structured interviews at 'intervention' sites provided a description of the range of issues which have been addressed in establishing the new A&E focused walk-in centres, range of staff employed, perceived barriers and facilitators to success, whether all A&E focused walk-in centres might be considered as one type of service model, or whether there were important differences between individual sites which would affect the interpretation of results.

3.9.2 Research objective 2

Analysis of the difference in change in the number of attendances at 'intervention' sites before and after the implementation of the walk-in centre ((C1+C2) – A) compared with the difference in change at 'control' sites over the same time period (D-B) demonstrated whether walk-in centres substitute for the work of the A&E department or whether the new services led to induced demand.

3.9.3 Research objectives 3, 4 and 5

Analysis of difference in changes in visit duration, process of care, treatments, and costs before and after the implementation of the walk-in centre ((C1+C2) – A) at 'intervention' sites, compared with the difference in change at 'control' sites over the same time period (D-B), assessed the impact of the A&E focused walk-in centres on these variables for users as a whole.

Since a high proportion of cases seen at both 'intervention' and 'control' sites are likely to reach the NHS target visit duration of less than four hours, difference in mean visit duration for both arms of the study were also assessed as a more sensitive measure.

3.9.4 Research objective 6

Comparison of the experience of patients who were *discharged* from combined A&E/walk-in centre sites, before (A) and after (C1+C2) the walk-in centre opened, compared with changes in the experience of patients seen and discharged from 'control' sites (B and D), illustrated whether these patients experienced differences in visit duration, types of care and costs when treated in a site with both A&E and walk-in centre rather than in a site with an A&E department alone.

Similar comparisons for patients with *major* conditions (i.e. those admitted) determined the impact of the walk-in centre on visit duration and other factors for those patients with more serious health conditions requiring urgent treatment.

3.9.5 Research objective 7

Patients who were discharged after attending sites with co-located walk-in centres were compared with those attending 'control' sites in terms of their choices and convenience of obtaining care, clinical outcomes, patterns of re-consultation and satisfaction with their consultation. These data were collected approximately four weeks after people had consulted.

3.10 Statistical analysis

For each outcome, the following three types of statistical modelling were undertaken:

- comparability of 'intervention' and 'control' sites at baseline. The independent variables were site status ('intervention' or 'control') and month of opening, with the data restricted to the six months prior to the index month of opening. In addition to month of opening, dummy variables representing matched pair of 'intervention' and 'control' sites were included, but were not found to add to the model and so were not included in any further models.
- within-group changes over time. The independent variables were a binary timing variable (before or after the index month of opening) and month of opening in models estimated separately for the two types of site.
- difference in change between 'intervention' and 'control' sites. These models included site status ('intervention' or 'control'), timing, month of opening, and the interaction between site status and timing as independent variables, with the interaction term giving an estimate of the difference in change in outcome between 'intervention' and 'control' sites before and after walk-in centre opening.

All models took appropriate account of the correlated (clustered) nature of the data, and of individuals' different probabilities of being sampled across time and sites. The regression analyses with regard to patient throughput were conducted excluding the Lewisham 'intervention' site, since there was reason to believe that the data underestimated the throughput before the walk-in centre opened, for the reasons discussed in section 3.8.6.

For the survey data, 'intervention' and 'control' groups were compared using appropriate regression models (logistic, ordinal or multinomial depending on the response categories), allowing for clustering and sampling probability.

All percentages in the tables take into account weighting according to the probability of sampling, which varied between sites and between individuals seen in walk-in centres and A&E departments at 'intervention' sites (see Appendix 5).

3.11 Sample size

The initial sample size calculations for the study were based on recruitment of ten 'intervention' and ten 'control' sites, as this was the number of A&E focused walk-in centres which were originally designated to open during the time frame of the evaluation. In fact, only eight new walk-in centres opened in time, which reduced the power of the study to detect meaningful changes.

The primary outcome used in the sample size calculation was the proportion of people expressing satisfaction with their access to care. However, similar calculations apply to other categorical variables such as the proportion of people waiting more than four hours, the proportion being referred to another health care provider, or the proportion re-attending within four weeks. Based on ten sites with, and ten sites without a walk-in centre, 200 patient records examined in each centre (i.e. a total of 4000 sets of notes), and using a 5% two-sided alpha and 80% power in sample size calculations, then the study has adequate power for the following scenarios:[ii]

- assuming an ICC of 0.01, 50% of the patients in the random 200 cases being discharged and eligible for the patient survey, and a 50% response rate from these patients per centre, there will be 80% power to detect a 10% difference in the proportion of people expressing satisfaction with care, assuming 70% of patients are satisfied in 'control' sites.
- for categorical data (e.g. whether patients are sent home without referral to another provided) obtained directly from the records (where we assume 200 patients per site will be available, rather than 50 due to non-response and the smaller number of eligible patients in the survey), then assuming an intracluster correlation co-efficient (ICC) of 0.01, to detect a difference of 5%, assuming 90% of patients in 'control' sites are sent home without referral to another health care provider.
- assuming an intracluster correlation co-efficient (ICC) of 0.1, to detect a difference of 12%, assuming 85% of patients are discharged within 4-hour target in 'control' sites (i.e. 85% vs. 97%).
- for continuous outcomes such as the costs of care for discharged patients, assuming an ICC of 0.05, there will be 80% power to detect a 0.3 standard deviation difference in mean cost.

[ii] a range of different ICCs was used to illustrate the impact of different levels of clustering of the data. There is likely to be more clustering in relation to issues mainly determined by the site organisation (e.g. visit duration and cost) than in relation to issues related to patients.

4 Results

The research design set out seven distinct research objectives – see Section 3.2 for details. This section, which reports the overall results of the evaluation, is configured to follow the same structure, taking each individual research objective in turn.

4.1 Research objective 1: description of walk-in centre sites

> To describe the local context, structure and process of implementation of new A&E focused walk-in centres.

Much descriptive information was obtained during the site visits which is not reported here in detail. Each of the following site-based summaries presents the main findings from the initial visits and interviews – further details can be found in Appendices 3 and 4. Whilst such summary descriptions cannot fully reflect all factors which may have impeded or enabled the establishment of each facility, they do allow a 'snapshot' of each new service within its localised context and therefore provide some background to the main data sources drawn upon for the rest of the evaluation. It should be borne in mind that the summaries describe the circumstances of each walk-in centre at the time of the site visits i.e. November/December 2004, and that the various services may have improved/developed since that point in time. In an effort to accommodate this, all centres were given the opportunity to review and update the descriptions as appropriate, prior to inclusion in this report.

4.1.1 Description of each site

The following site summaries describe the following key features of each walk-in centre:

- local name
- opening date
- delays to opening
- barriers to implementation
- aims
- targeted patient groups
- service provision, including any planned additional services
- opening hours
- staffing arrangements
- IT software / systems
- physical location
- patient accessibility / referral
- signage
- awareness of facility as 'walk-in centre'
- publicity

4.1.1.1 Guildford NHS walk-in centre

Known locally as Guildford NHS Walk-in Centre, this new facility opened on 1 November 2004, following some delays due to lack of medical input on implementation plans. A degree of conflict between the acute Trust and PCT regarding the aims of the centre and methods to be employed, resulted in a team of nursing staff being in place initially but unable to treat patients.

An initial lack of confidence on the part of staff working in A&E resulted in 'cherry-picking' of cases sent to the new facility, although this has now been overcome, with a view to improving compliance with the 4-hour wait target within A&E. Given the comparatively affluent catchment area, no specific patient groups have been identified as requiring specific attention.

The walk-in centre provides a moderate range of services including advice/treatment of minor illness, treatment of minor injuries, dealing with mental health issues via MHL, GP registration and general health promotion advice, with future plans to offer emergency contraception, advice about chronic illness, suturing and plastering, although expansion of existing services is largely dependant on receiving necessary medical support and further nurse training.

Open between 9:00 a.m – 5:00 p.m on weekdays, the centre employs a dedicated team of staff comprising 1 H grade ENP, 5 G grade ENPs, 0.6 GPs and 1.6 A grade assistants, with future plans to add 4 extra 4 ENPs over weekends along with additional GP support. Staff record patient contacts using CAS but no clinical decision-making software is used or planned.

The centre is located inside the main A&E department, with a shared entrance but separate reception/waiting area. Accommodation includes 2 consultation rooms and 2 'open' treatment rooms. The space is also shared with a primary care out-of-hours service. Patients report initially at the main A&E reception and are then re-directed to the walk-in centre as appropriate following informal allocation by A&E nurses.

Signage to the walk-in centre is evident outside the main entrance to A&E and A&E reception staff are well aware of the walk-in centre and its staff. There are no plans at present to explicitly advertise the walk-in centre services until nursing staff are sufficiently skilled to cope with an increased demand.

4.1.1.2 Homerton NHS walk-in centre

Known locally as Homerton Primary and Urgent Care Centre, phase 1 of this facility opened on 10 May 2004 with phase 2 planned to open in 2006. Initially, staffing shortages and restricted space caused some difficulties with implementation but completion of a new build in 2006 should solve many of these initial problems. Local poverty levels and wide ethnic diversity remain a constant challenge.

Overall aims of the centre are to simplify access to the NHS for local population by providing access to primary care for patients attending the A&E Department with primary healthcare problems as well as improving compliance with 4-hour wait target, as patients are streamed to the PUCC via a central point of access. The business plan also specifically targets unregistered patients and patients whose own GPs are having difficulty meeting 24/48-hour targets.

A wide range of services is offered including advice/treatment of minor illness, advice about chronic illness, treatment of minor injuries, dealing with mental health issues via MHL, GP registration, general advice on health promotion, provision of emergency contraception, and offering ambulatory blood pressure service, access clinics for local GPs and a PMS practice for short-term patients.

Open between 7:00 am – 10:00 pm on weekdays and between 9:00 am – 10:00 pm at weekends and bank holidays, the walk-in centre employs a dedicated team of staff comprising 1 Nurse Manager, 3 GPs, 2.3 H grade NPs, 3 G grade NPs, 3 F grade NPs, 5 HCSW, 1 Practice Nurse, 1 administrative assistant and 1 Centre manager.

The facility is located inside the main A&E department, with a shared reception/waiting area and offers 6 consultation rooms, 3 offices a treatment room and 2 small storerooms. Access to the facility is via a key-coded door and through the adjacent minor injuries unit. The space is also shared with a primary care out-of-hours service. On arrival at main A&E reception, patients are designated by a member of nursing staff as being suitable for the walk-in centre, minor injuries unit, A&E or the children's A&E department. Both A&E and children's A&E can refer back to the walk-in centre as appropriate.

No distinct signage for the walk-in centre is evident around the hospital site as yet though it is now evident within the main A&E department. A&E reception staff did not recognise the term 'walk-in centre'. There are no plans to explicitly advertise the service until the phase 2 build is complete and capacity increased.

4.1.1.3 Lewisham NHS walk-in centre

Known locally as University Hospital Lewisham Primary Care Suite, this facility opened on 5 September 2004, as a 're-badging' of a similar primary care-focused service which had been previously operational, on the same site, for four years.

The centre aims to divert appropriate cases of unscheduled care, particularly minor injuries, away from A&E and to provide a complementary service to the other local 'high street' facility (New Cross NHS walk-in centre). In doing so, it is hoped that there will be an associated improvement in patient flow, compliance with 4-hour wait target within A&E and compliance with the 48-hour GP wait target. The facility aims to attract all sectors of the local population but is particularly keen to provide services to unregistered patients, the homeless and substance abusers. The main barriers to success include the growing demand for services within the co-located A&E department and difficulty managing patient flow across the entire hospital.

A wide range of services is offered including advice/treatment of minor illness, advice about chronic illness, treatment of minor injuries, dealing with mental health issues via MHL, GP registration, health promotion advice, provision of emergency contraception, suturing, plastering and sexual health screening.

Open between 7:00 a.m – midnight p.m every day, with 'twilight' cover until 2 a.m two days a week. The walk-in centre employs a team of staff on rotation from existing A&E personnel comprising 1 SHO, 1 nurse consultant, 9.4 band 7 ENPs, 4 receptionists with 3 GPs appointed on a sessional basis. Future plans include provision for 2 additional ENPs. Staff record patient contacts using REMASS software.

The facility is located in a separate building to the main A&E department, with its own entrance and reception/waiting area, connected by covered walkway. The accommodation comprises 5 consultation rooms, 1 office and a storeroom. Second phase implementation will involve an extension to the current A&E facility to create an Urgent Treatment Centre housing the walk-in centre, a minor injuries unit, 'majors' A&E department and a primary care out-of-hours service. Patients are directed to the facility, following registration at A&E reception if presenting with an appropriate condition or following nurse assessment in A&E.

There is clear signage to the facility on both the main hospital site and above the facility entrance, although it is not branded as a 'walk-in centre'. Given the volume of patients already using the service, staff prefer not to encourage additional demand via advertising.

4.1.1.4 Maidstone NHS walk-in centre

Known locally as Maidstone Emergency Care Centre incorporating NHS Walk-in Centre, this facility opened on 29 November 2004. Opening was delayed due to funding issues in connection with the re-design of primary care services in the area and also due to problems recruiting experienced primary care nursing staff. It is hoped that the new facility will improve compliance with 4-hour wait target and patient streaming within A&E, although no specific patient groups have been identified as requiring attention.

A moderate range of services is offered including advice/treatment of minor illness, treatment of minor injuries, dealing with mental health issues via MHL, health promotion advice, suturing and plastering, with plans to offer advice about chronic illness, emergency contraception and a range of diagnostic services in future.

Open between 8:00 a.m – 2:00 a.m every day, the walk-in centre employs a team of staff on rotation from existing A&E personnel comprising 6.92 G grade ENPs and 1 F grade ENP plus extra GP time paid for by PCT to 'skill up' nursing staff. A combination of Symphony, Adastra and PAS software is used to record patient contacts.

Located inside the main A&E department, alongside majors, with a shared reception/waiting area, the walk-in centre also shares its space with a primary care out-of-hours service. Patients are directed to a walk-in centre cubicle, as appropriate, after assessment by a 'Nurse Navigator' who allocates patients into one of four streams and one of four urgency categories.

No signage for the walk-in centre facility is apparent on the hospital site and A&E reception staff are unaware of any 'walk-in centre' service.

4.1.1.5 Redbridge NHS walk-in centre

Known locally as Redbridge NHS Walk-in Centre, this facility opened on 1 April 2004. Whilst the service was implemented on time, the fact that the same PCT also opened another walk-in centre locally (Ilford NHS walk-in centre) led to some challenges regarding capital funding for equipment and in recruiting/retaining experienced nursing staff. The facility aims to improve compliance with the 4-hour target within A&E and also to provide a complementary service to the other 'high street' walk-in centre. The local population includes a large number of immigrants and their needs have been specifically targeted as part of the walk-in centre objectives.

A moderate range of services is offered including advice/treatment of minor illness, advice about chronic illness, treatment of minor injuries, dealing with mental health issues via MHL, health promotion advice, suturing and plastering with future plans to offer provision of emergency contraception and a range of children's services.

Open only between 9:00 a.m – 2:00 p.m each day, the centre employs a team of staff on rotation from existing A&E personnel comprising 1 staff grade doctor and 1 D/E grade nurse plus an additional sessional GP paid for by PCT, with plans for additional 11 G/H grades in future. Staff use PAS to record patient contacts, although no tracking system is available.

The facility is located inside the main A&E department, with a shared reception/waiting area and comprises 2 consultation rooms located directly off the main A&E waiting room, one of which is shared with the primary care out-of-hours service. Patients are directed to walk-in centre cubicles, as appropriate, after initial assessment by a nurse in the waiting room.

There is clear signage outside the main A&E entrance and additional signage within the A&E department, although A&E reception staff were unaware of the on-site walk-in centre and tried to re-direct the visiting researcher to the nearby 'shop front' site instead. Staff wish to avoid 'over-use' of facilities so the service is not advertised explicitly although the local primary-care focussed facility does circulate leaflets.

4.1.1.6 Sunderland NHS walk-in centre

Known locally as Sunderland NHS walk-in centre, this facility opened on 6 November 2004. It is one of a number of similar facilities in the locality, although the only officially branded walk-in centre. Its overall aim is to divert 'inappropriate' presentations to A&E and, in doing so, it hopes to achieve an associated improvement in compliance with 4-hour wait target within A&E. The facility works to attract all sectors of the local population but it particularly keen to accommodate the needs of a growing number of asylum seekers based in the area. The main barriers to success are staff retention and major changes to primary care provision locally.

The facility offers a wide range of services including advice/treatment of minor illness, advice about chronic illness, treatment of minor injuries, dealing with mental health issues via MHL, GP registration, health promotion advice, suturing and plastering with plans to provide an enhanced physiotherapy service in future. Staff use Meditech system to record patient contacts.

Open between 8:00 a.m – 10:00 p.m every day, the centre employs a team of staff on rotation from existing A&E personnel as required plus a dedicated team of walk-in centre staff comprising 1 nurse consultant, 12 ENPs and 0.8 physiotherapist.

The service is located inside the main A&E department, with its own reception/waiting area. Patients are able to walk directly into walk-in centre but may also be directed there after reporting at the main A&E reception, if their presenting complaint suggests suitability.

Signs were clearly visible around the hospital site and outside the A&E department itself, with A&E reception staff well aware of the service. No formal advertising is planned outside circulating information to other local healthcare providers.

4.1.1.7 Whipps Cross NHS walk-in centre

Known locally as Whipps Cross NHS walk-in centre, this facility opened on 3 March 2004. Its overall aims are to improve compliance with the 4-hour wait target within A&E, to improve the 24- and 48-hour GP wait targets and to signpost appropriate use of NHS services locally. The facility hopes to attract all sectors of the local population but is particularly keen to provide services which address the needs of the high number of immigrants resident in the area. The main barriers to success have been delays to building works since both the local acute Trust and PCT have been otherwise supportive in establishing the facility.

The centre offers a wide range of services including advice/treatment of minor illness, advice about chronic illness, treatment of minor injuries, dealing with mental health issues via MHL, GP registration, health promotion advice, provision of emergency contraception and suturing with future plans for plastering and ECG services.

Open between 7:00 a.m – 10:00 p.m every day, a dedicated team of walk-in centre staff is employed comprising 4 G grade nurses, 1 D grade nurse, 2.2 GPs, 2 receptionists and 0.75 administrator, with a Modern Matron working 50:50 between the main A&E department and the walk-in centre. Future plans include provision for 6 additional receptionists and 2 ENPs. Staff record patient contacts using Footman & Walker software but plan to move to Adastra/CAS as soon as possible.

The walk-in centre is located in a separate building, adjacent to the main A&E department, with its own entrance and reception/waiting area. It also shares space with the primary care out-of-hours service. Second phase implementation will involve an extension to the current facility, to provide a link corridor to A&E as well as a common entrance and shared reception/waiting area. Patients are able to walk directly into walk-in centre at present but may also be directed there after reporting at the main A&E reception, if their presenting complaint suggests suitability. Generally, a GP will see patients on a 'see and treat' basis or a nurse will assess before either treating or referring to a GP colleague.

Clear signage was evident around the main hospital site and also outside the walk-in centre itself. A&E reception staff were well aware of the service. No formal advertising of the walk-in centre had taken place although a campaign is planned to coincide with the Department of Health awareness drive in 2006.

4.1.1.8 Whittington NHS walk-in centre

Known locally as Whittington NHS Walk-in Centre, this facility opened on 1 April 2004, largely replacing the 'minors' function of the A& E department. Although the service was implemented according to schedule, there was pressure from the local PCT and SHA to open before the new build was completed and, as a result, several aspects of the service e.g. space and IT systems were lacking at the time of the site visit. The facility aims to improve compliance with the 4-hour wait target within A&E, to improve compliance with the 24- and 48-hour GP wait target, to assist with GP registration and also to signpost appropriate use of other local NHS services. The local population includes a large number of immigrants/refugees and their needs have been specifically targeted as part of the walk-in centre objectives, as have those of commuters, the homeless and substance abusers.

A wide range of services is offered including advice/treatment of minor illness, advice about chronic illness, treatment of minor injuries, dealing with mental health issues via MHL, GP registration, health promotion advice, suturing and plastering. There are no plans to augment existing services in future.

Open between 8:00 a.m – 11:00 p.m every day, the walk-in centre employs a team of staff on rotation from existing A&E personnel, as required, plus 5 G grade ENPs and 5 sessional GPs paid for by the local PCT. Staff 'cherry pick' suitable patients for treatment according to presenting condition and available skill-mix, recording patient contacts on a bespoke IT system.

The centre is located inside the main A&E department, with a shared reception/waiting area. Accommodation comprises 4 consultation rooms but will expand under second phase implementation and involve an extension into the basement area of the existing A&E department to increase physical capacity.

Signs for the facility are visible in the main A&E department waiting area and A&E reception staff are aware of both the service and staff members by name. In an effort to control demand, the service is not being actively advertised, although there has been some local press coverage of the existing service.

4.1.2 Development of walk-in centres

Following the conclusion of the site visits, it was clear that the latest wave of NHS walk-in centres are not homogeneous - all eight A&E-focused walk-in centres have been developed in very different ways, interpreting the 'co-location' specification and walk-in centre 'brand' in the widest sense. Despite the pre-requisite that all are co-located with existing A&E facilities, there are clear differences in the way that organisational and environmental factors have been incorporated into their establishment and yet more variance still in the facilities and range of services offered. This diversity of physical setting and developmental direction may have arisen in response to local need and circumstances but may also have reflected opportunism in the bid for funding. Some of the centres e.g. Guildford and Whipps Cross represented a genuinely new way of delivering primary care alongside existing A&E services, whereas others e.g. Redbridge, Lewisham and Whittington involved degrees of re-badging and modification of pre-existing services. Such re-configuration should not necessarily be interpreted negatively, since it may be appropriate that existing innovative services are brought within a national programme to benefit from a new source of funding, although the extent to which a simple re-badging can achieve the aims of the original walk-in centre brief must be considered.

4.1.3 Identity and public awareness

As far as publicising the walk-in centres was concerned, there were several issues to consider. Firstly, the signage to the new facilities was of varying quality and often did not explicitly refer to a 'walk-in centre' but some other type of service such as an 'urgent treatment centre' or similar. This could prove confusing to users as they would be unaware that the type of facility they were attending was a walk-in centre. In some cases, there seemed to be local resistance to the idea of labelling the facility as an NHS walk-in centre, because sites did not want to increase demand by encouraging people to 'walk in'.

Staff at most of the walk-in centres felt that demand was already at a level which stretched their current resources and preferred to avoid additional growth by discouraging formal publicity of the new service. It was thought that patients learned about the walk-in centre via word of mouth and, given the staffing/space constraints in many centres, staff felt that this was the most appropriate way of advertising the services available. Given that a major policy justification for the establishment of NHS walk-in centres is to increase public choice and to increase access to healthcare, there appears to be a tension between the central policy and the way this is being implemented locally.

4.1.4 Centre opening and service provision

The development of service provision varied from site to site, and has, it seems, been contingent on the skills and expertise of the nurses, other healthcare providers involved in the walk-in centre and the relationships between them, as well as demand from patients and the resources/space available. As a result, opening times are also variable from one site to the next. The majority aim to provide services over an extended period e.g. 8 a.m – 10 p.m , seven days a week but some are operating on a more restricted basis, either with shorter hours (often dependent on medical staff being available) or during weekdays only. However, it was clear that at most sites, at times of unforeseen demand or staff shortage, resources were insufficient to cope with growing demand. Most walk-in centres were looking to develop new services, such as sexual health screening, provision of emergency contraception and other health promotion clinics, but this would again be dependent on funding and staff availability.

4.1.5 Working relationships

Often the walk-in centre shared its facilities/space with a local out-of-hours service, and in several cases this meant that walk-in centre nursing staff were able to 'tap into' the expertise / skills of the medical staff on duty at that particular time, thus maximising the service provided as

well as opening hours. However, this did mean that the range of treatments available to patients varied considerably, often according to which staff were working at any given time.

The timing of the site visits, when many of the walk-in centres had only recently opened, meant that many of the centres were in a period of considerable change. Several were responding to problems or difficulties associated with opening the centre particularly in relation to staff recruitment and training. In a number of cases, the underlying factor which pointed to a smooth transition was the positive working relationship between the pre-existing A&E facility and the new walk-in centre staff. Indeed, in those few places where the new facility had been implemented without the full involvement of existing staff or associated healthcare workers, it was evident that relationships were less effective, and that this often had an effect on the way in which patients were provided for. For example, one walk-in centre site expressed frustration at the fact that their A&E colleagues essentially acted as 'gate-keepers' to the new service by deciding which patients were to be passed on to the walk-in centre. Equally, a number of sites felt they benefited from their A&E colleagues' expertise and experience, in terms of dealing with patients clinical needs and as regards a source of on-the-job training.

4.1.6 Management

Several of the walk-in centres were managed from different trusts (usually a PCT) from the hospital trusts managing the A&E departments. In some cases, this led to complex management structures and unclear lines of accountability.

4.1.7 The role of nurses in walk-in centres

Given the range of different staffing arrangements in place at the 'intervention' sites, it is difficult to describe a typical nursing establishment. Most centres seem to employ high grade nursing staff drawing their expertise from both A&E and primary care settings. Many of the co-located walk-in centres had decided to staff their facility with nurses on rotation from the main A&E facility and this was clearly effective in terms of addressing the minor injury aspect of walk-in centre work. However, skilling up nursing staff to deal with primary care-focussed cases was more problematic and often relied upon the sessional GPs working in the new facilities to act as 'mentors' for their nursing colleagues until their knowledge, skills and confidence had increased.

4.1.8 Information technology and clinical assessment software

The different walk-in centres had implemented a wide range of software solutions. This was usually determined by the need to integrate with the existing software used by the co-located A&E department. The level of recording of data about consultations was variable. The ease with which sites were able to extract useful data about their activity (for example for the detailed data collection needed for this research) was also very variable but this seemed to cause most sites considerable difficulties.

It was notable that none of the sites appeared to use clinical assessment / decision support software of the type widely used in the earlier wave of NHS walk-in centres.

4.2 Research objective 2: patient throughput

To determine the impact of developing an A&E focused walk-in centre on the total number of patients attending the hospital for care at the A&E department and/or the new walk-in centre.

4.2.1 Total number of visits to 'intervention' and 'control' sites

All sixteen sites were able to provide data on the total number of visits made to their respective A&E and walk-in centre facilities for the six months before and after the new walk-in centre facility opened.[iii] Table 3 shows the total patient throughput at each site for the relevant six-month periods, and highlights how attendance varied considerably from site to site during this time.

Table 3 Total patient throughput for six-month period before and after walk-in centre opening –' intervention' and 'control' sites

'Intervention' sites	BEFORE		AFTER		
	A&E	WIC	A&E	WIC	% change
Guildford	25114	-	23191	2064	0.6
Homerton	41199	-	39394	4993	7.7
Lewisham	41968	*	42865	12340	*
Maidstone	26256	-	9884	16224	-0.6
Redbridge	44413	-	42423	5635	8.2
Sunderland	43201	-	29630	12755	-1.9
Whipps Cross	46841	-	52122	12423	37.8
Whittington	35489	-	38228	7674	29.3
Mean	*38060*	-	*34717*	*9264*	*11.6**
'Control' sites	BEFORE		AFTER		
	A&E	WIC	A&E	WIC	% change
Queen Elizabeth	35488	-	37137	-	4.6
Kings Mill	39619	-	39553	-	-0.2
Birmingham	28513	-	28534	-	0.1
Frenchay/Southmead	41280	-	46735	-	13.2
Northwick Park	34290	-	32617	-	-4.9
Wythenshawe	46017	-	51071	-	11
Queen Alexandra	33419	-	38843	-	16.2
Royal Berkshire	*36134*	-	*37757*	-	4.5
Mean	*36845*	-	*39031*	-	*5.6*

***** there was a primary care centre in existence at Lewisham, which was replaced by the walk-in centre, but it was not possible to obtain data on activity for this centre. Mean change excludes Lewisham.

[iii] matched walk-in centre, in the case of 'control' sites.

The figures overleaf illustrate the change in total patient throughput at each site, and on average, and also show whether changes are related to the establishment of the walk-in centre.

It is evident that the situation is variable between different sites. Overall, there appears to be a slight increase in total activity at both 'intervention' and 'control' sites. At most walk-in centre sites, the activity in the walk-in centre is substituting for the work previously carried out in the A&E department. This is unsurprising because at several sites the walk-in centre mainly represents a 're-badging' of activity previously carried out in the 'minors' wing of the pre-existing A&E department.

At three sites (Lewisham, Whipps Cross and Whittington), there appears to be an increase in throughput related to the walk-in centre, rather than changes at the co-located A&E department. However, the apparent rise at Lewisham is probably artefactual since the walk-in centre replaced an existing primary care unit and it was not possible to obtain data about the number of patients who had been seen at this facility. Therefore, there are an unknown number of people who consulted in the 'before' period, represented by the question mark on the Figure overleaf.

The walk-in centre at Whipps Cross was an entirely new facility, which was relatively well signposted (even though not advertised to the local population). This may explain the notable increase in activity at this site.

The walk-in centre at the Whittington hospital largely replaced the 'minors' end of the A&E department, so the increase in activity is harder to explain. However, the facility is labelled as an NHS walk-in centre (unlike some other centres) and had been given coverage in the local press, so it is possible that this may have increased local awareness and use of the service.

4.2.2 Regression analyses

4.2.2.1 Baseline comparability in relation to monthly attendance[iv]

There was no evidence that 'intervention' sites differed from 'control' sites, in terms of monthly attendance, at baseline (difference in means = 155 attendances, 95% CI –-784 to 1095, p = 0.75).

4.2.2.2 Within groups changes over time for all attendances

The within-group changes over time were 270 attendances per month (95% CI -114 to 655, p = 0.17) and 813 per month (95% CI –30.3 to 1655, p = 0.06) in the 'control' and 'intervention' groups respectively.

4.2.2.3 Between groups changes over time for all attendances

There was no evidence of any difference in change between 'intervention' and 'control' groups between pre- and post- periods (difference in change = 542, 95% CI –-347 to 1431, p = 0.23).

[iv] all regression analyses relating to throughput excluded Lewisham as discussed in section 3.10.

Figure 2 Total patient throughput for six-month period before and after walk-in centre opening – 'intervention' sites

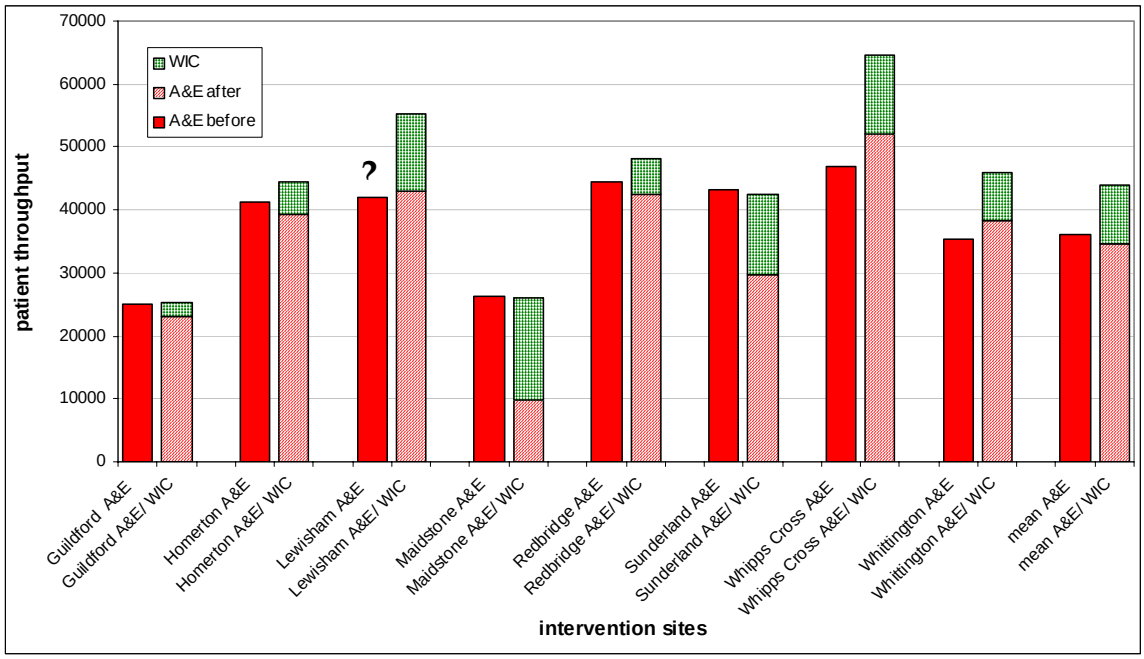
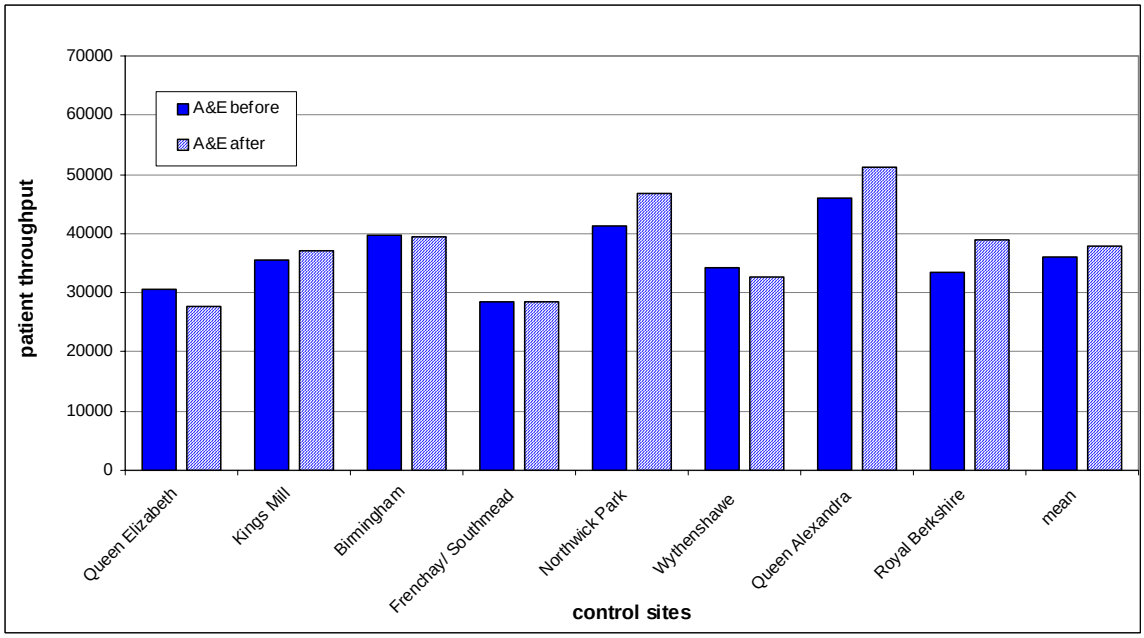


Figure 3 Total patient throughput for six-month period before and after WIC opening – 'control' sites



4.2.3 Admitted / discharged case mix at 'intervention' sites

The following tables and graphs provide data about whether any change in activity was due to changes in the number and proportion of cases which were 'minor' (not admitted) or 'major' (admitted). If the growth in activity was due to walk-in centres increasing access to care for patients with less serious problems, one would expect a greater increase in discharged patients than in admitted cases at 'intervention' sites.

The tables show that the overall increase in activity affected both discharged and admitted cases at both 'intervention' and 'control' sites, and the proportion of cases which were discharged increased slightly at 'intervention' sites and decreased slightly at 'control' sites. There is more variability between individual sites, than between 'intervention' and 'control' sites, and much of this may be due to random fluctuations in the data.

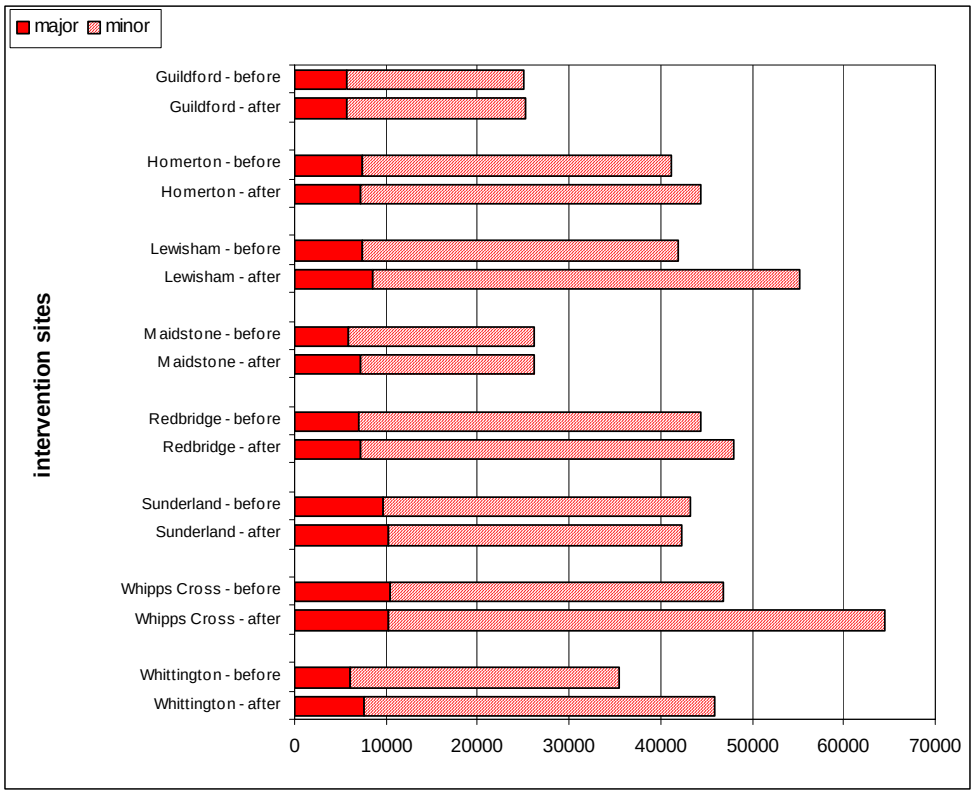
4.2.3.1 Regression: Between groups changes over time for discharged patients

For discharged patients, the difference in change between 'intervention' and 'control' groups between pre- and post- periods was 547 patients (95% CI –-369 to 1464, p = 0.24). This is very similar to the difference in change between 'intervention' and 'control' groups between pre- and post-periods for all cases (see above) of 542 patients (95% CI -347 to 1431, p = 0.23).

Table 4 Admitted / discharged patients by site and time – 'intervention' sites

	BEFORE				AFTER				
	admitted		discharged		admitted		discharged		discharged
	count	%	count	%	count	%	count	%	% change
Guildford	5745	(22.9)	19369	(77.1)	5758	(22.8)	19497	(77.2)	0.1
Homerton	7483	(18.2)	33716	(81.8)	7219	(16.3)	37168	(83.7)	1.9
Lewisham	7382	(17.6)	34586	(82.4)	8515	(15.4)	46690	(84.6)	2.3
Maidstone	5920	(22.6)	20336	(77.5)	7293	(27.9)	18815	(72.1)	-5.4
Redbridge	7104	(16.0)	37309	(84.0)	7265	(15.1)	40793	(84.9)	0.9
Sunderland	9648	(22.3)	33553	(77.7)	10320	(24.4)	32065	(75.7)	-2.0
Whipps Cross	10493	(22.4)	36348	(77.6)	10152	(15.7)	54393	(84.3)	6.7
Whittington	6118	(17.2)	29371	(82.8)	7542	(16.4)	38360	(83.6)	0.8
Mean	*7487*	*(19.7)*	*30574*	*(80.3)*	*8008*	*(18.3)*	*35923*	*(81.8)*	*1.4*

Figure 4 Admitted / discharged patients by site and time – 'intervention' sites

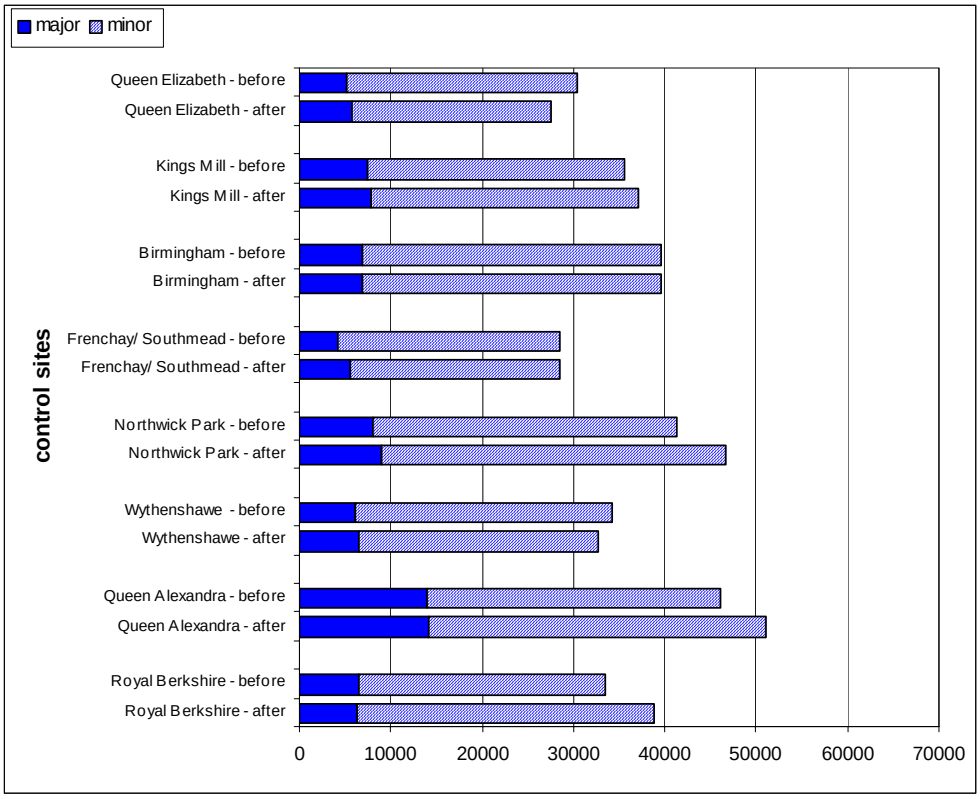


4.2.4 Admitted / discharged patients by site and time at 'control' sites

Table 5 Admitted / discharged patients by site and time – 'control' sites

	BEFORE				AFTER				
	admitted		discharged		admitted		discharged		discharged
	count	%	count	%	count	%	count	%	% change
Queen Elizabeth	5081	(16.7)	25363	(83.3)	5702	(20.7)	21862	(79.3)	-4.0
Kings Mill	7529	(21.2)	27959	(78.8)	7850	(21.1)	29287	(78.9)	0.1
Birmingham	6960	(17.6)	32659	(82.4)	6841	(17.3)	32712	(82.7)	0.3
Frenchay/Southmead	4129	(14.6)	24384	(85.5)	5573	(19.5)	22961	(80.5)	-5.1
Northwick Park	8100	(19.6)	33180	(80.4)	9065	(19.4)	37670	(80.6)	0.2
Wythenshawe	6166	(18.0)	28124	(82.0)	6470	(19.8)	26147	(80.2)	-1.9
Queen Alexandra	13952	(30.3)	32065	(69.7)	14197	(27.8)	36874	(72.2)	2.5
Royal Berkshire	6441	(19.3)	26978	(80.7)	6383	(16.4)	32460	(83.6)	2.8
Mean	*7295*	*(20.5)*	*28239*	*(79.5)*	*7760*	*(20.6)*	*29997*	*(79.4)*	*-0.1*

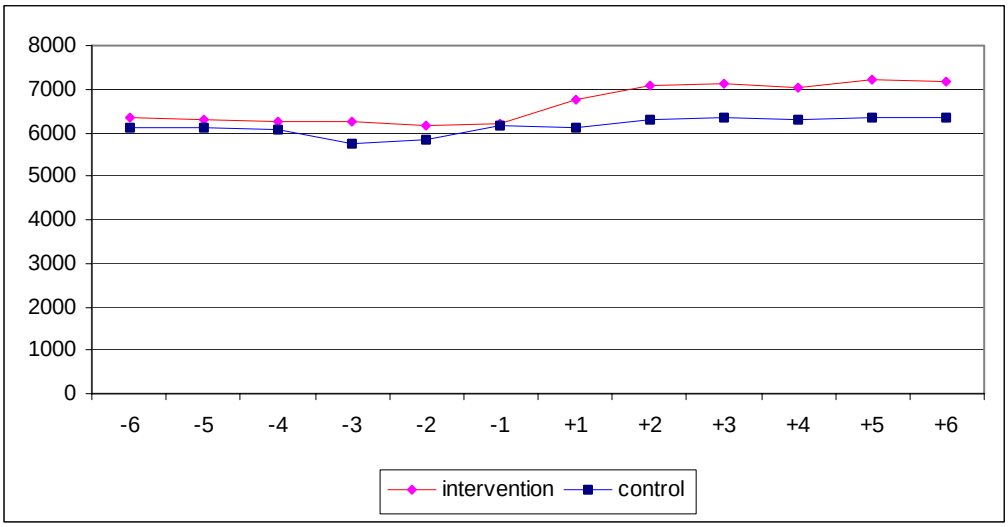
Figure 5 Admitted / discharged patients by site and time – 'control' sites



The following line graph illustrates the overall increase in throughput at 'intervention' sites compared with 'control' sites over time, as it might be anticipated that there would be a trend of an increase in demand at 'intervention' sites. This figure suggests a small step change in the demand at 'intervention' sites with no evidence of a greater increase in demand at 'control' sites.

The graph below excludes Lewisham, as it likely that the absence of data about throughput from the primary care centre which preceded the walk-in centre would lead to misleading findings.

Figure 6 Change in patient throughput over six-month period before and after walk-in centre opening – comparison of 'intervention' and 'control' sites (excluding Lewisham)



4.3 Research objective 3: visit duration

To assess the visit duration for patients attending A&E departments before, and combined A&E/walk-in centre sites after, the implementation of adjacent NHS walk-in centres compared with 'control' A&E departments.

4.3.1 Visit duration

All study sites were asked to provide information on time of arrival, start time of main consultation, end time of main consultation and time of disposal for each patient included in their anonymised random sample. Unfortunately, there was a technical problem with the data collected from one 'intervention' site (Whipps Cross) before the walk-in centre was opened and this site was there therefore excluded from this aspect of the analysis and the 'intervention' group baseline denominator adjusted accordingly. Also, the data requested relating to 'start of consultation' and 'end of consultation' were rarely available and often incomplete, so no estimation of either length of consultation or waiting time to consultation was possible.

However, 'time of arrival' and 'time of disposal' were reliably recorded by all sites, so it was possible to compute a new variable which calculated overall visit duration. The tables below show the median and mean visit duration for each site, within both 'intervention' and 'control' groups.

Table 6 Median and mean visit durations for individual 'intervention' sites in minutes

	BEFORE		AFTER					
	intervention A&E		intervention A&E		intervention WIC		intervention combined	
	n=1315		n=785		n=761		n=1546	
	median	mean	median	mean	median	mean	median	mean
Guildford	104	116.4	99	125.2	49	51.3	92	118.8
Homerton	112.5	136.9	125	168.2	166	198.2	113	175.3
Lewisham	123	147.6	124.5	133.3	62	79.4	110	121.3
Maidstone	112	144.2	174.5	175.2	88.5	97	116	127.6
Redbridge	162	219.8	130	138.4	80.5	88.6	121	132.6
Sunderland	97.5	118.5	107.5	116.5	103.5	104.7	106	112.9
Whipps Cross	-	-	139	137.3	59.5	132	137	136.7
Whittington	166	191	163	167.7	82	90.7	154	154.7

Table 7 Median and mean durations for individual 'control' sites in minutes

	BEFORE		AFTER	
	control A&E		control A&E	
	n=1534		n=1530	
	median	mean	median	mean
Queen Elizabeth	134	133.6	129.5	138.2
Kings Mill	101	125.5	95.5	114.3
Birmingham	141	168.3	123	150.8
Frenchay/Southmead	103	122	104.5	128.9
Northwick Park	140.5	181.5	109	147.1
Wythenshawe	120.5	138.1	139	149.5
Queen Alexandra	126	141.5	97	107.4
Royal Berkshire	93	128.5	124	131.1

Table 8 Mean waiting times for all 'intervention' and 'control' sites, split by type of case in minutes

		BEFORE		AFTER				
		intervention A&E	control A&E	intervention A&E	intervention WIC	intervention combined	control A&E	p*
discharged patients	n=2323	133.0	120.4	131.2	105.6	124.6	121.5	0.39
all patients	n=3062	156.6	143.9	142.2	107.6	134.8	133.5	0.44

*difference in change between post-intervention 'intervention' sites v. 'control' sites, adjusted for baseline

The tables suggest that mean visit duration at both 'intervention' sites and 'control' sites reduced, with a greater reduction at sites with walk-in centres. Within 'intervention' sites, patients seen in the walk-in centres had shorter mean visit durations than those seen in the co-located A&E departments. These patterns were the same whether all patients, or just those who were discharged, were considered. Patients who were discharged generally had a slightly shorter mean visit duration compared with those who were admitted.

The p-values from the regression analyses show that the difference in change between 'intervention' and 'control' sites may have arisen by chance, and the wide confidence intervals around the mean reflect the high level of variability between individual sites as well as the small number of sites studied.

4.3.1.1 Baseline comparability in relation to visit duration

There was no evidence that 'intervention' sites differed from 'control' sites at baseline (difference in means = 15 minutes, 95% CI -15 to 46, p = 0.30).

4.3.1.2 Within-groups changes over time for visit duration for all attendances

The within-group changes over time were -27 minutes (95% CI -64 to 10, p = 0.12) and -10 minutes (95% CI -27 to 6, p = 0.18) in the 'intervention' and 'control' groups respectively.

4.3.1.3 Between-groups changes over time for visit duration for all attendances

There was no evidence of any difference in change between 'intervention' and 'control' groups between pre- and post- periods (difference in change = -13 minutes, 95% CI -48 to 22, p = 0.44).

4.3.1.4 Between groups changes over time for visit duration for patients discharged

For patients discharged, the difference in change between 'intervention' and 'control' groups between pre- and post- periods was -11 minutes (95% CI -37 to 15, p = 0.39).

4.3.2 Compliance with 4-hour target

By calculating whether visit duration was in excess of the 4-hour target duration, it was possible to possible to compute a new variable which demonstrated sites compliance rate. As discussed previously, Whipps Cross had to be excluded from the data available for analysis relating to the period before the walk-in centre opened.

The tables below show the compliance rate for each study site, before and after walk-in centre implementation, whilst Table 11 compares the mean compliance rates for all study groups, by discharged and 'all' case categories.

Table 9 Percentage compliance with '4 hour target' for individual 'intervention' sites

	BEFORE	AFTER		
	intervention A&E	intervention A&E	intervention WIC	intervention combined
	n=1315	n=785	n=761	n=1546
Guildford	96.2	93.6	100	94.2
Homerton	91.3	80	71.4	78.0
Lewisham	87.5	98	100	98.4
Maidstone	90	94	100	97.6
Redbridge	71.1	96	99	96.4
Sunderland	95.9	98	100	98.6
Whipps Cross	-	98	88	96.9
Whittington	85.4	93.9	100	95.0

Table 10 Percentage compliance with '4 hour target' for individual 'control' sites

	BEFORE	AFTER
	control A&E	control A&E
	n=1534	n=1530
Queen Elizabeth	95	97.5
Kings Mill	95.3	98.4
Birmingham	80	89
Frenchay/Southmead	92.8	91.7
Northwick Park	79.1	91.4
Wythenshawe	93.5	95
Queen Alexandra	89	99
Royal Berkshire	91.5	96.4

Table 11 Percentage compliance with '4 hour target', split by type of case

		BEFORE		AFTER				
		intervention A&E	control A&E	intervention A&E	intervention WIC	intervention combined	control A&E	p*
discharged patients	n=2323	92.0	94.2	95.7	95.6	95.7	96.7	0.87
all patients	n=3062	87.4	89.0	94.6	95.6	94.8	94.8	0.73

*difference in change between 'intervention' and 'control' sites between pre- and post- periods

4.3.3 Regression models

The data above suggest that there have been slight increases in the proportion of patients who are admitted or discharged within the 4-hour target, but no difference between 'intervention' and 'control' sites, nor between walk-in centres and A&E departments within 'intervention' sites. As before the regression models suggest that the small changes observed may well be due to chance.

4.3.3.1 Baseline comparability in relation to compliance with '4-hour target'

There was no evidence that 'intervention' sites were any more or less likely to comply with the '4-hour target' compared with 'control' sites at baseline (odds ratio = 0.80, 95% CI 0.39 to 1.64, p = 0.55).

4.3.3.2 Within-groups changes over time for compliance with '4-hour target' for all attendances

Sites in both groups ('control' group odds ratio = 2.27, 95% CI 1.55 to 3.34, p<0.001) ('intervention' group odds ratio = 3.10, 95% CI 0.92 to 10.43, p = 0.07) were more likely to comply with the 4-hour hour target at follow-up compared with baseline.

4.3.3.3 Between-groups changes over time for compliance with '4-hour target' for all attendances

There was no evidence of any difference in change between 'intervention' and 'control' groups between pre- and post- periods (odds ratio for interaction term = 1.23, 95% CI 0.38 to 4.00, p = 0.73).

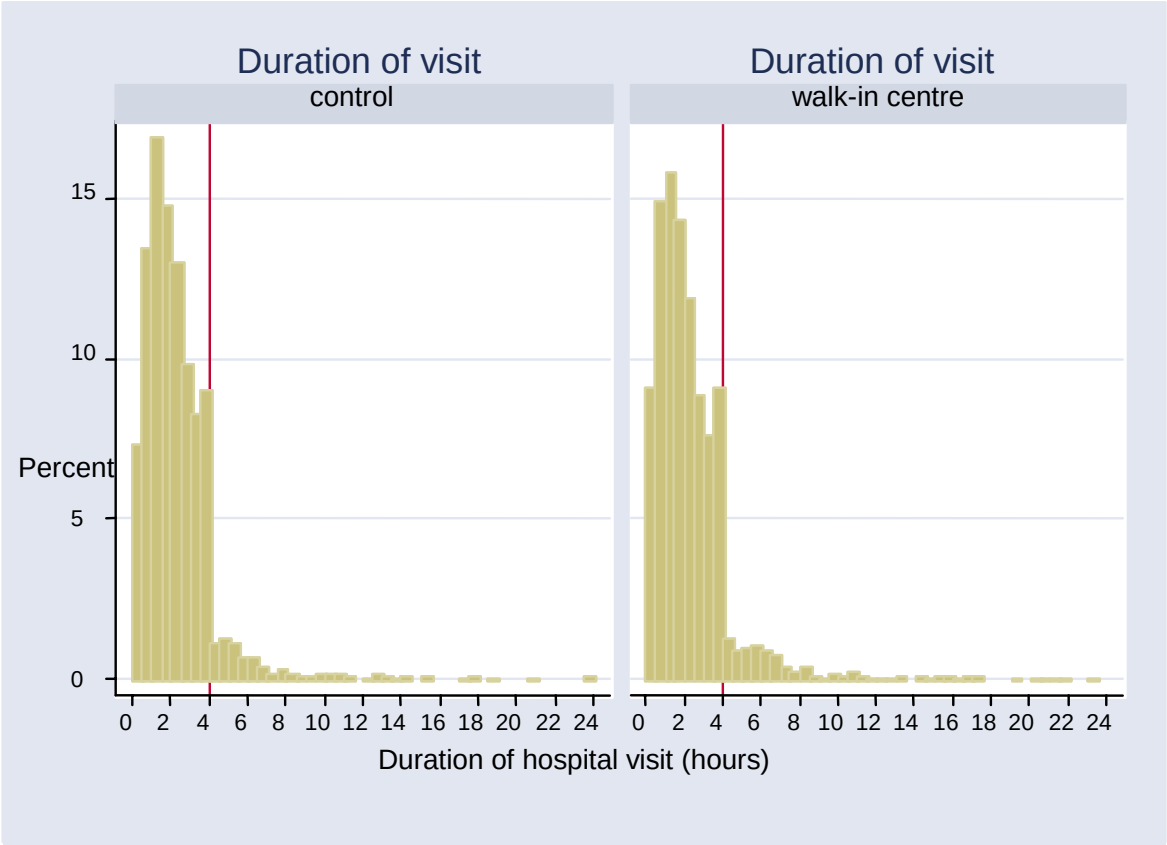
4.3.3.4 Between groups changes over time for compliance with '4-hour target' for patients who were discharged

For patients discharged, there was no evidence of any difference in change between 'intervention' and 'control' groups with respect to non-compliance with the 4-hour target (odds ratio for interaction term = 1.13, 95% CI 0.27 to 4.71, p = 0.87).

4.3.4 Distribution of visit duration

The distribution of visit duration was examined. As anticipated, the 4-hour A&E access target appears to have an impact on how long patients spent at the sites.

Figure 7 Distribution of all visit durations for all 'intervention' and 'control' sites after walk-in centre opening



4.4 Research objective 4: process of care, treatments, investigations

To assess the process of care and treatment provided for patients attending A&E departments before, and combined A&E/walk-in centre sites after, the implementation of adjacent NHS walk-in centres compared with 'control' A&E departments.

4.4.1 Data sources and data completion

The analyses in this section are based on the data extracted from 200 randomly selected records at each site, chosen from patients attending within a two-week period before and after the walk-in centre opened at 'intervention' sites, and the same periods for 'control' sites - see section 3.7.3. The amount of information available for extraction about different variables varied from site to site, and some of the analyses which had been intended were not possible because of the inadequacies of the data available. The number of sites contributing data varies for different analyses and this is described in each of the following sections.

4.4.2 Visitor profile at walk-in centres and A&E departments

All eight 'intervention' and all eight 'control' sites provided information about the age and/or sex of their visitors during their 'index' fortnights before and after walk-in centres were opened, during which detailed patient contacts were extracted for the evaluation. Overall, the profile of visitors to walk-in centres differs little from that attending A&E departments.

The mean age of visitors attending walk-in centres, 34.8 years, was very similar to that seen at their linked A&E departments, although slightly lower than seen within 'control' A&E facilities. The proportion of women and men attending walk-in centres compared to their linked A&E departments again showed little difference, although the proportion of men attending 'control' A&E departments was slightly lower.

In terms of healthcare professionals consulted, it is clear that the proportion of patients being seen by a doctor was lower at walk-in centres than at either linked or 'control' A&E departments, with the great majority of consultations in mainstream A&E departments involving medical as well as nursing expertise.

Table 12 Characteristics of patients attending sites – before and after walk-in centre opening

	BEFORE		AFTER			
	intervention A&E	control A&E	intervention A&E	intervention WIC	intervention combined	control A&E
	n=1400*	n=1600	n=800	n=800	n=1600	n=1600
mean age	34.1	38.1	33.4	34.8	33.7	37.6
sex = male	50.6%	54.6%	54.7%	55.2%	54.8%	52.0%
consulted doctor	87.5%	85.7%	95.7%	39.5%	83.2%	86.6%

* excluding Whipps Cross

4.4.3 Differences in process of care

All study sites were asked to return details of any investigations undertaken as part of the care process for each of the two hundred patients randomly sampled during the two data collection periods. Since this request allowed for a free-text response, details of investigations were subsequently recoded into eight multiple response categories as follows:

- X-ray
- ECG
- blood tests
- blood cross match
- urine tests
- ultrasound scan
- CT scan
- MRI scan

One 'intervention' site was unable to provide reliable data relating to investigations at baseline and another 'intervention' site was unable to do so for either baseline or post-intervention. Denominators for each study group have, therefore, been adjusted to reflect this.

Table 13 All investigations undertaken before and after walk-in centre opening – 'intervention' and 'control' sites

	BEFORE				AFTER							
	intervention A&E		control A&E		intervention A&E		intervention WIC		intervention combined		control A&E	
	n=1200*		n=1600		n=700**		n=700**		n=1400**		n=1600	
x-ray	311	(25.2)	642	(39.4)	160	(21.5)	172	(24.2)	332	(22.1)	602	(37.2)
ECG	87	(7.7)	242	(15.3)	55	(9.2)	6	(1.1)	61	(7.3)	260	(16.5)
blood tests	203	(16.9)	397	(24.3)	169	(22.2)	12	(2.0)	181	(17.4)	376	(23.1)
blood matches	9	(0.7)	25	(1.9)	-	-	-	-	-		20	(1.4)
urine tests	86	(7.2)	133	(8.6)	68	(10.1)	10	(1.0)	78	(7.9)	160	(10.7)
ultrasound scans	3	(0.2)	1	(0.1)	-	-	-	-	-		3	(0.2)
CT scans	1	(0.1)	21	(1.3)	4	(0.5)	-	-	4	(0.4)	20	(1.3)
MRI scans	-	-	4	(0.3)	-	-	-	-	-		8	(0.6)

* excluding Homerton and Whipps Cross
** excluding Whipps Cross

The data above suggest that patients in 'intervention' sites were given fewer x-rays both before and after the walk-in centres were opened, compared with 'control' sites. There was no difference at 'intervention' sites between patients seen in a walk-in centre or A&E setting.

The original research protocol outlined the possibility of considering investigations undertaken by seriousness of case i.e. whether designated as admitted/discharged. However, once the data were collected, it was evident that this type of analysis would not be worthwhile due to the small number of cases within each category of investigation.

4.4.4 Treatments

As with investigations, details of treatments administered to patients included in the anonymised data sample were elicited from all study sites as free text responses and recoded into twelve multiple-response categories as follows:

- wound closure (including sutures, glue, steristrips)
- medication (supplied or prescribed)
- dressings (including wound care)
- catheter (insertion or removal)
- suture removal
- bandages / slings (including strappings, tubigrip, collar and cuff)
- nebuliser
- plaster of Paris
- removal of foreign body (including eye wash, eye stain)
- IV/cannula (insertion or removal)
- injections
- resuscitation
- oxygen

Since only three of the eight 'intervention' sites were able to provide data on this aspect of care prior to walk-in centre opening, analysis was conducted only in respect of treatments post-intervention i.e. once the new walk-in centre facilities were operational. One 'intervention' site was unable to furnish any details of its treatments, before or after walk-in centre implementation and, as a result, this site was excluded from the analysis. Denominators for each study group have, therefore, been adjusted to reflect this.

Table 14 All treatments after walk-in centre opening – 'intervention' and 'control' sites

	AFTER							
	intervention A&E		intervention WIC		intervention combined		control A&E	
	n=700*		n=700*		n=1400*		n=1600	
wound closure	15	(2.1)	29	(3.7)	44	(2.4)	64	(4.1)
medication	237	(16.9)	202	(14.4)	439	(31.4)	592	(37.0)
dressings	24	(3.5)	87	(10.1)	111	(5.0)	50	(3.3)
catheter	3	(0.5)	-	-	3	(0.4)	6	(0.4)
suture removal	-	-	2	(0.1)	2	(0.0)	-	-
bandages / slings	24	(3.7)	85	(12.1)	109	(5.7)	58	(3.6)
nebuliser	14	(2.1)	2	(0.4)	16	(1.7)	28	(1.8)
plaster of Paris	8	(1.1)	14	(1.8)	22	(1.3)	28	(1.7)
foreign body removal	1	(0.1)	5	(0.4)	6	(0.2)	7	(0.5)
IV / cannula	48	(5.7)	3	(0.5)	51	(4.5)	57	(3.6)
injections	12	(1.7)	13	(1.8)	15	(1.7)	22	(1.5)
resuscitation	1	(0.2)	-	-	1	(0.2)	-	-
oxygen	13	(1.9)	1	(0.1)	14	(0.8)	13	(0.8)

* excluding Whipps Cross

There did not appear to be any meaningful differences between the 'intervention' or 'control' sites, in the treatments that patients received. Within 'intervention' sites, patients seen in the A&E department appeared more likely to have an IV cannula, and less likely to be treated with dressings or bandages compared with those seen in co-located walk-in centres, which reflects the way in which patients with minor injuries tended to be triaged to the walk-in centre at most sites.

4.4.5 Disposal category

All 'intervention' and 'control' sites were able to provide data on the final disposal category awarded to patients at their facility, although one 'intervention' site was only able to provide reliable data for the time period subsequent to walk-in centre opening. Denominators for each study group have, therefore, been adjusted to reflect this.

Table 15 Patient disposal before and after walk-in centre opening – 'intervention' and 'control' sites

	BEFORE				AFTER							
	intervention A&E		control A&E		intervention A&E		intervention WIC		intervention combined		control A&E	
	n=1400*		n=1600		n=800		n=800		n=1600		n=1600	
admitted	280	(19.4)	380	(24.1)	204	(23.3)	21	(3.4)	225	(19.0)	348	(21.0)
discharged	860	(62.1)	883	(55.3)	494	(65.1)	641	(81.0)	1135	(68.6)	968	(61.4)
referred	163	(11.9)	257	(15.8)	69	(8.4)	113	(12.7)	182	(9.4)	241	(15.1)
transferred	16	(1.2)	14	(0.9)	10	(1.0)	3	(0.6)	13	(0.9)	5	(0.3)
did not wait	72	(5.2)	54	(3.3)	13	(1.5)	16	(2.1)	29	(1.6)	32	(1.9)
died	2	(0.1)	10	(0.6)	6	(0.7)	1	(0.2)	7	(0.6)	5	(0.3)

* excluding Whipps Cross

Patients attending an 'intervention' site appeared slightly less likely to be admitted or referred and more likely to be discharged than those in 'control' sites, both at baseline and after the walk-in centres opened, probably suggesting differences in the case-mix at these sites.

Within 'intervention' sites, almost all patients who were eventually admitted were dealt with in the A&E department rather than the walk-in centre, and patients who were eventually referred to a clinic, outpatient department or other agency were mainly dealt with in the walk-in centre. This is unsurprising and reflects the way in which patients are assessed and allocated to either the A&E department or the walk-in centre at the outset.

It would have been interesting to have considered the number and profile of patients transferring from walk-in centres to A&E departments within the course of a visit (or vice versa) but this information was unavailable because most sites only recorded one variable for where the patient was finally treated, and did not record cross-referral between the two facilities.

4.4.6 HRG groups

There is on-going methodological work being conducted by the NHS Health and Social Care Information Centre to determine the resource implications of different types of patients attending A&E departments.[28] This has concluded that triage categories are used too inconsistently by A&E departments to be useful for this purpose. They have concluded that a combination of types of investigation undertaken (grouped into categories of high medium or low cost) and disposal category provides a number of potential groups which can be used to characterise the resource needs of different types of patients. This can be used to summarise the case mix in different A&E departments.

In this evaluation, it was possible to use the same methodology and to combine data about disposal and investigations to show the percentage of people who were in each of the eight main HRG groups at different types of site. This information is provided purely as descriptive data and to enable comparison with patients visiting A&E departments nationally.

Table 16 HRG group categorisation before and after walk-in centre opening – 'intervention' and 'control' sites

	BEFORE				AFTER							
	intervention A&E		control A&E		intervention A&E		intervention WIC		intervention combined		control A&E	
	n=1200*		n=1600		n=1400**		n=1400**		n=1400**		n=1600	
	count	%	count	%	count	%	count	%	count	%	count	%
high cost imaging (died/admitted)	-	-	2	(.1)	1	(.1)	-	-	1	(.0)	1	(.0)
high cost imaging (referred/discharged)	-	-	5	(.3)	2	(.3)	-	-	2	(.2)	-	-
other high cost invest. (died/admitted)	26	(1.8)	45	(2.9)	17	(2.0)	7	(1.6)	24	(1.9)	27	(1.6)
other high cost invest. (referred/discharged)	187	(15.3)	358	(21.8)	78	(11.2)	161	(21.9)	239	(13.7)	342	(21.1)
lower cost invest. (died/admitted)	123	(10.4)	259	(16.0)	108	(14.1)	7	(.9)	115	(11.0)	251	(15.4)
low cost invest. (referred/discharged)	141	(11.8)	225	(13.7)	106	(15.2)	18	(2.7)	124	(12.3)	252	(15.9)
no investigation (died/admitted)	123	(9.7)	98	(6.5)	78	(11.0)	9	(1.9)	87	(8.8)	79	(4.7)
no investigation (referred/discharged)	593	(51.0)	606	(38.7)	306	(46.0)	497	(71.0)	803	(51.9)	647	(41.3)

* excluding Homerton and Whipps Cross
** excluding Whipps Cross

As discussed previously, patients in 'intervention' sites were less likely to fall in the groups requiring admission and high cost investigations, both at baseline and at follow-up, suggesting some case mix differences between the two groups (despite attempts to match sites on admission rates). Within 'intervention' sites, patients seen in the walk-in centre were more likely to fall into the lowest cost category of patients receiving no investigations and being discharged.

4.5 Research objective 5: resource use and costs

To assess resource utilisation and costs of care for patients attending A&E departments before, and combined A&E/walk-in centre sites after, the implementation of adjacent NHS walk-in centres compared with 'control' A&E departments.

4.5.1 Assessing resource use and costs

Table 17 shows the estimated total cost by resource use group for the three-month period January – March before and after the opening of the walk-in centres. The year-on-year total cost increased by 22% in the 'intervention' group and 10% in the 'control' group, considerably ahead of the increase in the retail prices index of 3.2% for this period. The differential between the two groups is largely due to the difference in the increase in clinical staff costs of 28% in the 'intervention' group and 15% in the 'control' group. The cost of both outpatients appointments arranged and medication prescribed fell during the period at intervention sites.

Table 17 Estimated total cost (£000) for three-month period January – March 2004 and 2005

	BEFORE		AFTER	
	intervention A&E	control A&E	intervention combined	control A&E
doctors	3086	3323	4172	4055
Nurses	4904	4297	6062	4740
other clinical staff	161	39	198	48
all clinical staff	*8151*	*7658*	*10431*	*8844*
other fixed and semi-fixed costs	3502	1997	4452	2266
total fixed and semi-fixed costs	**11653**	**9655**	**14884**	**11110**
investigations	1656	2696	2080	2895
medication	280	157	213	164
onward referral (out patients)	2263	2892	2209	2797
re-consultations*	1041	988	1229	1044
total variable costs	**5239**	**6734**	**5731**	**6900**
total cost	**16892**	**16389**	**20614**	**18010**

* including GP, practice nurse, walk-in centre or NHS Direct

Figure 8 shows the contribution of each category of resource use to total cost before and after opening of the walk-in centres for the 'intervention' and 'control' groups. There is no indication of a systematic shift in skill-mix from doctors to nurses in the 'intervention' sites since the opening of the new units; the proportion of total costs that is accounted for by the cost of doctors increased from 18% to 20% in the 'intervention' group and from 20% to 23% in the 'control' group, whilst for nurses the proportion was maintained at 29% in the 'intervention' group and at 26% in the 'control' group.

Figure 8 Distribution of costs by activity

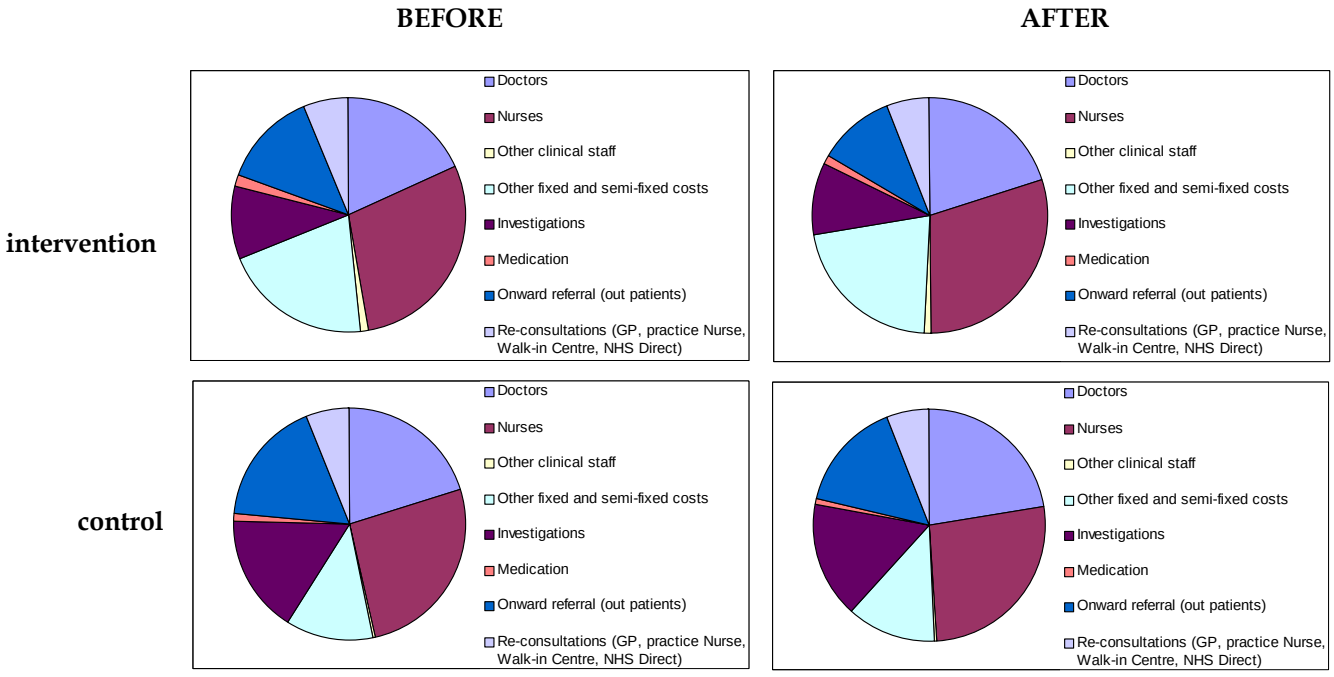


Table 18 and Table 19 give the total cost and cost per patient for all sixteen sites separately, and Table 20 gives the cost per patient, by category of resource use.

Table 18 Total cost and cost per patient for all 'intervention' sites

	BEFORE			AFTER		
	total cost (£000)	throughput (000)	cost per patient (£)	total cost (£000)	throughput (000)	cost per patient (£)
Guildford	1305	12.6	103.96	1542	12.6	122.12
Homerton	2704	20.6	131.24	3324	22.2	149.76
Lewisham	2612	21.0	124.49	2994	27.6	108.45
Maidstone	1054	13.1	80.29	973	13.1	74.54
Redbridge	2663	22.2	119.90	3191	24.0	132.79
Sunderland	1824	21.6	84.44	2090	21.2	98.61
Whipps Cross	2883	23.4	123.10	3965	32.3	122.87
Whittington	1848	17.7	104.12	2536	23.0	110.51
Total / mean	**16892**	**152.00**	**110.96**	**20614**	**175.9**	**117.18**

Table 19 Total cost and cost per patient for all 'control' sites

	BEFORE			AFTER		
	total cost (£000)	throughput (000)	cost per patient (£)	total cost (£000)	throughput (000)	cost per patient (£)
Queen Elizabeth	1833	15.2	120.45	1887	13.8	136.91
Kings Mill	1610	17.7	90.75	1664	18.6	89.622
Birmingham	2079	19.8	104.94	2422	19.8	122.46
Frenchay/Southmead	2099	14.3	147.24	2292	14.3	160.65
Northwick Park	2300	20.6	111.44	2503	23.4	107.11
Wythenshawe	1930	17.1	112.56	2229	16.3	136.71
Queen Alexandra	2674	23.0	116.22	3051	25.5	119.46
Royal Berkshire	1863	16.7	111.52	1962	16.4	119.47
Total / mean	**16389**	**144.5**	**113.39**	**18010**	**148.0**	**121.67**

Overall, the total number of patients seen in the period (throughput) increased by 16% in the 'intervention' group and by 2% in the 'control' group. This, combined with the increase in overall costs, led to an increase in cost per patient of 10% in the 'intervention' group and 7% in the 'control' group.

Of the 'intervention' sites, Sunderland experienced the greatest increase in cost per patient (24%), largely due to a reduction in throughput. Lewisham and Maidstone both recorded a fall in cost per patient: Lewisham due to an apparent increase in throughput (see sensitivity analysis) and a lower than average increase in total costs, and Maidstone due to reduced costs and stable throughput.

Two 'control' sites (King's Mill and Northwick Park) experienced a reduction in cost per patient. The greatest increase was found in Wythenshawe (21%).

Table 20 Total cost per patient (£) by category of resource use

	BEFORE		AFTER	
	intervention A&E	control A&E	intervention combined	control A&E
doctors	20.27	22.99	23.71	27.40
nurses	32.21	29.73	34.46	32.02
other clinical staff	1.06	0.27	1.12	0.33
all clinical staff	*53.54*	*52.99*	*59.30*	*59.75*
other fixed and semi-fixed costs	23.00	13.82	25.31	15.31
total fixed and semi-fixed costs	**76.54**	**66.80**	**84.60**	**75.05**
investigations	10.87	18.65	11.82	19.56
medication	1.84	1.09	1.21	1.11
onward referral (out patients)	14.87	20.01	12.55	18.90
re-consultations*	6.84	6.84	6.98	7.05
total variable costs	**34.42**	**46.59**	**32.58**	**46.61**
total cost	**110.96**	**113.39**	**117.18**	**121.67**

* including GP, practice nurse, walk-in centre or NHS Direct

4.5.1.1 Regression analysis

There was no evidence of any difference between the increase in cost at the 'intervention' sites compared with the 'control' groups. The difference in change was -£3.06 (95% CI -£16.50, £10.39) per patient.

4.5.2 Sensitivity Analysis

4.5.2.1 Investigating the effect of admissions

Table 21 shows the rate and cost of admissions in the 'intervention' and 'control' group sites before and after the opening of the walk-in centres.

Table 21 Admissions in 'intervention' and 'control' groups before and after opening of the walk-in centre facilities

	BEFORE		AFTER	
	intervention A&E	control A&E	intervention combined	control A&E
number of admissions	29947	29179	32032	31041
total patient throughput (000)	152.0	144.5	175.9	148.0
admission rate per thousand patients	197	202	182	210
total cost of all admissions (£000)	37464	36504	41337	40058
cost of admissions per patient seen (£)	264.08	252.56	234.98	270.61

The number of admissions rose slightly at both 'intervention' and 'control' sites, but because overall throughput increased to a greater extent in 'intervention' sites, the rate and cost per patient of admissions decreased in the 'intervention' sites after the opening of the adjacent walk-in centres, whilst in the 'control' sites, both the rate and the cost increased. The overall effect of including admissions in the analysis is for total cost per patient to decrease from £357.04 to £352.15 in the 'intervention' sites and to increase from £365.95 to £392.28 in the 'control' sites.

When admissions are included in the analysis, there is a £20.97 (95% CI –£64.98, 23.04) reduction in cost per patient in the 'intervention' group, after controlling for the change in cost per patient found in the 'control' group.

4.5.2.2 *Investigating the effect of excluding Lewisham*

In Lewisham, the estimated baseline cost per patient fell from £124.49 to £108.45, due largely to the possibly artefactual increase in throughput of 30%. When Lewisham is excluded from the analysis, mean cost per patient in the 'intervention' group increases from £108.80 to £118.80 compared to an increase from£113.39 to £121.67 in the 'control' group.

When Lewisham is excluded from the analysis, there is a £1.00 (95% CI –£9.85, £11.85) increase in cost per patient in the 'intervention' group, after controlling for the change in cost per patient found in the 'control' group.

4.6 Research objective 6: difference between 'minor' and 'major' cases

> To compare visit duration, resource utilisation and costs of care separately for patients with 'minor' problems and 'major' problems when managed in a walk-in centre, an A&E department with an adjacent walk-in centre, or a control A&E department without an adjacent walk-in centre.

This objective has been partly addressed within a preceding section. The difference in visit duration for patients who were admitted or not, at sites with and without walk-in centres, is discussed in Section 4.3.1. The differences in resource utilisation and costs for patients admitted or not are considered below. The analysis relating to this objective focuses on the cost of treating patients with minor conditions in the 'intervention' and 'control' groups, before and after the opening of the adjacent walk-in centres, as the walk-in centres are likely to have had a very small impact on the care of admitted patients. In addition, the cost associated with caring for admitted patients, is likely to have been underestimated in this analysis because no data were available on follow-up treatment after admission (and discharge).

4.6.1 Identifying and measuring the cost relevant to discharged patients

Fixed and semi-fixed costs (excluding clinical staff costs) relevant to discharged patients were estimated on the basis of the total time spent in the unit by discharged patients, compared to those admitted. Table 22 shows the mean duration for each category of patient, weighted by throughput and the proportion of time spent in the facilities.

Table 22 Proportion of total time spent by admitted and discharged patients, in 'intervention' and 'control' sites, before and after opening of the walk-in centres

	BEFORE			AFTER		
	weighted mean duration	3-monthly throughput	proportion	weighted mean duration	3-monthly throughput	proportion
intervention admitted	232.55	29947	0.324	173.33	32032	0.247
intervention discharged	118.85	122294	0.676	117.42	143891	0.753
control admitted	209.59	29179	0.303	176.82	31041	0.281
control discharged	121.69	115356	0.697	120.21	116986	0.719

Clinical staff costs relevant to discharged patients were estimated on the basis of information gathered in the 'time and motion' study. The proportions for each staff type and grade used in the analysis are shown in Table 23. All are based on observed proportions, adjusted to allow for differences in skill-mix across shifts and the different patterns of staffing, by shift, in each of the facilities observed.

Table 23 Proportion of staff costs attributed to admitted and discharged patients, for nurses and doctors separately, and for three different staff grades

	BEFORE		AFTER	
	admitted %	discharged %	admitted %	discharged %
junior doctor	0.419	0.581	0.414	0.586
middle-grade doctor	0.431	0.569	0.423	0.577
senior doctor	0.261	0.739	0.246	0.754
junior nurse	0.341	0.659	0.325	0.675
middle-grade nurse	0.577	0.443	0.539	0.461
senior nurse	0.311	0.689	0.288	0.712

Variable costs relevant to discharged patients were identified from information provided by the data from patient records and the patient survey. Investigations, drugs, and onward referral were recorded at a patient-specific level so could be assigned directly, as with the information on re-consultations obtained through the survey. Table 24 shows the total cost attributable to discharged patients and cost per discharged patient for 'intervention' and 'control' groups before and after the opening of the walk-in centres.

Table 24 Total costs and cost per discharged patient, in 'intervention' and 'control' sites together, before and after opening of the walk-in centres

	BEFORE			AFTER		
	total cost (£000)	throughput (000)	cost per patient	total cost (£000)	throughput (000)	cost per patient
intervention discharged	11716	122.3	95.81	15513	143.9	107.81
control discharged	11313	115.4	98.07	12424	117.0	106.20

4.6.1.1 Regression analysis

The difference in increase in cost per discharged patient between the 'intervention' group and the 'control' group was £0.51 (95% CI -£13.70, £14.71).

4.7 Research objective 7: outcomes and re-attendance, patient satisfaction

To compare clinical outcomes, re-attendance rates, patient satisfaction and costs of providing care for people with 'minor' problems four weeks after they attended a combined A&E/walk-in centre or a matched 'control' A&E department.

4.7.1 Patient survey response rate

A total of 2017 patients at 'intervention' and 'control' sites were identified as being potential participants in the patient survey, by reason of being aged 16 or over and having not been admitted to hospital following their visit. Of these 2017, 65 were subsequently deemed ineligible on a variety of grounds including death, mental incapacity or having no known address. This gave a survey denominator of 1952. Of these 1952 eligible service users, 704 successfully completed and returned a questionnaire, which equates to an overall survey response rate of 36.1%.

The results from the survey must be interpreted with some caution due to the low number of responses received from each site and the associated moderate response rate.

Table 25 Overall response rate – 'intervention' sites

	patients identified count	non contacts count	eligible contacts count	respondents count	response rate %
Guildford	156	1	155	67	43.2
Homerton	164	8	156	22	14.1
Lewisham	136	7	129	49	38.0
Maidstone	100	6	94	34	36.2
Redbridge	127	6	121	34	28.1
Sunderland	123	3	120	49	40.8
Whipps Cross	137	6	131	45	34.4
Whittington	128	5	123	38	30.9
total	*1071*	*42*	*1029*	*338*	*32.9*

Table 26 Overall response rate – 'control' sites

	patients identified count	non contacts count	eligible contacts count	respondents count	response rate %
Queen Elizabeth	99	0	99	44	44.4
Kings Mill	116	2	114	49	43.0
Birmingham	118	4	114	37	32.5
Frenchay/Southmead	120	3	117	40	34.2
Northwick Park	141	7	134	29	21.6
Wythenshawe	120	1	119	54	45.4
Queen Alexandra	108	4	104	50	48.1
Royal Berkshire	124	2	122	63	51.6
total	*946*	*23*	*923*	*366*	*39.7*

It is notable that the response rate was particularly low for some of the sites situated in and around London such as Homerton, Redbridge and Northwick Park. The highest response rates were in towns outside London such as Reading (Royal Berkshire Hospital) and Guildford. These varying response rates probably reflect the diverse socio-economic and ethnicity/language characteristics of the local populations. Furthermore, many of the walk-in centres were located in relatively deprived areas of outer London, with the effect of making the response rate for sites with walk-in centres lower than of 'control' sites.

Unfortunately, no information was available, at patient level, on the socio-economic status of patients not returning the questionnaire, so comparisons with the characteristics of those who did return the questionnaire were not possible. However, data were available with regard to the age and sex of respondents and non-respondents, and also whether or not these people were seen by a doctor (instead of, or as well as, a nurse). These data are compared below.

Table 27 Characteristics of patients eligible for and completing survey

	AFTER							
	intervention A&E		intervention WIC		intervention combined		control A&E	
	eligible	responded	eligible	responded	eligible	responded	eligible	responded
	n=397	n-117	n=674	n=221	n=1071	n=338	n=946	n=366
mean age	39.4	44	39.0	43.7	39.3	43.9	40.3	46.2
sex = male	55.3%	48.7%	53.8%	47.4%	54.8%	48.3%	53.3%	47%
consulted doctor	97%	97%	37.8%	41.8%	77.6%	78.2%	84.4%	85.1%

Survey respondents were more likely to be female and older than represented in the population from which they were drawn, although differences were small. There were no differences in terms of whether respondents had seen a doctor or a nurse. Patients in 'intervention' sites were more likely to have finished full-time education before the age of 17, to live in rented accommodation, to be unemployed, and to be of an ethnic minority group compared with those in 'control' sites. This probably reflects the fact that many 'intervention' sites (those with walk-in centres) were established in more deprived parts of London. Details are given in Appendix 5.

Overall, 96% of respondents at 'intervention' sites and 99% of respondents at 'control' sites were registered with GPs, with 83% and 86% respectively being registered with a GP in the same town as the hospital they visited (see Appendix 6).

4.7.2 Reasons for attending the hospital

The majority of patients attending all types of site presented with an injury, with relatively few presenting with illness.

Table 28 Reasons for attending hospital

	AFTER								P*
	intervention A&E n=112		intervention WIC n=219		intervention combined n=331		control A&E n=360		
	count	%	count	%	count	%	count	%	
A1: What was the main type of problem that you attended the hospital about?									
1: injury	47	(39.5)	118	(55.1)	165	(44.7)	194	(53.4)	0.39
2: recent illness	12	(12.1)	29	(12.0)	41	(12.1)	37	(10.6)	
3: illness for more than two weeks	15	(15.4)	23	(9.9)	38	(13.6)	30	(8.5)	
4: other problem	38	(32.9)	49	(23.0)	87	(29.6)	99	(27.5)	

* comparison between intervention sites and control sites, using appropriate regression models allowing for clustering and sampling probability. Percentages in the table also take account of sampling probability.

4.7.3 Patient choice of facility and route to care

It is notable that most patients attended the A&E department first, even in sites with co-located walk in centres. Of those patients seen in walk-in centres at 'intervention' sites, 79% initially attended the A&E department and were then sent to the walk-in centre.

Table 29 Where patients attended initially

	AFTER								
	intervention A&E n=113		intervention WIC n=220		intervention combined n=333		control A&E n=362		P[v]
	count	%	count	%	count	%	count	%	
B1: When you went to the hospital, where did you go first?									
1: A & E	95	(84.4)	170	(79.3)	265	(82.7)	333	(92.3)	0.001
2: NHS walk-in centre	15	(12.7)	40	(14.9)	55	(13.4)	12	(3.0)	
3: somewhere else	3	(2.9)	10	(5.8)	13	(3.9)	17	(4.7)	

Table 30 Whether patients were redirected

	AFTER								
	intervention A&E n=110		intervention WIC n=216		intervention combined n=326		control A&E n=355		P[vi]
	count	%	count	%	count	%	count	%	
B2. Were you then sent anywhere else?									
1. no, I just went to one place	76	(67.4)	116	(50.3)	192	(61.8)	266	(75.5)	<0.001
2. yes, A&E	11	(10.3)	20	(9.8)	31	(10.1)	28	(8.2)	
3. yes, NHS walk in centre	10	(10.9)	57	(27.8)	67	(16.5)	8	(2.4)	
4. yes, I was sent somewhere else	13	(11.4)	23	(12.0)	36	(11.6)	53	(13.9)	

These findings are explored further in Table 31. This shows the proportion of patients who stated that they were seen in the A&E department or the walk-in centre, cross-tabulated by where they were recorded by the hospital as having been seen.

Table 31 Where patients stated they were seen in relation to where they were recorded as being seen

	AFTER							
	intervention A&E n=109		intervention WIC n=215		intervention combined n=324		control A&E n=355	
	count	%	count	%	count	%	count	%
A&E department only	84	(75.9)	117	(55.1)	201	(69.0)	324	(91.4)
walk-in centre only	15	(13.0)	35	(12.7)	50	(12.9)	11	(2.7)
A&E then walk-in centre	8	(9.3)	52	(26.1)	60	(14.9)	7	(2.2)
walk-in centre then A&E	-	-	6	(3.1)	6	(1.0)	1	(.3)
Other	2	(1.7)	5	(3.0)	7	(2.1)	12	(3.4)

[v] comparison between intervention sites and control sites, using appropriate regression models allowing for clustering and sampling probability. Percentages in the table also take account of sampling probability.

Slightly more than half (55%) of the patients who were treated in a walk-in centre stated that they had only been treated in an A&E department. This is consistent with the finding from the site observations that, in some locations, the walk-in centre was a 'nominal' concept, with very little to indicate to patients that they were not being treated in a traditional A&E department.

The proportion of patients attending walk-in centres who stated that they had only attended an A&E department varied considerably from site to site, reflecting the extent to which the walk-in centre had a clear separate identity in each location. This is shown in Table 32 below. For example, 86% of patients at Whipps Cross, where there is a clearly identifiable walk-in centre facility, recognised that they had attended a walk-in centre whilst at sites such as Maidstone, Redbridge and the Whittington hospital more than 80% of patients recorded by the hospital as attending the walk-in centre believed that they had attended the A&E department.

Table 32 Whether patients at walk-in centres believed they were seen in A&E or WIC, by site

site		Whether patient stated they were seen in A&E or WIC					
		A&E only	WIC only	A&E then WIC	WIC then A&E	other	total
Guildford	count	22	11	11	1	0	45
	% within site	(48.9)	(24.4)	(24.4)	(2.2)	(.0)	(100.0)
Homerton	count	10	3	1	0	2	16
	% within site	(62.5)	(18.8)	(6.3)	(.0)	(12.5)	(100.0)
Lewisham	count	15	2	16	0	1	34
	% within site	(44.1)	(5.9)	(47.1)	(.0)	(2.9)	(100.0)
Maidstone	count	16	0	2	1	1	20
	% within site	(80.0)	(.0)	(10.0)	(5.0)	(5.0)	(100.0)
Redbridge	count	25	1	1	1	0	28
	% within site	(89.3)	(3.6)	(3.6)	(3.6)	(.0)	(100.0)
Sunderland	count	11	2	17	1	0	31
	% within site	(35.5)	(6.5)	(54.8)	(3.2)	(.0)	(100.0)
Whipps Cross	count	2	13	4	2	1	22
	% within site	(9.1)	(59.1)	(18.2)	(9.1)	(4.5)	(100.0)
Whittington	count	16	3	0	0	0	19
	% within site	(84.2)	(15.8)	(.0)	(.0)	(.0)	(100.0)
Total	count	117	35	52	6	5	215
	% within site	(54.4)	(16.3)	(24.2)	(2.8)	(2.3)	(100.0)

Of patients seen in an A&E department (whether at an 'intervention' site or a 'control' site), 12% would have preferred to be seen in a walk-in centre. Of patients seen in a walk-in centre, about a third would have preferred to be seen in an A&E department. This illustrates that whether patients are treated in a walk-in centre or an A&E department at 'intervention' sites depends heavily on triage mechanisms as well as patient choice. In all sites, more than a third of patients did not mind where they were seen. This is illustrated in Table 33.

Table 33 Patient choice of facility

	AFTER								p[vi]
	intervention A&E n=110		intervention WIC n=215		intervention combined n=325		control A&E n=360		
	count	%	count	%	count	%	count	%	
B3. If you had a choice, where would you have preferred to go for your problem?									
1. A&E	51	(47.1)	70	(35.2)	121	(43.1)	168	(46.0)	0.61
2. NHS walk in centre	13	(12.9)	48	(22.4)	61	(16.1)	38	(11.6)	
3. somewhere else	5	(5.4)	19	(6.7)	24	(5.8)	23	(6.6)	
4. didn't mind where I went	41	(34.6)	78	(35.6)	119	(34.9)	131	(35.7)	

[vi] Comparison between intervention sites and control sites, using appropriate regression models allowing for clustering and sampling probability. Percentages in the table also take account of sampling probability.

4.7.4 Distance from hospital

About two thirds of patients lived with five miles of the facility they attended, but one in seven lived more than ten miles away. This pattern was similar for all types of facility.

Table 34 Distance people live from the hospital

	AFTER								
	intervention A&E n=112		intervention WIC n=215		intervention combined n=327		control A&E n=355		P[vii]
	count	%	count	%	count	%	count	%	
B4. How far from the hospital do you live?									
1. less than 2 miles	29	(27.6)	62	(28.9)	91	(28.0)	76	(22.1)	0.37
2. 3 to 5 miles	47	(45.3)	86	(40.0)	133	(43.5)	139	(40.7)	
3. 6 to 10 miles	17	(12.0)	45	(21.7)	62	(15.2)	88	(24.7)	
4. more than 10 miles	19	(15.2)	22	(9.3)	41	(13.2)	52	(12.5)	

4.7.5 Preferences

Patients were asked why they attended the facility they chose, rather than going to an alternative provider of care. For 'intervention' sites, responses were categorised according to where people said they went first (see Table 29) rather than according to where they were eventually coded as having attended by the hospital.

Within 'intervention' sites, there was a suggestion that people choosing to go to the walk-in centre did so because it was quicker than getting a GP appointment, whereas people attending the A&E department initially, did so because they thought it was the most appropriate place for their problem. However, the numbers choosing to go to the walk-in centre were relatively small, so these findings may well be due to chance.

Comparing 'intervention' sites and 'control' sites, it appears that more people attend 'intervention' sites because of perceptions of a shorter wait for treatment or because it is quicker than getting an appointment with a GP. This may reflect the fact that walk-in centres have often been specifically established in areas where people have difficulty accessing other primary care services.

Table 35 Reasons for choosing the facility they chose

	AFTER								p[vii]
	intervention A&E first n=260		intervention WIC first n=55		intervention combined n=331		control A&E n=356		
	count	%	count	%	count	%	count	%	
B5. Thinking of the place you went first during your visit, why did you go there rather than anywhere else?									
1. convenient location	73	(27.5)	10	(21.6)	87	(26.1)	67	(18.6)	0.18
2. convenient opening hours	35	(14.1)	13	(23.4)	49	(14..8)	45	(13.2)	0.55
3. quicker than getting GP appointment	70	(25.3)	22	(40.4)	93	(27.0)	49	(14.7)	0.01
4. would be shorter wait	22	(8.0)	2	(4.9)	24	(7.2)	9	(2.8)	0.04
5. best place for my particular problem	119	(50.3)	10	(12.2)	134	(44.5)	136	(37.2)	0.21
6. not registered with a GP	10	(3.5)	6	(14.8)	17	(5.4)	9	(2.6)	0.20
7. wanted a second opinion	9	(4.7)	0	(0)	10	(4.0)	8	(2.4)	0.17
8. didn't want to bother my GP	7	(1.6)	0	(0)	7	(1.3)	9	(2.5)	0.14
9. my GP wasn't available	36	(15.2)	10	(17.8)	46	(14.7)	29	(7.9)	0.04
10. no NHS walk in centre	8	(2.6)	2	(4.5)	11	(3.3)	29	(8.7)	0.03
11. sent there by my GP	21	(7.5)	9	(18.2)	34	(9.5)	48	(13.7)	0.04
12. sent there by NHS direct	8	(4.0)	0	(0)	9	(3.6)	26	(8.0)	0.004
13. sent there by someone else	21	(7.8)	7	(14.8)	30	(8.8)	47	(12.6)	0.54
14. didn't think about going anywhere else	37	(13.6)	8	(8.1)	46	(13.1)	56	(16.0)	0.37

The survey asked users what they would have done if the facility they attended had not been available to them. This question was included for comparison with similar questions asked in other research studies about walk-in centres, but it may be less useful in this study since people attending A&E departments may find it hard to imagine a situation where A&E services were not available.

Of those people attending a walk-in centre, the most common response was that they would otherwise have attended the A&E department.

Table 36 What visitors would have done if facility had not been available

	AFTER							
	intervention A&E n=91		intervention WIC n=191		intervention combined n=282		control A&E n=252	
	count	%	count	%	count	%	count	%
B6. If you went to the NHS walk-in centre at your hospital, what would you have done if this had not been available?								
1. looked after the problem myself	6	(6.8)	9	(3.9)	15	(5.8)	11	(4.5)
2. gone to GP or practice nurse	14	(18.9)	36	(18.3)	50	(18.7)	27	(10.7)
3. called my GP out	8	(7.4)	9	(5.2)	17	(6.6)	21	(8.7)
4. gone to see the pharmacist	2	(2.7)	3	(1.6)	5	(2.3)	6	(2.4)
5. gone to a different NHS walk in centre	7	(8.2)	13	(6.3)	20	(7.5)	5	(1.9)
6. gone to an A&E	31	(32.3)	84	(43.8)	115	(36.3)	87	(34.6)
7. telephoned NHS direct	2	(1.9)	5	(3.1)	7	(2.3)	5	(2.0)
8. other	2	(2.6)	3	(1.6)	5	(2.3)	7	(2.7)
9. I did not go to the NHS walk in centre	19	(19.1)	29	(16.3)	48	(18.1)	83	(32.4)

[vii] Comparison between intervention sites and control sites, using appropriate regression models allowing for clustering and sampling probability. Percentages in the table also take account of sampling probability.

4.7.6 Convenience of obtaining care

As discussed in section 3.7.4.4, a question about the overall convenience of obtaining help was developed as the *a priori* primary outcome measure, in order to capture the notion of patient choice. As shown in the table below, there was no evidence that attending an 'intervention' site was perceived to be more convenient than attending a 'control' site, nor that attending a walk-in centre was more convenient than attending an A&E department within 'intervention' sites. However, in general, accessing care at these hospital sites was described by more than half of respondents as very convenient.

Table 37 Convenience of obtaining help

	AFTER								
	intervention A&E n=113		intervention WIC n=221		intervention combined n=334		control A&E n=356		P*
	count	%	count	%	count	%	count	%	
B7. Overall, was attending the hospital a convenient way to get help for your problem?									
1. very convenient	70	(63.6)	134	(61.0)	204	(62.7)	198	(55.1)	0.15
2. fairly convenient	36	(30.4)	67	(29.0)	103	(30.0)	122	(34.8)	
3. not very convenient	6	(5.2)	12	(6.5)	18	(5.7)	21	(5.6)	
4. not at all convenient	1	(0.7)	8	(3.5)	9	(1.6)	15	(4.5)	

* comparison between intervention sites and control sites, using appropriate regression models allowing for clustering and sampling probability. Percentages in the table also take account of sampling probability.

4.7.7 Problem score analysis

A series of dichotomous problem scores were created from each of the relevant variables in the patient survey dataset, following the protocol described in the pilot testing of the NHS Acute Trust Emergency Department Survey 2003. Denominators varied from item to item, depending on how many respondents provided an answer to each individual question.

The results are shown in Table 38. There is no strong evidence of any differences between patients consulting in an 'intervention' site or a 'control' site. Although there is a suggestion of a difference relating to privacy during examination or treatment, it is important to bear in mind that with multiple significance testing as performed here, some comparisons will generate p values of less than 0.05 by chance. Considered as a whole, it appears that patients had similar experiences at both types of site.

It is more informative to consider the issues that were perceived to be a problem at both types of site. Overall, it can be seen that the issues causing most dissatisfaction for patients related to:

- waiting times
- discussion of patients' fears and anxieties
- patient involvement in decision making
- pain control
- instructions about danger signals to watch for after leaving hospital

Table 38 Problem scores by type of site after walk-in centre opening – 'intervention' and 'control' sites

Figures relate to the number and % of patients indicating a problem

	AFTER				
	intervention		control		p*
	count	%	count	%	
How long did you wait before being examined?	176	(55.4)	199	(55.5)	0.98
How long did your visit to the hospital last?	51	(19.7)	70	(19.5)	0.96
In your opinion, how clean was the hospital?	106	(38.5)	137	(38.0)	0.91
Did you have enough time to discuss your medical or health problem with a nurse of doctor?	104	(38.1)	135	(37.3)	0.87
Did the nurse of doctor explain your condition or treatment in a way which you could understand?	93	(31.2)	118	(33.3)	0.72
Did the nurse or doctor discuss any anxieties or fears you had about your condition or treatment?	140	(47.2)	172	(46.9)	0.96
Did the nurse or doctor listen to what you had to say?	85	(29.8)	112	(31.4)	0.79
Did you have confidence and trust in what the nurses and doctors examining or treating you?	101	(32.1)	103	(29.0)	0.62
In your opinion, did the nurses or doctors know enough about your condition or treatment?	56	(16.9)	55	(15.9)	0.81
Did the nurses or doctors talk in front of you as if you were not there?	80	(26.0)	60	(18.4)	0.06
How much information was given to you about you condition or treatment?	74	(24.2)	86	(24.2)	0.99
Were you given enough privacy when discussing your condition or treatment?	82	(28.3)	96	(26.9)	0.64
Were you given enough privacy when being examined or treated?	66	(25.3)	68	(19.2)	0.03
Sometimes, a member of staff will say one thing and another will say something quite different. Did this happen to you during your hospital visit?	70	(24.5)	88	(24.5)	0.99
Were you involved as much s you wanted to be in the decisions about your care and treatment?	131	(43.4)	148	(42.8)	0.88
Did a member of staff explain any tests you had in a way you could understand?	40	(25.3)	70	(32.6)	0.07
Do you think the staff did everything they could to help control your pain?	106	(43.5)	120	(46.8)	0.59
Overall, how would you rate the care you received at the hospital?	57	(18.3)	59	(16.7)	0.63
Was the main reason you went to hospital dealt with to your satisfaction?	140	(43.0)	140	(39.7)	0.55
Did you feel you were treated with dignity and respect while you were at the hospital?	79	(26.9)	87	(25.0)	0.71
Did a member of staff tell you about what danger signals regarding your illness or treatment to watch for, after you left the hospital?	136	(41.6)	156	(44.0)	0.47

*comparison between intervention sites and control sites, using appropriate regression models allowing for clustering and sampling probability. Percentages in the table also take account of sampling probability.

4.7.7.1 Comparison of patients attending walk-in centre or A&E

It is possible to compare the experience of patients seen at walk-in centres or A&E departments within 'intervention' sites, but as discussed previously, such comparisons should be considered with caution as there was often a deliberate selection of different types of patient to go to one facility or another within these sites. Table 39 overleaf shows the experience of patients, through the use of problem scores, based on dichotomising patient's responses.

4.7.7.2 Detailed answers to questions about specific experiences

More detailed information is available by examining the full range of responses on each question, and these are shown in Appendix 8. Patients seen in a walk-in centre setting expressed fewer problems in relation to length of visit, the cleanliness of the hospital, and several variables relating to the consultation such as discussion of anxieties and listening to what the patient had to say.

Table 39 Problem scores by type of site after walk-in centre opening – walk-in centres and A&E departments compared.

Figures relate to the number and weighted % of patients indicating a problem.

	AFTER						
	intervention A&E		intervention WIC		control A&E		
	n	%	n	%	n	%	p*
How long did you wait before being examined?	54	(51.9)	122	(62.6)	199	(55.5)	0.12
How long did your visit to the hospital last?	28	(23.5)	23	(11.5)	70	(19.5)	0.03
In your opinion, how clean was the hospital?	49	(43.6)	57	(27.7)	137	(38.0)	<0.001
Did you have enough time to discuss your medical or health problem with a nurse of doctor?	49	(43.6)	55	(26.5)	135	(37.3)	<0.001
Did the nurse of doctor explain your condition or treatment in a way which you could understand?	35	(32.9)	58	(27.7)	118	(33.3)	0.29
Did the nurse or doctor discuss any anxieties or fears you had about your condition or treatment?	56	(50.9)	84	(39.8)	172	(46.9)	0.21
Did the nurse or doctor listen to what you had to say?	34	(32.5)	51	(24.1)	112	(31.4)	0.01
Did you have confidence and trust in what the nurses and doctors examining or treating you?	34	(33.0)	67	(30.3)	103	(29.0)	0.65
In your opinion, did the nurses or doctors know enough about your condition or treatment?	16	(16.9)	40	(17.0)	55	(15.9)	0.97
Did the nurses or doctors talk in front of you as if you were not there?	29	(26.7)	51	(24.8)	60	(18.4)	0.48
How much information was given to you about you condition or treatment?	27	(25.4)	47	(21.6)	86	(24.2)	0.39
Were you given enough privacy when discussing your condition or treatment?	35	(30.9)	47	(23.1)	96	(26.9)	0.01
Were you given enough privacy when being examined or treated?	31	(28.8)	35	(18.0)	68	(19.2)	0.02
Sometimes, a member of staff will say one thing and another will say something quite different. Did this happen to you during your hospital visit?	31	(26.9)	39	(19.5)	88	(24.5)	0.06
Were you involved as much s you wanted to be in the decisions about your care and treatment?	46	(44.2)	85	(41.8)	148	(42.8)	0.55
Did a member of staff explain any tests you had in a way you could understand?	16	(24.4)	24	(27.7)	70	(32.6)	0.64
Do you think the staff did everything they could to help control your pain?	29	(43.0)	77	(44.5)	120	(46.8)	0.84
Overall, how would you rate the care you received at the hospital?	20	(18.9)	37	(16.9)	59	(16.7)	0.58
Was the main reason you went to hospital dealt with to your satisfaction?	47	(43.6)	93	(42.0)	140	(39.7)	0.78
Did you feel you were treated with dignity and respect while you were at the hospital?	31	(29.5)	48	(21.4)	87	(25.0)	0.08
Did a member of staff tell you about what danger signals regarding your illness or treatment to watch for, after you left the hospital?	48	(41.9)	88	(40.8)	156	(44.0)	0.85

* NB in this table, unlike the others, the comparison is between patients seen in walk-in centres or A&E departments at 'intervention' sites, using appropriate regression models allowing for clustering and sampling probability, rather than between 'intervention' and 'control' sites.

4.7.8 Overall satisfaction

Two questions asked people about their overall rating of the care they received and whether their main problem was dealt with to their satisfaction. Overall, 65% of people described their care as very good or excellent and 59% said that the main reason they attended the hospital was dealt with to their complete satisfaction.

There was no evidence of any difference between 'intervention' and 'control' sites on either of these variables, nor between walk-in centres and A&E departments at 'intervention' sites.

Table 40 Overall rating of care

	AFTER								P*
	intervention A&E n=114		intervention WIC n=219		intervention combined n=333		control A&E n=358		
	count	%	count	%	count	%	count	%	
I1. Overall, how would you rate the care you received at the hospital?									
1. excellent	27	(23.6)	70	(30.6)	97	(25.9)	98	(26.4)	0.46
2. very good	41	(33.9)	73	(35.6)	114	(34.4)	137	(39.3)	
3. good	26	(23.6)	39	(16.9)	65	(21.4)	64	(17.7)	
4. fair	11	(9.8)	28	(13.8)	39	(11.1)	31	(8.5)	
5. poor	5	(4.1)	5	(1.7)	10	(3.3)	14	(4.0)	
6. very poor	4	(5.0)	4	(1.3)	8	(3.8)	14	(4.1)	

* comparison between intervention sites and control sites, using appropriate regression models allowing for clustering and sampling probability. Percentages in the table also take account of sampling probability.

Table 41 Overall satisfaction

	AFTER								P*
	intervention A&E n=112		intervention WIC N=217		intervention combined n=329		control A&E n=361		
	count	%	count	%	count	%	count	%	
I2. Was the main reason you went to the hospital dealt with to your satisfaction?									
1. yes, completely	65	(56.4)	124	(58.0)	189	(57.0)	221	(60.3)	0.60
2. yes, to some extent	36	(32.7)	71	(33.4)	107	(32.9)	105	(30.0)	
3. no	11	(10.9)	22	(8.6)	33	(10.1)	35	(9.7)	

* comparison between intervention sites and control sites, using appropriate regression models allowing for clustering and sampling probability. Percentages in the table also take account of sampling probability.

4.7.9 Further consultations about the same problem

Respondents were asked about whether they had consulted again about the same problem, and if so, where. Almost half (47%) of all respondents had re-consulted about the same problem, and 69% of these further consultations were with a GP or nurse in general practice (see Table 42 and Table 43). There was no evidence of any difference in the rate or pattern of reconsultations between 'intervention' sites or 'control' sites, or between walk-in centres and A&E departments within 'intervention' sites. In particular there was no evidence that people attending walk-in centres were more likely to re-consult than people attending other types of facility.

Table 42 Re-consultations about the same problem

	AFTER								P[viii]
	intervention A&E n=115		intervention WIC n=215		intervention combined n=330		control A&E n=362		
	count	%	count	%	count	%	count	%	
J3. Have you been back to the hospital or consulted another healthcare professional about the same problem since your visit?									
1. yes	54	(48.2)	95	(43.3)	149	(46.6)	177	(48.5)	0.69
2. no	61	(51.8)	120	(56.7)	181	(53.4)	185	(51.5)	

Table 43 Where re-consultations took place*

	AFTER								P[ix]
	intervention A&E n=53		intervention WIC n=93		intervention combined n=146		control A&E n=172		
	count	%	count	%	count	%	count	%	
J4. Who have you consulted about the same problem?									
1. GP	34	(62.7)	52	(55.2)	86	(60.5)	96	(56.3)	0.72
2. nurse at GP surgery	6	(10.0)	7	(8.3)	13	(9.5)	23	(13.3)	0.42
3. A&E department	8	(14.9)	18	(18.2)	26	(15.9)	22	(13.1)	0.53
4. NHS walk in centre	0	(0.0)	7	(5.7)	7	(1.7)	7	(3.8)	0.16
5. outpatient department	7	(16.6)	16	(19.0)	23	(17.3)	40	(22.3)	0.43
6. NHS Direct helpline	1	(.6)	2	(3.3)	3	(1.4)	4	(2.4)	0.58
7. other	11	(18.1)	13	(16.7)	24	(17.7)	35	(21.3)	0.48

* people may have consulted in more than one place, so column totals exceed 100%

4.7.10 Patient outcome

There is no evidence of any difference in patient outcome, with about three-quarters of patients being very much or much better by the time they received the follow-up questionnaire.

Table 44 Outcome: patient improvement

	AFTER								P[ix]
	intervention A&E n=114		intervention WIC n=221		intervention combined n=335		control A&E n=358		
	count	%	count	%	count	%	count	%	
A2: How much has this problem improved, if at all?									
1: very much better	45	(37.5)	90	(43.6)	135	(39.5)	142	(39.6)	0.99
2: much better	36	(31.6)	91	(39.0)	127	(34.0)	138	(38.2)	
3: no change	18	(18.0)	28	(12.1)	46	(16.0)	48	(13.5)	
4: much worse	3	(3.0)	3	(1.0)	6	(2.4)	8	(2.4)	
5: very much worse	2	(1.6)	3	(1.3)	5	(1.5)	9	(2.6)	
6: not applicable	10	(8.3)	6	(3.0)	16	(6.5)	13	(3.7)	

[viii] Comparison between intervention sites and control sites, using appropriate regression models allowing for clustering and sampling probability. Percentages in the table also take account of sampling probability.

5 Discussion of findings

5.1 Purpose of walk-in centres

The policy driver for NHS walk-in centres is to increase choice for people by offering new ways of providing access to health care which are quick and convenient, in keeping with modern lifestyles. This forms part of the modernisation agenda for the NHS. Walk-in centres aim to offer help, advice and treatment for a wide range of problems and also support people in looking after themselves. The key feature of NHS walk-in centres is their accessibility, with people being able to attend in convenient locations without an appointment. This is in contrast with most other NHS services, such as general practice (which usually involves making an appointment and not necessarily at a convenient time) and A&E departments, which have a focus on severe and acute illness and injury, and were not designed to deal with minor or on-going illness or to provide general health advice. Other key features of NHS walk-in centres include the fact that they place a strong emphasis on health professional skill mix, with the early wave of walk-in centres being almost entirely led and staffed by nurses rather than doctors and that they support other local services (for example by treating people who are not registered with a GP and facilitating registration). Linked to the issue of nurse-led services is the use of computerised decision support and protocols, so that advice given is high quality and consistent.

In the case of walk-in centres co-located with A&E departments, a further aim is to divert patients, where appropriate, from the A&E department. This should help A&E departments to reduce waiting times for treatment, and also ensure that patients with less serious or urgent conditions receive care in a more appropriate environment with a focus on primary care.

5.2 Summary of findings

5.2.1 Local context, structure and process of implementation

The first objective of the evaluation was to describe the new co-located walk-in centre sites. This descriptive work proved invaluable since it documented how the policy initiative has been enacted in different ways and in different settings, facilitating the interpretation of the quantitative results obtained from other aspects of the evaluation. It also demonstrated that the development of a typology or categorisation system for comparing different types of service was, for this latest wave of walk-in centres, almost impossible.

In the light of the policy intention described above, it is interesting to note the way in which the original concept of the NHS walk-in centre has actually been implemented in the latest wave co-located with A&E departments. Although several of the first wave of walk-in centres were also located with A&E departments, they were managed in a more directive manner and generally incorporated all of the features described above. However, in the latest wave, local health providers appear to have been given far more flexibility in how they have implemented the concept.

The consequence of this change in implementation has been that few of the eight centres studied appear to have a similar structure or function to the original NHS walk-in centres. Several of the new centres represent a 're-badging' of the 'minors' wing of existing A&E departments, or pre-existing primary care centres. None of the new walk-in centres had advertised their existence to the local population, and in three locations the receptionist at the A&E department was unaware that a walk-in centre even existed at their site. Three of the new facilities were not known locally as an NHS walk-in centre, despite being listed as such on NHS websites. Given this very low level of visibility, it is unlikely that the new centres are fulfilling the aim of increasing access to care for their local population.

The name given to the new facilities is also important, since it reflects and shapes local perceptions of the function of the walk-in centre. Several sites were resistant to calling their new service a 'walk-in centre' because of concerns that this would lead to additional demand. Historically, A&E departments have struggled to meet increasing demand, while also being under pressure to reduce waiting times. They have used various strategies, including firmly worded notices in the waiting room, to discourage people from attending with conditions which are neither accidents nor emergencies. The battle, conducted over many years, to insist that they should be known as 'Accident and Emergency' departments, rather than 'Casualty' departments, is an example of this determination. There is also a wealth of literature discussing the extent of the problem of "inappropriate attenders" at A&E, although the philosophy has now shifted from inappropriate attenders to one of an inappropriate response or availability of NHS emergency care services. In this context, encouraging people to 'walk in' with any problem (whether or not it is serious) to suit the convenience of the individual requires a major cultural shift in attitude on the part of service providers, and it is not surprising that this has not yet been entirely achieved.

From the perspective of the health service providers, the main function of the new A&E focused walk-in centres is to expand the capacity of, or reduce pressure on the co-located A&E department and specifically to enable them to reach the four-hour target for patient treatment, admission or discharge. All of the new walk-in centres were set up in Trusts which were having difficulty meeting this particular target. A second aim was to provide a more appropriate environment for people attending with primary care type problems, recognising that many people do use A&E departments for these problems, especially in London. However, these two aims were often seen to be at odds with one-another as improving care for people with primary care problems may lead to an increase in the number of attendances at A&E which, in turn, increased pressure on waiting times.

As described earlier, another key feature of walk-in centres is the central role of nurses to patient care, and the use of clinical assessment software. Nurses with further training in assessment and management of primary care problems did play a large role in all the walk-in centres visited, but unlike the earlier waves of walk-in centres, there was also a more significant role for doctors. The majority of new centres had employed general practitioners to work alongside the nursing staff, both in a training capacity and to see a proportion of the patients. Generally, the process of giving nurses more responsibility for patient management appeared to be successful, as was team-work between nurses and doctors. However, examples of dysfunctional situations where nurses' skills were not being fully used were also observed.

Many of the new centres were highly integrated with their co-located A&E departments and, in some sites, were barely distinguishable from the A&E department, due to the low visibility of the walk-in centre Staff often moved between the walk-in centre and the A&E department according to patient demand at any given time. Few walk-in centres had a distinct identity and, in particular, few had their own front door, so patients did not need to decide whether to attend the A&E department or the walk-in centre. In most cases, patients reported to a common reception desk and were directed to one facility or the other by a receptionist, or were assessed by a triage nurse who subsequently directed them to the most appropriate facility. Aside from the issue of whether or not assigning patients to services in this way is the most appropriate model of care, this approach raises questions about the extent to which patients have the opportunity to exercise choice in how they wish to receive care. There may also be a conflict between the view of the patient and of the health service provider about the most appropriate site of care.

5.2.2 Impact of A&E focused walk-in centres

As discussed previously, most walk-in centre sites had a low profile, with little or no advertising of services and only modest changes in the way in which services were being delivered. Therefore, it is arguable that, from the perspective of the patient, there would be little obvious difference in how they obtained care compared to the situation prior to walk-in centre establishment. This is, indeed, the main finding from this evaluation, with relatively little change

observed in most variables studied. There were few changes when comparing hospitals with walk-in centres before and after the walk-in centre opened, or comparing walk-in centre sites with 'control' sites without walk-in centres.

For example, it might be expected that total patient throughout would increase at sites with walk-in centres as a result of them representing a new and more accessible route to care. However, whilst patient throughput did increase during the course of the evaluation, this did not vary significantly between 'intervention' and 'control' sites. Indeed, there was more variation between individual sites than between types of site i.e. 'intervention' or 'control'. The variation between walk-in centre sites was considerable, probably reflecting the extent of local awareness and influence. In particular, the walk-in centre at Whipps Cross hospital experienced a significant increase in patient throughput and appeared to be providing an additional service rather than simply substituting for care previously provided in the A&E department.

5.2.3 Visit duration and compliance with 4 hour access target

An important function of A&E focused walk-in centres is to reduce the time that people have to spend in A&E departments before being discharged, transferred elsewhere or admitted for care. It is important to note that all A&E departments are working hard to reduce visit durations, and opening a walk-in centre is only one of the strategies they might use to achieve this.[29] Because of the imperative to meet the four-hour access target, departments which do not have walk-in centres will almost certainly be using other strategies to reduce visit durations. Indeed, this study demonstrated that mean visit duration was reduced at both 'intervention' and 'control' sites. There was a slightly greater improvement at sites with walk-in centres i.e. 'intervention' sites, but the confidence intervals for this estimate were wide and included zero, implying that this finding may be due to chance.

There was clear evidence both from the quantitative data (see Figure 7) and from the site visits that the four-hour access target is having a galvanising effect on the way that A&E departments manage patients[30] and much of this reflects genuine focusing of effort and ingenuity to complete episodes of care within the given time-frame. However, on a small number of occasions, observation of these efforts suggested an artificial attempt to 'game' the target.

5.2.4 Process of care

One aim of this evaluation was to explore whether patients attending in a walk-in centre environment, with care largely provided by nurses, received a different process of care from those attending in A&E departments. Attempts to answer this question were limited by a number of factors. Firstly, it became apparent that most patients were being triaged to attend either the walk-in centre or the A&E department upon arrival at the hospital, rather than explicitly choosing to go there. This results in systematic differences between the characteristics and case-mix of patients attending the walk-in centre or A&E department within many of the 'intervention' sites, and between walk-in centre patients at 'intervention' sites and 'minor' cases at 'control' sites. As a result, any comparisons of process of care would probably be misleading. In addition, many sites were unable to provide detailed data about several of the variables relating to investigations and treatment that were necessary to undertake this analysis.

With these limitations in mind, it does appear that patients seen in a walk-in centre were more likely to consult a nurse alone, without any involvement of doctors, than those seen in A&E departments. There were also differences in treatments provided at the two types of facility, which are likely to be consistent with the difference in case-mix.

5.2.5 Resource utilisation and costs

Implementing an NHS walk-in centre alongside an existing A&E department does incur some extra costs. The economic analysis shows that the cost of running A&E departments increased substantially above the rate of inflation at both sites with and without walk-in centres, with a

greater increase at the former. However, since the total patient throughput at sites with walk-in centres also increased, the mean cost per patient remained almost identical in both types of site. If walk-in centres therefore represent an increase in capacity at no greater cost per patient, the important question is whether this extra activity involves people with previously unmet need (for whom a walk-in centre is an appropriate route to care) or whether these people would otherwise have improved without consulting a health service provider at all.

The limited evidence available suggests that the former is true. Most people attending a walk-in centre stated that they would otherwise have attended an A&E department[ix], and the rate of clinical improvement was equivalent in those people who attended sites with or without a walk-in centre.

The walk-in centres appear to mainly provide a substitute service for A&E departments whilst also providing additional capacity for people with the type of problems that they would take to A&E departments, rather than to general practice. The majority of respondents to the patient survey stated that they had an injury rather than an illness, and relatively few had on-going illness of more than two weeks duration.

5.2.6 Patient experience

Perhaps the most striking finding from the whole study was the fact that relatively few people made an active choice to attending a walk-in centre. Most of the people registered by the hospital as having attended a walk-in centre had chosen initially to attend the A&E department, and had been re-directed to the walk-in centre. More than half those seen in the walk-in centre did not even realise that they were in a walk-in centre, stating in the survey that they were seen in the A&E department. When asked where they would prefer to be seen, a third of those seen in a walk-in centre would rather have been seen in an A&E department and a further third did not mind where they were seen. Only 22% of patients seen in a walk-in centre, and 12% of patients seen in A&E departments at 'control' sites, expressed a preference to be seen in an NHS walk-in centre.

Given that the process of care was not dissimilar for most patients seen in sites with and without walk-in centres, it is not surprising that few differences were observed in patients perceptions of their care or in patient outcome. Patients attending sites with walk-in centres did not find their care any more convenient (the primary outcome of increased accessibility and choice), and nor were they more likely to express satisfaction overall with their visit to the hospital.

Those consulting in a walk-in centre did express fewer problems with regard to a number of aspects of their care and their consultation, including the time they had to wait, the cleanliness of the hospital, the time they were given to discuss problems, discussion of their fears and anxieties, whether their views were listened to, and whether there was sufficient privacy. However, these comparisons should be treated with caution because of the case-mix differences between patients seen in a walk-in centre or A&E environment.

5.2.7 Re-attendance rates and patient outcomes

Almost half the people in this study re-consulted about the same problem in the four weeks after they originally attended the hospital, and most of these consultations were with doctors or nurses in general practice. There was no evidence of any difference in re-attendance rates between patients seen at 'intervention' or control' sites and neither was there any evidence of differences in patient outcomes between the two settings.

[ix] the fact that there was an increase in throughput at walk-in centre sites suggests that in fact not all of these people would actually have attended an A&E department, but it does imply that they felt they needed to do so.

5.3 Limitations

Ideally, data about patient contacts prior to the opening of any of the new walk-in centres would have been collected as soon after opening as possible, to ensure that all relevant data are available in a meaningful form. However, several of the walk-in centres opened before the research began and before all ethics and local research governance approvals had been obtained. Some data were therefore collected retrospectively and, inevitably, this resulted in a proportion of data being either unavailable or of less reliable quality. No such problems of data reliability were encountered with regard to the patient survey, since it was conducted only once, subsequent to the walk-in centres having opened.

In one sense, this evaluation was conducted too late, because it would have been preferable to obtain baseline data before the walk-in centres opened. However, in another sense, it was conducted too soon because one of the main limitations of the study is that many of the walk-in centre centres were at an early stage of development. Many sites were concerned about overwhelming their capacity to meet demand. This may have been a realistic concern, especially as some sites had difficulty recruiting staff, nurses needed to gain experience of working more independently, and staff in A&E departments needed to build confidence about the type of patients that could be successfully managed in a walk-in centre. Gradually increasing the activity of the walk-in centre over one to two years may be a sensible management strategy, but it means that the full impact of these new walk-in centres cannot be assessed until a later date.

Despite the fact that the study relied upon the collection and coding of data from original notes about individual patients (rather than using amalgamated data) there were still some quality issues encountered. It had been anticipated that there might not be uniformity across the different A&E departments as regards the way in which data about patient contacts were collected and recorded but, even where facilities used similar IT processes, it was difficult to guarantee that all details of patient contacts had been coded by clinical staff in a way that was totally reliable.

From a research point of view, it would be have been preferable for all data to be extracted from patients' records by one researcher, to maximise the reliability and consistency of data, without extracting any patient identifiers to ensure anonymity. However, the Research Governance Framework now makes this almost impossible. Although, in theory, researchers can access notes once they have been anonymised, anonymising records (whether on paper or electronically) is rarely feasible. Therefore, all data had to be extracted by a variety of staff in different departments and, in some sites, some information was unobtainable, particularly for the historical period before walk-in centres opened.

In order to conduct this evaluation, it was necessary to distinguish between 'minor' cases which were potentially suitable for treatment in a walk-in centre, and 'major' cases which needed the facilities of an A&E department. This proved challenging for a number of reasons - different departments used different triage systems, some patients were not triaged but treated under the 'see-and treat' philosophy, and suitability for a walk-in centre often depended on the facilities/staff available. All of these factors varied considerably from site to site. How best to categorise patients into 'major' and 'minor' cases is a recurring problem both for research in A&E departments and for operational policy. Some have tried to classify patients according to whether they could be treated in primary care but many measures have not been reproducible or are only of use in retrospective analysis.[31]

For the purposes of this evaluation, an 'expert group' was convened and a range of possible options discussed. For pragmatic reasons, it was decided to use admission as the defining criterion in the analysis and, as a result, 'major' cases were defined as those requiring admission (either at the same or different hospital) whilst 'minor' cases were construed as those which resulted in the patient being discharged home, or referred as an out-patient. Although pragmatic, this solution does mean that the use of the term 'minor' in this study does not necessarily concur with that used by sites themselves. Nor can it be assumed that patients categorised as 'minor' in this study could necessarily be managed in walk-in centres, which was the original purpose of attempting a classification. Therefore, we have placed less emphasis than

originally intended on the distinction between 'minor' and 'major' cases in this report, and we have used the terms 'admitted' and 'discharged' instead.

The original sample size calculations were based on ten 'intervention' and ten 'control' sites being involved in the evaluation. Since only eight new walk-in centres opened in time, this has implications for the power of the study to be able to detect meaningful differences in the main outcome variables. The original calculations also made some assumptions about the extent of clustering for each outcome type - the intracluster correlation coefficient, or ICC. We are able to use the actual ICCs found in the study for the various outcomes in retrospective power calculations.

For the outcome of the proportion of people expressing satisfaction with convenience of access to care, the ICC found in the study was 0.05, an increase from the assumed 0.01. Even without a reduced number of sites, this would have the effect of reducing the power of the study. Combined with a reduction in the number of participating sites, the achieved sample size yields only 40% power to detect a 10% change in proportion of patients expressing satisfaction with access to care.

For other outcomes, ICCs were either very similar (e.g. whether patients are sent home without referral to another provider, ICC = 0.0147) or smaller (e.g. compliance with 4-hour waiting time, ICC = 0.0278) than those assumed in the original calculations. This meant that the reduction in the number of sites had a negligible effect on the power of the study to detect the pre-specified target differences in these other outcomes.

It is important to note that once the study has been conducted, one should primarily consider the 95% confidence intervals for differences between 'intervention' and 'control' groups for the main outcomes. If such confidence intervals exclude important differences, then the issue of reduced sample size and power becomes irrelevant.

The patient survey was seriously limited by the poor response rate of 36%. This raises concerns about the representativeness of the results, since there was evidence that respondents had different characteristics from the whole sample, and in particular young men (who are heavy users of A&E departments) were under-represented. This response rate is lower than that obtained in the National Survey of Emergency Patients (44% response)[32] but similar to the response rate after the first reminder (between 26% and 35% in different trusts) obtained in the piloting and development of that survey.[27] In the National Survey of Emergency Patients, two reminders were sent to increase the response rate. Whilst two reminders were planned in the protocol for this study, the ethics committee felt this was coercive and insisted that only one reminder was sent. Unfortunately, this appears to have undermined the reliability of this survey.

5.4 Relationship to earlier research about walk-in centres

The walk-in centres in this evaluation have different characteristics from those studied in the National Evaluation of the first wave of walk-in centres, as previously discussed. The conclusions from the earlier evaluation were that walk-in centres appeared to provide a safe, high quality and popular service, but were considerably more expensive than alternatives such as general practice. They appeared to be meeting additional demand rather than substituting for existing services. There was some concern that they may increase inequalities of access to health care since a high proportion of users were young adults of higher than average socio-economic status.

In this study, patients consulting in walk-in centres appeared to be satisfied with the care they received, although no more so that those consulting in A&E departments. There was limited evidence that they were more satisfied with some aspects of their consultations. No evidence about quality of care or safety was examined in this evaluation. Establishing a walk-in centre incurred greater costs, mainly due to increased staffing, but since patient throughput also increased, the costs per patient were equivalent. Patients consulting in walk-in centres had similar characteristics to those consulting in A&E departments.

As in other studies of walk-in centres and A&E departments, a higher proportion of patients consulting in this study were male compared with the population consulting in general practice. However, unlike earlier studies, a high proportion of patients in this study had an injury, rather than an illness, suggesting that the population was more similar to that attending normal A&E departments or minor injuries units, than that attending first wave walk-in centres or general practices. This would seem consistent with the lack of identity of the new walk-in centres.

There was no evidence that introducing a walk-in centre helped A&E departments to reduce waiting times, but weak evidence that they may have led to an increased number of attendances. A large number of initiatives have been introduced to decrease waiting times and attendances at A&E departments. There is no strong evidence that any particular initiatives have successfully reduced attendance numbers although strategies have managed to reduce wait times.[33]

5.5 Implications for policy

The latest wave of walk-in centres in A&E departments has implemented the walk-in centre concept to a more limited extent, and in more flexible ways, than earlier waves of implementation. Some A&E departments with walk-in centres are barely distinguishable from those without. The Department of Health needs to consider whether to let this process continue, following a philosophy of allowing local health economies to find their own solutions to local needs, or whether to seek to maintain a more distinct national identity for NHS walk-in centres.

The former approach has several merits as it allows experimentation and may mean that models of care which meet a real need locally flourish, while others do not. On the other hand, without continued strong central direction and incentives, it is possible that walk-in centres will gradually merge with other provider organisations (A&E departments in this case, but general practice and out-of-hours primary care centres in other contexts), and that any nationally recognised 'brand' of walk-in centres will disappear. One of the arguments in favour of walk-in centres is that they meet a need for people who are not registered with a general practice or are away from home, providing a reliable, consistent and recognisable form of care in any part of the country.

In a small number of cases, walk-in centres appear to be providing extra capacity and meeting a previously unmet need for care. In other instances, they are providing similar services to those which existed before. For future sites, it may be wise to demand a more thorough assessment of the case for a new walk-in centre adjacent to an A&E department, justification for why a walk-in centre is the best way to meet the need, explicit plans for how the extra resources will be spent, and a local evaluation plan to determine whether the centre achieves its objectives.

This study does not address the issue of varying alternatives that might be adopted to improve waiting times in A&E by introducing or making provision for primary care services. The investment used to introduce walk-in centres could equally have been utilised to increase investment in minor injury services within A&E, expansion of ENP services or increased integration with urgent primary care services. This study cannot determine which of these is the optimal approach in a specific health economy.

5.6 Conclusions

The latest wave of eight walk-in centres co-located with A&E departments has generally implemented the walk-in centre concept to a more limited extent than previous waves. Although there are exceptions, the service is not visibly different from the way it was provided before, from the patients' perspective. This is illustrated by the fact that most of the people treated in the walk-in centres believed that they were being treated in an A&E department, and most of them had chosen to go to an A&E department rather than a walk-in centre.

Consequently, the impact of this new wave of walk-in centres is limited. In most cases, demand has increased in the year since implementation but, on average, no more in sites with walk-in centres than in those without. However, there are exceptions to this observation. At the site with the most distinct walk-in centre, there was a 38% increase in total patient throughput over one year.

Waiting times have improved in both hospitals with and without walk-in centres, with no evidence of any significant difference in change between these different types. Overall, 95% of patients were seen, treated, admitted or discharged within four hours.

The process of care appears to be similar in sites with and without walk-in centres, although patients attending a walk-in centre are more likely to be managed by a nurse, without involvement of a doctor, than those in 'control' sites.

The outcomes of care were also similar. Overall, patients in sites with walk-in centres expressed similar levels of satisfaction as those in 'control' sites. However, within the hospitals with walk-in centres, patients seen in the walk-in centre expressed greater satisfaction with waiting times and some aspects of their consultations than at the mainstream A&E department.

The cost of running a site with a walk-in centre was greater than that without a walk-in centre but, because patient throughput also increased in walk-in centre sites, the cost per patient was ultimately very similar.

The overall conclusion of this evaluation is that most of these new walk-in centres are providing a slightly different organisational environment, with a greater role for nurse management of patients, compared with standard A&E departments. Outcomes and costs per patient are similar to those obtained in hospitals without walk-in centres. At present, these walk-in centres have a low public profile and, therefore, few people are choosing to use them, with most patient activity arising through re-direction from the co-located A&E department.

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7 Appendices

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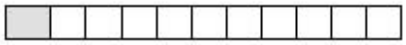
Appendix 1 Matching of intervention sites and control sites on key variables

Choices	Health Authority	Trust	A&E Performance	quintile	A&E Attendances	quintile	A&E Admission Rate	quintile	Emergency Admissions
Guildford	Surrey and Sussex	Royal Surrey County Hospital NHS Trust	75.80%	1	13604	1	0.2202	5	2995
Queen Elizabeth Hospital	Norfolk, Suffolk and Cambridgeshire	Kings Lynn and Wisbech Hospitals NHS Trust	82.20%	1	11978	1	0.1963	4	2351
Homerton	North East London	Homerton University Hospital NHS Trust	89.10%	3	19549	3	0.1806	3	3531
Kings Mill Hospital	Trent	Sherwood Forest Hospitals NHS Trust	88.80%	3	18111	3	0.1835	3	3324
Lewisham	South East London	The Lewisham Hospital NHS Trust	90.00%	3	26453	5	0.1743	3	4610
Birmingham Heartlands Hospital	Birmingm and the Black Country	Birmingham Heartlands and Solihull (Teaching) NHS Trust	90.60%	3	37494	5	0.1895	3	7104
Maidstone	Kent and Medway	Maidstone and Tunbridge Wells NHS Trust	79.90%	1	22971	4	0.1615	2	3709
Frenchay/Southmead Hospitals	Avon, Gloucestershire & Wiltshire	North Bristol NHS Trust	80.00%	1	24733	4	0.1504	1	3719
Redbridge	North East London	Barking, Havering and Redbridge Hospitals NHS Trust	72.70%	1	44313	5	0.1831	3	8115
King George Hospital	North West London	North West London Hospitals NHS Trust	81.00%	1	38574	5	0.1558	2	6008
Sunderland	Northumberland, Tyne and Wear	City Hospitals Sunderland NHS Trust	92.60%	4	22615	4	0.2036	4	4604
Wythenshawe Hospital	Greater Manchester	South Manchester University Hospitals NHS Trust	91.10%	4	18674	3	0.2682	4	5008
Whipps Cross	North East London	Whipps Cross University Hospital NHS Trust	80.70%	1	24117	4	0.1598	2	3853
Queen Alexandra Hospital	mpshire and Isle of Wight	Portsmouth Hospitals NHS Trust	81.40%	1	25885	4	0.1786	3	7211
Whittington	North Central London	The Whittington Hospital NHS Trust	83.40%	3	18230	1	0.1555	2	2834
Royal Berkshire Hospital	Thames Valley	Royal Berkshire and Battle Hospitals NHS Trust	80.30%	3	18073	1	0.1672	2	3622

The top line in each cell, shown in red, is the site with an NHS walk-in centre, and the bottom line is their matched control site.

Appendix 2 Patient questionnaire

'Problem scores' are indicated with a solid box.



'Your Visit to the Hospital' Questionnaire

This survey is being carried out by a team of researchers at the University of Bristol, on behalf of the Department of Health. It is completely anonymous and confidential. None of the healthcare professionals who treated you during your recent visit to the hospital will be shown your answers.

- Read each question carefully and tick the appropriate box (or boxes).
- Sometimes you will find the box you have ticked has an instruction to go to another question after it. By following these instructions carefully, you will miss out any questions that do not apply to you.
- Don't worry if you make a mistake, simply cross it out and put a tick in the correct box.
- Please DO NOT write your name or address anywhere on the questionnaire.

When you have completed all the questions that apply to you, please put the finished questionnaire in the FREEPOST envelope provided and return it directly to us - no stamp is needed.

Alternatively, post this questionnaire back to:

Melanie Chalder
Primary Health Care
University of Bristol
FREEPOST (SWB446)
Clifton
Bristol
BS8 2ZZ

If you have any queries about the questionnaire, or would like some information or advice, please call Melanie Chalder on 0117 331 0863 and she will try to help.

A. YOUR PROBLEM

A1. What was the main type of problem that you attended the hospital about?
(please tick one box only)

1 ❑ Injury
2 ❑ Recent illness i.e. for the previous two weeks or less
3 ❑ Illness i.e. for more than the previous two weeks
4 ❑ Other problem *(please describe)* _____

A2. How much has this problem improved, if at all?
(please tick one box only)

1 ❑ Very much better
2 ❑ Much better
3 ❑ No change
4 ❑ Much worse
5 ❑ Very much worse
6 ❑ Not applicable

B. ACCESS TO CARE

B1. When you went to the hospital, where did you go <u>first</u>?
(please tick one box only)

1 ❑ Accident & Emergency Department
2 ❑ NHS Walk-in Centre / Primary Care Centre / Urgent Treatment Centre
3 ❑ Somewhere else *(please describe)* _____

B2. Were you then sent <u>anywhere else</u>?
(please tick one box only)

1 ❑ No, I just went to one place
2 ❑ Yes, I was sent to the Accident & Emergency Department
3 ❑ Yes, I was sent to the NHS Walk-in Centre / Primary Care Centre / Urgent Treatment Centre
4 ❑ Yes, I was sent somewhere else *(please describe)* _____

B3. If you had a choice, where would you have <u>preferred</u> to go for your problem?
(please tick one box only)

1 ❑ Accident & Emergency Department
2 ❑ NHS Walk-in Centre / Primary Care Centre / Urgent Treatment Centre
3 ❑ Somewhere else *(please describe)* _____
4 ❑ Didn't mind where I went

B4. How far from the hospital do you live?
(please tick one box only)

1 ❑ Less than 2 miles
2 ❑ 3 to 5 miles
3 ❑ 6 to 10 miles
4 ❑ More than 10 miles

B5. **Thinking of the place you went to <u>first</u> during your visit, why did you go there rather than anywhere else?**

(please tick as many boxes as apply)

1 ❑ Convenient location
2 ❑ Convenient opening hours
3 ❑ Quicker than getting a GP appointment
4 ❑ Thought that there would be a shorter wait
5 ❑ Best place for my particular type of problem
6 ❑ Not registered with a GP
7 ❑ Wanted a second opinion
8 ❑ Didn't want to bother my GP
9 ❑ My GP wasn't available
10 ❑ No NHS Walk-in Centre / Primary Care Centre / Urgent Treatment Centre nearby
11 ❑ Sent there by my GP
12 ❑ Sent there by NHS Direct
13 ❑ Sent there by someone else
14 ❑ Didn't think about going anywhere else

B6. **If you went to the NHS Walk-in Centre / Primary Care Centre / Urgent Treatment Centre at your hospital, what would you have done if this <u>had not</u> been available?**

(please tick one box only)

1 ❑ Looked after the problem myself
2 ❑ Gone to GP or practice nurse
3 ❑ Called my GP out
4 ❑ Gone to see the pharmacist
5 ❑ Gone to a different NHS Walk-in Centre / Primary Care Centre / Urgent Treatment Centre
6 ❑ Gone to an Accident & Emergency Department
7 ❑ Telephoned NHS Direct
8 ❑ Other *(please describe)* _____
9 ❑ I did not go to the NHS Walk-in Centre / Primary Care Centre / Urgent Treatment Centre

B7. **Overall, was attending the hospital a convenient way to get help for your problem?**

(please tick one box only)

1 ❑ Very convenient
2 ❑ Fairly convenient
3 ❑ Not very convenient
4 ❑ Not at all convenient

C. WAITING

C1. **Following your arrival at the hospital, how long did you wait before being examined?**

(please tick one box only)

1 ❑ I did not have to wait
2 ❑ 1 - 30 minutes
3 ■ 31 - 60 minutes
4 ■ More than 1 hour but no more than 2 hours
5 ■ More than 2 hours but no more than 4 hours
6 ■ More than 4 hours
7 ❑ I can't remember
8 ❑ I did not see a nurse or a doctor

C2. **Overall, how long did your visit to the hospital last?**

(please tick one box only)

1 ❑ 1- 30 minutes
2 ❑ 31- 60 minutes
3 ❑ More than 1 hour but no more than 2 hours
4 ❑ More than 2 hours but no more than 4 hours
5 ■ More than 4 hours but no more than 8 hours
6 ■ More than 8 hours
7 ❑ I can't remember

D. ENVIRONMENT AND FACILITIES

D1. **In your opinion, how clean was the hospital?**

(please tick one box only)

1 ❑ Very clean
2 ■ Fairly clean
3 ■ Not very clean
4 ■ Not at all clean

E. NURSES AND DOCTORS

E1. **Did you have enough time to discuss your health or medical problem with the nurse or doctor?**

(please tick one box only)

1 ❑ Yes, definitely
2 ■ Yes, to some extent — Go to E2
3 ■ No
4 ❑ I did not see a nurse or doctor → Go to H1

E2. **Did the nurse or doctor explain your condition and treatment in a way you could understand?**

(please tick one box only)

1 ❑ Yes, completely
2 ■ Yes, to some extent
3 ■ No
4 ❑ I did not need an explanation

E3. **Did the nurse or doctor discuss any anxieties or fears you had about your condition or treatment?**

(please tick one box only)

1 ❑ Yes, completely
2 ■ Yes, to some extent
3 ■ No
4 ❑ I didn't have anxieties or fears

E4. **Did the nurse or doctor listen to what you had to say?**

(please tick one box only)

1 ❑ Yes, definitely
2 ■ Yes, to some extent
3 ■ No

E5. **Did you have confidence and trust in the nurses or doctors examining and treating you?**

(please tick one box only)

1 ❑ Yes, definitely
2 ■ Yes, to some extent
3 ■ No

E6. **In your opinion, did the nurses or doctors know enough about your condition or treatment?**

(please tick one box only)

1 ❑ All of them knew enough
2 ❑ Most of them knew enough
3 ■ Only some of them knew enough
4 ■ None of them knew enough

E7. **Did the nurses or doctors talk in front of you as if you weren't there?**

(please tick one box only)

1 ■ Yes, definitely
2 ■ Yes, to some extent
3 ❑ No

F. YOUR CARE AND TREATMENT

F1. **How much information about your condition or treatment was given to you?**

(please tick one box only)

1 ■ Not enough
2 ❑ Right amount
3 ■ Too much
4 ■ I was not given any information about my treatment or condition

F2. **Were you given enough privacy when discussing your condition or treatment?**

(please tick one box only)

1 ❑ Yes, definitely
2 ■ Yes, to some extent
3 ■ No

F3. **Were you given enough privacy when being examined or treated?**

(please tick one box only)

1 ❑ Yes, definitely
2 ■ Yes, to some extent
3 ■ No

F4. **Sometimes, a member of staff will say one thing and another will say something quite different. Did this happen to you during your hospital visit?**

(please tick one box only)

1 ■ Yes, definitely
2 ■ Yes, to some extent
3 ❑ No

F5. **Were you involved as much as you wanted to be in decisions about your care and treatment?**

(please tick one box only)

1 ❑ Yes, definitely
2 ■ Yes, to some extent
3 ■ No

G. TESTS

G1. **Did you have any tests e.g. x-rays, blood tests or scans, when you visited the hospital?**

(please tick one box only)

1 ❑ Yes → Go to G2
2 ❑ No → Go to H1

G2. **Did a member of staff explain the tests in a way you could understand?**

(please tick one box only)

1 ❑ Yes, definitely
2 ■ Yes, to some extent
3 ■ No

H. PAIN

H1. **Were you in any pain while you were at the hospital?**

(please tick one box only)

1 ❑ Yes → Go to H2
2 ❑ No → Go to I1

H2. **Do you think the staff did everything they could to help control your pain?**

(please tick one box only)

1 ❑ Yes, definitely
2 ■ Yes, to some extent
3 ■ No

I. OVERALL SATISFACTION

I1. **Overall, how would you rate the care you received at the hospital?**

(please tick one box only)

1 ❑ Excellent
2 ❑ Very good
3 ❑ Good
4 ■ Fair
5 ■ Poor
6 ■ Very poor

I2. **Was the main reason you went to the hospital dealt with to your satisfaction?**

(please tick one box only)

1 ❑ Yes, completely
2 ■ Yes, to some extent
3 ■ No

I3. **Did you feel you were treated with respect and dignity while you were at the hospital?**

(please tick one box only)

1 ❑ Yes, all of the time
2 ■ Yes, some of the time
3 ■ No

J. LEAVING THE HOSPITAL

J1. **What happened at the end of your visit to the hospital?**

(please tick one box only)

1 ❑ I was admitted to hospital as an in-patient
2 ❑ I went home
3 ❑ I went to stay somewhere else

J2. **Did a member of staff tell you about what danger signals regarding your illness or treatment to watch for after you left the hospital?**

(please tick one box only)

1 ❑ Yes, completely
2 ■ Yes, to some extent
3 ■ No
4 ❑ I did not need this type of information

J3. **Have you been back to the hospital or consulted another healthcare professional <u>about the same problem</u> since your visit?**

(please tick one box only)

1 ❑ Yes → Go to J4
2 ❑ No → Go to K1

J4. **Who have you consulted about the <u>same problem</u>?**

(please tick all boxes that apply)

1 ❑ GP
2 ❑ Nurse at GP surgery
3 ❑ Accident & Emergency Department
4 ❑ NHS Walk-in Centre / Primary Care Centre / Urgent Treatment Centre
5 ❑ Outpatient department
6 ❑ NHS Direct telephone help-line
7 ❑ Other *(please describe)* _____

K. ABOUT YOU

K1. How old are you? _____ *(please write)*

K2. Are you:

(please tick one box only)

1 ❑ male
2 ❑ female

K3. How old were you when you left full-time education?

(please tick one box only)

1 ❑ 16 years old or less
2 ❑ 17 or 18 years old
3 ❑ 19 years old or over
4 ❑ I am still in full-time education

K4. What kind of accommodation do you live in?

(please tick one box only)

1 ❑ Owner occupied / mortgaged
2 ❑ Rented or other arrangements

K5. Are you registered with a GP?

(please tick one box only)

1 ❑ Yes, a GP in this town
2 ❑ Yes, a GP elsewhere
3 ❑ Not registered with a GP

K6. Which of these best describes the main thing you do?

(please tick one box only)

1 ❑ Going to school, college or university
2 ❑ Employed
3 ❑ Unemployed
4 ❑ On a Government / employment training scheme e.g. New Deal
5 ❑ Permanently sick or disabled
6 ❑ Looking after the home or the family
7 ❑ Retired

K7. To which of these ethnic groups would you say you belong?

(please tick one box only)

1 ❑ White
2 ❑ Black or Black British
3 ❑ Asian or Asian British
4 ❑ Mixed
5 ❑ Chinese
6 ❑ Other Ethnic group

Thank you for completing this questionnaire. Your answers will remain anonymous and confidential. Please post it back to us in the FREEPOST envelope provided. No stamp is needed.

Appendix 3 Details of information collected at site visits to walk-in centres

	Officially known as	Opening date	Aims	Delays to opening
Guildford	NHS Walk-in Centre	1 November 2004	Improve 4-hour target within A&E	Lack of medical input delayed opening and implementation of full service despite facilities and nursing staff being in place
Homerton	Primary and Urgent Care Centre	Phase 1: 10 May 2004 Phase 2: 1 March 2005	Simplify access to NHS Improve 4-hour target within A&E Improve streaming in A&E GPs treat patients in A&E	Restricted space and facilities until new build is completed
Lewisham	Primary Care Suite	5 September 2004	Divert appropriate cases of unscheduled care from A&E Provide complementary service to 'high street' walk-in centre Improve patient flow Improve 4-hour wait target Improve 48-hour wait target	Builds on an existing service which had been operational for four years
Maidstone	Emergency Care Centre including NHS Walk-in Centre	29 November 2004	Improve 4-hour target within A&E Improve streaming in A&E	Building work cased some delays
Redbridge	NHS Walk-in Centre	1 April 2004	Improve 4-hour target within A&E Provide complementary service to 'high street' walk-in centre	-
Sunderland	NHS Walk-in Centre	6 November 2004	Improve 4-hour target within A&E Improve 48-hour GP wait target Widen access to GPs locally	Changes in primary care provision locally and constant re-definition of plans. Other local 'primary care suites' up and operational
Whipps Cross	NHS Walk-in Centre	3 March 2004	Improve 4-hour target within A&E Signpost appropriate use of services	Building works were due to update and expand current facilities but are taking longer to get underway than expected.
Whittington	NHS Walk-in Centre	Phase 1: 1 April 2004 Phase 2: 1 April 2005	Improve 4-hour target within A&E Signpost appropriate use of services Provide second opinions	Pressure from PCT and SHA to open and work towards targets

	Patient groups targeted	Existing / future location	Opening times	Access
Guildford	-	Adjacent to main A&E with separate reception and waiting area.	9:00 a.m – 5:00 p.m weekdays	Patients report initially at main A&E reception and are then sent around to WIC, to sit in WIC waiting area
Homerton	Unregistered patients Patients whose GPs are having difficulty meeting 24/48 hour targets	Phase 1: Inside A&E department through key-coded door via MIU Phase 2: Extension to current facility with separate entrance and reception desk adjacent to main A&E entrance.	8:00 a.m – 10:00 p.m weekdays 9:00 a.m – 10:00 p.m weekends	One reception area in A&E which directs patients initially to either PUCC, A&E assessment nurse or Children's A&E. Both A&E assessment nurse or Children's A&E can refer on to PUCC
Lewisham	Unregistered patients Homeless/drug users	Phase 1: in adjacent building to A&E Phase 2: extension to current facility planned for 2008 to create an urgent Treatment Centre housing WIC, MIU, majors and primary care	7:00 a.m – 10:00 p.m every day No reception cover in PCS between 7:00 a.m – 8:00 a.m so nurses tend to work out of main A&E department for safety reasons	One reception area at main A&E which diverts patients with appropriate presenting complaints directly to PCS. Own reception and waiting area within separate but nearby building.
Maidstone	-	Within main A&E department, alongside majors and OOH with shared entrance and waiting area.	8:00 a.m – 2:00 a.m every day Looking to move towards 24 hour opening by mid 2005	One reception and waiting area at main A&E which redirects to WIC as appropriate
Redbridge	Refugee population	Within main A&E department with shared waiting area. Using what was previously a 'see-and-treat' room and a consultation room off the main waiting area	9:00 a.m – 2:00 p.m	One reception and waiting area at main A&E which redirects to WIC cubicles as appropriate, after triage
Sunderland	Asylum seekers	Adjacent to main A&E with separate reception and waiting area.	8:00 a.m – 10:00 p.m everyday	Separate reception and waiting room but main A&E also redirects as appropriate
Whipps Cross	Non-English speakers Users of EC Immigrant population	Phase 1: Adjacent to main A&E with separate entrance and waiting area. Access to phlebotomy services on same site. Phase 2: Extension to current facility, with a linking corridor to A&E and a common entry point and shared reception	7:00 a.m – 10:00 p.m every day	Own reception and waiting area in building adjacent to main A&E.
Whittington	Unregistered patients Commuter population Refugees / immigrants Homeless/drug users	Phase 1: Inside A&E department as 'minors' Phase 2: New facility in basement of A&E department planned for late 2005	8:00 a.m – 11:00 p.m every day	One reception area at entrance to main A&E which streams patients with appropriate presenting complaints

	Interpreter service available	Triage system in place	Existing services	Planned services
Guildford	Nothing formal – very few ethnic minority patients	Informal allocation by A&E nurses to WIC	Advice/treatment of minor illness and minor injuries GP registration Health promotion advice	Emergency contraception Suturing Plastering
Homerton	Uses established hospital service	Nurse on reception desk allocates upon arrival either to A&E, MIU or WIC	Advice/treatment of minor illness and minor injuries Advice about chronic illness GP registration Health promotion advice Emergency contraception Suturing Plastering	Ambulatory blood pressure service Access clinics for local GPs PMS practice for short-term patients OOH based at PUCC
Lewisham	Two-fold approach – internal Trust interpreting service and Language Line. Main ethnic groups are Turkish, Vietnamese and Eastern Europeans	Five categories used throughout A&E (1, 2, 3, 4, 5) with 5 as designated PCS category	Advice/treatment of minor illness and minor injuries Advice about chronic illness GP registration Health promotion advice Emergency contraception Suturing Plastering Sexual health screening	
Maidstone	Uses established hospital service	Use Nurse 'Navigator' to allocate into 4 streams (minors, majors, resus, clinic) and then into 4 urgency categories	Advice/treatment of minor illness and minor injuries Health promotion advice Suturing Plastering	Advice about chronic illness Emergency contraception Diagnostic services
Redbridge	Use Language Line – main groups being Russian, Albanian, Croatian, Bengali	2 triage nurses 'cherry pick' patients who can be treated within WIC on a 'see-and-treat' basis	Advice/treatment of minor illness and minor injuries Advice about chronic illness Health promotion advice Suturing Plastering	Children's services Emergency contraception
Sunderland	Use Language Line via hospital service and also PALS		Advice/treatment of minor illness and minor injuries GP registration Health promotion advice Emergency contraception Suturing	Physiotherapy
Whipps Cross	Main ethnic groups are Russian, Eastern Europeans. Use Language Line	Doctor will see on 'see and treat' basis or nurse will carry out triage before treating or referring to GP colleague.	Advice/treatment of minor illness and minor injuries Advice about chronic illness GP registration Health promotion advice Emergency contraception Suturing	Emergency contraception Plastering ECG
Whittington	Main ethic groups are Turkish, Kurds, Armenians, Somalians. Use Language Line and local PALS service	All WIC patients are ESC Group 1 clinically but recorded as Category 6 on Triage system	Advice/treatment of minor illness and minor injuries Advice about chronic illness GP registration Health promotion advice Suturing Plastering	-

	Description of facilities	Staffing arrangements	Staff rota	Children treated?
Guildford	2 consultation rooms, 2 open treatment rooms	Dedicated walk-in centre staff. Plan to bring in extra 4 ENPs over weekends along with additional GP support	1 H grade ENP 5 G grade ENPs 0.6 GPs 1.6 A grade assistants	No under-2s treated
Homerton	3 consultation rooms, 2 admin rooms, storeroom	Dedicated walk-in centre staff	1 nurse manager 2 GPs 3 H grade ENPs 3 G grade ENPs 3 F grade ENPs 1 administrative assistant 1 centre manager	Initially seen in Children's A&E and either treated or referred to WIC if busy and appropriate
Lewisham	4 consultation rooms, 1 office and additional storeroom	Use existing A&E staff as required. Also use GPs on sessional basis. Plans afoot to train 2 additional ENPs for use as required in walk-in centre.	1 SHO 0.5 nurse consultant 6 H grade ENPs 1 G grade ENPs 2 F grade ENPs 4 receptionists 3 GPs	All under 16s treated by separate A&E staff in separate area of building. PCS will see patients aged 13 and over when A&E is busy.
Maidstone		Use existing A&E staff as required plus extra GP paid for by PCT to 'skill up' nursing staff	1 GP 5.75 G grade ENPs 1 F grade ENP	All but under-2s who will be seen by doctor
Redbridge	2 consultation rooms located directly off main A&E waiting room. OOH services uses one room in evening	Use existing A&E staff as required plus extra GP paid for by PCT. 'Cherry pick' suitable cases according to staff available to treat. Plan to add additional 11 G/H grades	1 staff grade doctor 1 D/E grade nurse 1 GP	Seen at Paediatric Unit within A&E unless busy when WIC will offer to treat
Sunderland		Use existing A&E staff as required plus dedicated nurse consultant, 12 ENPs and 0.8 physiotherapist	1 nurse consultant 12 ENPs 0.8 physio 1 receptionist	Seen at Paediatric Unit within A&E
Whipps Cross		Dedicated walk-in centre staff including Modern Matron works 50:50 between A&E and WIC. Hope to recruit extra staff – 6 FTE receptionists and 2 ENPs	4 G grade nurses 1 D grade nurse 2.2 GPs 2 receptionists 0.75 administrator	All treated except under 2s. Will log in but then refer to paediatric nurse.
Whittington	4 consultation rooms plus additional treatment rooms when OOH service not on duty	Existing A&E staff as required plus extra ENPs paid for by PCT. 'Cherry pick' suitable cases according to staff available to treat.	5 G grade ENPs 1 GP 1 middle grade doctor	Seen in WIC but also use dedicated paediatric nurse for under 2s

	IT system/software used	Visibility	Knowledge	Advertising
Guildford	CAS with back-up on written cards. No clinical decision-making software is used or planned	Clear signage outside main entrance to A&E	A&E reception staff aware of walk-in centre	No plans until full service and training demands are met
Homerton		No distinct signage for WIC on hospital site or within A&E	A&E reception staff unaware of walk-in centre or of named staff working in WIC	No plans to advertise until Phase 2 is complete and capacity increased
Lewisham	REMASS. No clinical decision-making software is used or is planned in future	Signs visible on main hospital site and clearly above WIC entrance	A&E reception staff aware of walk-in centre, although called it different name	Prefer not to encourage additional demand via advertising
Maidstone	Symphony, Adastra and PAS	No signage	A&E reception staff unaware of walk-in centre	
Redbridge	PAS, although no tracking system available	Clear signage outside main A&E entrance and additional sign next to main consultation room	A&E reception unaware of walk-in centre and tried to re-direct to nearby 'shop front' site	Wish to avoid 'over-use' of facilities so no leaflets printed although primary-care focussed WIC does have leaflets
Sunderland	Meditech – rather limited	Signs visible on main hospital site and clearly above WIC entrance	A&E reception staff well aware	
Whipps Cross	Footman & Walker used by A&E but plan to use to Adastra/CAS in future	Signs visible on main hospital site and clearly above WIC entrance	A&E reception staff well aware	Nothing planned at present but GPs well aware of availability of services and referring
Whittington	Bespoke record system. No clinical decision-making software nor any plans to use in future	Signs visible outside 'minors' end of A&E	A&E reception staff aware of both WIC and WIC staff by name	Do not intend to 'grow' demand by advertising although this has happened inadvertently via local press

Appendix 4 Details of information obtained from telephone interviews with control sites

	Setting / context	Ability to meet '4 hour wait' targets	Barriers to meeting targets
Queen Elizabeth	Serves a population of 25, 000 with a yearly attendance of 45, 000, subject to seasonal tourist fluctuations. Nearest MIU is 15 miles away	Close to meeting targets with 98% compliance achieved some months	Increasing attendance by patients who perceive a problem accessing GP care out-of-hours
Kings Mill	Large district general hospital with population of 265, 000. Provides 24-hour service and is co-located with Community Benefits Society GP co-operative, ambulance service and NHS Direct. Low number of ethnic patients.	Almost consistently 98% apart from over Christmas/New Year period	Limited by medical bed capacity, availability of emergency psychiatric service and ambulance transport for patients on discharge
Birmingham	Large urban general hospital serving multi-ethnic, residential community. Provides 24-hour care across entire range of emergency work.	Very close to targets	Maintaining staffing levels
Frenchay / Southmead	250, 000 catchment from urban / suburban population of 500, 000. Operates 24-hour service with a recently rationalised site structure. Co-located with out-of-hours GP co-operative.	96% and above generally	Bed availability is limited and only small number of ENPs on duty
Northwick Park	600, 000 catchment with high multi-ethnic immigrant residential population in outer London. 90, 000 new patients each year of whom around 20% are under 16s. Provides 24-hour A&E service with the Harmoni GP co-operative working on-site to provide out-of-hours primary care.	Has been growing closer to targets in recent months with more than 98% fulfilment in May 2005	Still a large primary care group of patients who attend A&E because of lack of access to GP, particularly out-of-hours.
Wythenshawe	Large teaching hospital in suburban setting. Provides all major services with 24-hour care.	Consistently above 95% but struggling to achieve 98%	Fluctuations in attendance numbers and limited bed capacity, with little support from primary care agencies out-of-hours.
Queen Alexandra	Serves a population of 500, 000 with a throughput of 100, 000 patients each year.	Has found meeting targets challenging but has reached 98% compliance a number of times	Managing growing demand for services
Royal Berkshire	Large urban general hospital serving multi-ethnic, residential community of 450, 000. Provides 24-hour acute services for 71, 000 new patients each year.	Managing to meet targets regularly with 99.5% compliance in recent weeks	Large numbers of patients who attend 'inappropriately' rather than access services via primary care

	Triage method	Interpreter service	IT software to record patient contacts	Staffing arrangements as FTE
Queen Elizabeth	Dedicated triage nurse following a modified Manchester triage system	Language Line	PAS	5 consultants 1 staff grade doctor 2 specialist registrar 8 SHOs 2 G grade nurses 6.67 F grade nurses 10.75 E grade nurses 12.85 D grade nurses 1.5 B grade care assistants 7.25 A grade auxiliary 1 housekeeper
Kings Mill	Minor patients triaged by dedicated triage nurse after registration. A fast assessment room operates in majors.	No dedicated service but a listing of interpreters is available via Switchboard.	PAS	2.2 consultants 2 specialist registrars 6.5 staff grade doctors 9 SHOs 1 consultant nurse 1 H grade modern matron 5.4 G grade nurses 3 F grade ENPs 5.5 F grade nurses 16 E grade nurses 15.2 D grade nurses 3.8 A grade care assistants 2.5 AC3 secretaries 5.6 AC2 receptionists 6.3 facilities workers
Birmingham	Dedicated triage nurse operates with some patients being taken directly by senior doctor or ENP as a 'see and treat' service	Yes	EDIS	10 consultants 12 SHOs 12 middle grade doctors 60 nursing staff
Frenchay / Southmead	Dedicated triage nurse except for minor injuries which are streamed into separate 'see and treat' system.	Yes	PAS	5 consultants 8 middle grade doctors 11 SHOs 2 H grade nurses 13 G grade nurses / ENPs 11 F grade nurses 22 E grade nurses 27 D grade nurses 11 B grade care assistants 2 G grade psychiatric liaison nurses 11.5 AC2 receptionists 3 managers

Northwick Park	Dedicated nurse triage based on variant of Manchester triage system.	Straightforward access to interpreter service but expensive	Silver Link Software 3.5 ICS	2 consultants 1 associate specialist 2 registrars 5 clinical fellows 0.8 staff grade doctors 13 SHOs 3.5 ENPs 2 H grade 5 G grade 10 F grade 27 E grade 22 D grade 1 C grade 4 B grade
Wythenshawe	Nurse-led triage using Manchester triage system	Yes	CASCADE	5.1 consultants 5 specialist registrars 4 clinical fellows 1 staff grade doctors 11.2 SHOs 3.5 ENPs 1 ECP 1 I grade 1 H grade 4.84 band 7 12.17 band 6 48.53 band 5 1 band 4 14.19 band 2
Queen Alexandra	Patients are registered and then seen by a 'streaming nurse' rather than a triage system	Yes	TOREX A&E module and PAS	5 consultants 1 military consultant 1 associate specialist 2.8 staff grade doctors 8 specialist registrars 9 SHOs 1 nurse consultant 3 nurse managers 17.25 G grade nurses 5 G grade cardiac nurses 15.5 G grade / ENPs 9.25 F grade nurses 1.5 military nurses 43.85 E grade nurses 9.5 D grade nurses 9 A grade nursing assistants 1 administration manager

				1 operational manager 1 AC4 data co-ordinator 1 AC4 reception supervisor 23.5 administrative and reception staff
Royal Berkshire	Minor patients are streamed into 'see and treat' system whilst major cases are triaged on arrival by nurse-in-charge	Yes	bespoke	4 consultants 1 associate specialist 2 registrars 7 staff grades 9 SHOs 1 clinical assistant 69 nursing grades 16 administrative and reception staff

Appendix 5 Sampling probabilities for patient survey, by site and time period

The inverse of these sampling probabilities were used to weight all analyses resulting from the analyses of detailed data and the patient survey, except where stated

Figures are probability of being sampled		pre/post				
		2004 - pre		2005 - post		
		intervention A&E	control A&E	intervention A&E	intervention WIC	control A&E
site id	guildford	.07743	.	.03743	.42017	.
	homerton	.06055	.	.03920	.11765	.
	lewisham	.04914	.	.03237	.11312	.
	maidstone	.07590	.	.09083	.05858	.
	redbridge	.04810	.	.02270	.17094	.
	sunderland	.04545	.	.03798	.08818	.
	whipps cross	.	.	.02037	.13280	.
	whittington	.06260	.	.03236	.16129	.
	queen elizabeth	.	.08877	.	.	.08699
	kings mill	.	.07666	.	.	.07559
	birmingham	.	.05214	.	.	.05729
	frenchay/southmead	.	.07631	.	.	.09099
	northwick park	.	.05193	.	.	.04532
	wythenshawe	.	.05616	.	.	.05410
	queen alexandra	.	.04850	.	.	.04817
	royal berkshire	.	.07171	.	.	.06077

Appendix 6 Socio-demographic characteristics of survey respondents

Age groups

% within Intervention or control

		Intervention or control		Total
		Intervention	Control A&E	
age group	16-24	16.9%	13.9%	15.3%
	25-44	39.2%	39.2%	39.2%
	45-64	28.2%	24.8%	26.4%
	>65	15.7%	22.2%	19.1%
Total		100.0%	100.0%	100.0%

Age when left full-time education

% within Intervention or control

		Intervention or control		Total
		Intervention	Control A&E	
age when left full-time education	16 years old or less	47.8%	56.4%	52.4%
	17-18 years old	23.2%	17.1%	19.9%
	19 years old or over	21.9%	21.7%	21.8%
	still in full-time education	7.1%	4.7%	5.8%
Total		100.0%	100.0%	100.0%

Accommodation status

% within Intervention or control

		Intervention or control		Total
		Intervention	Control A&E	
accommodation status	owner occupied / mortgaged	53.0%	67.5%	60.6%
	rented or other arrangements	47.0%	32.5%	39.4%
Total		100.0%	100.0%	100.0%

Registered with GP

% within Intervention or control

		Intervention or control		
		Intervention	Control A&E	Total
registered with gp	yes, gp in same town	83.4%	85.7%	84.7%
	yes, gp elsewhere	12.9%	12.9%	12.9%
	no	3.7%	1.3%	2.4%
Total		100.0%	100.0%	100.0%

Occupation

% within Intervention or control

		Intervention or control		
		Intervention	Control A&E	Total
occupation	school, college, university	9.4%	4.9%	7.0%
	employed	50.9%	53.8%	52.4%
	unemployed	6.7%	4.3%	5.4%
	on government scheme	.2%	.5%	.4%
	permanently sick or disabled	8.2%	6.4%	7.3%
	looking after home or family	8.6%	6.4%	7.4%
	retired	16.0%	23.6%	20.1%
Total		100.0%	100.0%	100.0%

Ethnic group

% within Intervention or control

		Intervention or control		
		Intervention	Control A&E	Total
ethnic group	white	77.2%	86.8%	82.3%
	black or black british	7.1%	3.6%	5.2%
	asian or asian british	9.1%	8.1%	8.5%
	mixed	.4%	.3%	.3%
	chinese	1.3%	.4%	.8%
	other	4.9%	.9%	2.8%
Total		100.0%	100.0%	100.0%

Appendix 7 Problem scores for each site

Intervention sites

	site id							
	guildford	homerton	lewisham	maidstone	redbridge	sunderland	whipps cross	whittington
length of wait before being examined	35.1%	38.7%	47.0%	63.2%	89.5%	48.4%	57.8%	70.0%
length of hospital visit	27.9%	22.6%	11.0%	10.3%	24.1%	15.9%	16.9%	34.3%
cleanliness of hospital	26.0%	20.6%	45.7%	34.3%	53.4%	35.1%	45.2%	36.4%
enough time to discuss problem	26.0%	17.6%	45.7%	34.3%	53.4%	33.6%	45.2%	36.4%
clear explanation of condition and treatment	18.4%	32.3%	22.9%	32.1%	48.9%	22.0%	42.6%	29.1%
discussion of anxieties and fears	23.5%	30.3%	66.7%	36.6%	76.0%	44.1%	40.6%	65.1%
listened to patient views	18.8%	11.8%	45.2%	26.4%	35.1%	13.3%	42.0%	26.6%
confidence and trust in staff	19.5%	29.4%	35.7%	22.9%	39.7%	12.6%	47.2%	37.3%
staff knowledge of condition or treatment	10.5%	19.4%	24.7%	8.3%	35.6%	1.5%	24.1%	14.4%
staff talked as if patient not there	22.4%	51.6%	31.8%	20.7%	6.0%	21.2%	32.5%	22.9%
amount of information about condition or treatment	26.8%	11.8%	29.3%	19.4%	21.2%	12.6%	34.0%	20.4%
enough privacy when discussing condition or treatment	30.4%	29.0%	23.6%	33.3%	24.8%	18.2%	33.8%	30.3%
enough privacy when being examined or treated	22.6%	20.6%	18.7%	24.1%	20.6%	17.7%	32.3%	35.4%
staff gave contradictory opinions/ advice	25.1%	8.8%	32.9%	21.4%	9.0%	23.7%	22.7%	37.3%
appropriate amount of involvement in decision-making	31.6%	53.6%	47.9%	40.5%	35.8%	38.8%	52.1%	43.4%
clear explanation of tests	41.8%		23.5%	39.1%	21.9%	22.8%	28.9%	12.3%
staff tried to contol pain	30.0%	42.9%	38.3%	39.6%	57.7%	32.1%	55.3%	45.1%
overall rating of care received	9.4%	11.8%	23.4%	14.6%	10.5%	10.9%	26.8%	25.0%
main problem dealt with satisfactorily	28.9%	41.9%	40.1%	33.6%	63.6%	38.8%	50.3%	49.0%
treated with dignity and respect	14.1%	17.6%	39.0%	13.4%	20.3%	18.5%	39.3%	31.4%

Control A&E

	site id							
	queen elizabeth	kings mill	birmingham	frenchay/south mead	northwick park	wythenshawe	queen alexandra	royal berkshire
length of wait before being examined	52.3%	57.1%	55.6%	50.0%	51.7%	55.6%	62.5%	54.1%
length of hospital visit	20.9%	8.2%	32.4%	20.0%	24.1%	22.2%	10.0%	22.2%
cleanliness of hospital	36.4%	38.8%	52.8%	28.2%	42.9%	28.3%	30.0%	47.6%
enough time to discuss problem	36.4%	38.8%	52.8%	28.2%	42.9%	28.3%	26.0%	47.6%
clear explanation of condition and treatment	25.0%	26.5%	55.6%	27.5%	48.3%	20.4%	27.1%	39.7%
discussion of anxieties and fears	43.2%	38.8%	55.6%	57.5%	48.3%	46.3%	36.7%	54.0%
listened to patient views	27.3%	28.6%	52.8%	22.5%	41.4%	25.9%	22.4%	33.9%
confidence and trust in staff	18.6%	30.6%	41.7%	20.0%	41.4%	18.5%	22.4%	38.1%
staff knowledge of condition or treatment	6.8%	14.6%	18.9%	10.0%	27.6%	7.4%	16.3%	22.2%
staff talked as if patient not there	9.5%	4.1%	25.7%	7.5%	32.1%	18.5%	20.8%	21.0%
amount of information about condition or treatment	18.6%	22.4%	32.4%	20.0%	48.3%	18.5%	10.2%	29.0%
enough privacy when discussing condition or treatment	15.9%	30.6%	37.8%	20.0%	31.0%	24.1%	22.4%	30.6%
enough privacy when being examined or treated	14.0%	20.4%	24.3%	12.5%	20.7%	15.1%	20.4%	22.2%
staff gave contradictory opinions/ advice	27.3%	14.3%	35.1%	22.5%	27.6%	25.9%	20.8%	23.8%
appropriate amount of involvement in decision-making	40.5%	33.3%	61.1%	30.0%	55.2%	38.9%	39.1%	43.3%
clear explanation of tests	30.8%	24.1%	38.1%	25.0%	38.9%	27.6%	34.5%	36.4%
staff tried to control pain	44.4%	42.9%	48.3%	37.5%	54.5%	43.6%	34.3%	63.0%
overall rating of care received	16.3%	14.3%	27.8%	15.4%	20.7%	15.1%	14.6%	13.1%
main problem dealt with satisfactorily	20.5%	34.7%	64.9%	35.0%	48.3%	33.3%	29.2%	50.0%
treated with dignity and respect	16.3%	30.6%	38.9%	15.0%	34.5%	19.2%	22.9%	23.0%

Appendix 8 Full details of responses to questions about patient experience

It is important to reiterate that although these tables show several differences between the experience of patients consulting in A&E departments or walk-in centres in intervention sites (those with A&E and co-located walk-in centres), there are inevitably important case mix differences. Within these intervention sites patients with more serious conditions were generally triaged to the A&E department and those with minor conditions to the walk-in centre. The more appropriate comparison is between patients seen in intervention sites (A&E and walk-in centre combined) vs. those in control sites, as described using problem scores in the main body of the report. The main purpose of this appendix is to describe the experience of patients in walk-in centres, rather than to make comparisons, therefore no tests of significance have been conducted.

length of hospital visit * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
length of hospital visit	1-30 minutes	6.8%	15.9%	5.2%	7.3%
	31-60 minutes	8.6%	21.3%	12.8%	12.7%
	more than 1 hour but no more than 2 hours	27.9%	28.6%	27.0%	27.5%
	more than 2 hours but no more than 4 hours	29.3%	19.7%	33.8%	30.2%
	more than 4 hours but no more than 8 hours	14.5%	8.4%	12.7%	12.6%
	more than 8 hours	8.9%	3.2%	6.8%	6.9%
	can't remember	3.9%	3.0%	1.7%	2.6%
Total		100.0%	100.0%	100.0%	100.0%

cleanliness of hospital * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
cleanliness of hospital	very clean	56.4%	72.3%	62.0%	61.8%
	fairly clean	33.9%	24.9%	31.2%	31.1%
	not very clean	9.7%	1.6%	6.0%	6.5%
	not at all clean		1.2%	.7%	.6%
Total		100.0%	100.0%	100.0%	100.0%

enough time to discuss problem * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
enough time to discuss problem	yes, definitely	56.4%	72.3%	62.0%	61.8%
	yes, to some extent	33.9%	24.9%	31.2%	31.1%
	no	9.7%	1.6%	6.0%	6.5%
	did not see nurse or doctor		1.2%	.7%	.6%
Total		100.0%	100.0%	100.0%	100.0%

clear explanation of condition and treatment * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
clear explanation of condition and treatment	yes, definitely	62.6%	70.9%	64.9%	65.1%
	yes, to some extent	23.9%	23.3%	25.3%	24.5%
	no	9.0%	4.4%	8.0%	7.8%
	did not need explanation	4.5%	1.4%	1.8%	2.6%
Total		100.0%	100.0%	100.0%	100.0%

discussion of anxieties and fears * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
discussion of anxieties and fears	yes, definitely	35.1%	43.8%	36.5%	37.2%
	yes, to some extent	35.4%	21.9%	25.1%	27.8%
	no	15.5%	17.9%	21.8%	19.2%
	did not have anxieties or fears	14.0%	16.4%	16.6%	15.7%
Total		100.0%	100.0%	100.0%	100.0%

listened to patient views * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
listened to patient views	yes, definitely	67.5%	75.9%	68.6%	69.4%
	yes, to some extent	26.7%	21.1%	26.1%	25.6%
	no	5.8%	3.0%	5.3%	5.1%
Total		100.0%	100.0%	100.0%	100.0%

confidence and trust in staff * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
confidence and trust in staff	yes, definitely	67.0%	69.7%	71.0%	69.5%
	yes, to some extent	24.7%	26.5%	23.3%	24.2%
	no	8.3%	3.8%	5.8%	6.3%
Total		100.0%	100.0%	100.0%	100.0%

staff knowledge of condition or treatment * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
staff knowledge of condition or treatment	all knew enough	53.0%	58.9%	53.2%	54.0%
	most knew enough	30.2%	24.1%	30.9%	29.7%
	only some knew enough	11.5%	11.4%	10.4%	10.9%
	none knew enough	5.3%	5.6%	5.4%	5.4%
Total		100.0%	100.0%	100.0%	100.0%

staff talked as if patient not there * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
staff talked as if patient not there	yes, definitely	13.4%	12.5%	7.1%	9.9%
	yes, to some extent	13.2%	12.3%	11.2%	12.0%
	no	73.3%	75.2%	81.6%	78.0%
Total		100.0%	100.0%	100.0%	100.0%

amount of information about condition or treatment * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
amount of information about condition or treatment	not enough	16.8%	15.3%	18.6%	17.5%
	right amount	74.6%	78.4%	75.8%	75.8%
	too much	.8%	3.0%	.9%	1.2%
	not given any information	7.9%	3.2%	4.7%	5.5%
Total		100.0%	100.0%	100.0%	100.0%

enough privacy when discussing condition or treatment * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
enough privacy when discussing condition or treatment	yes, definitely	69.1%	76.9%	73.1%	72.4%
	yes, to some extent	21.8%	19.9%	21.6%	21.4%
	no	9.0%	3.1%	5.3%	6.1%
Total		100.0%	100.0%	100.0%	100.0%

enough privacy when being examined or treated * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
enough privacy when being examined or treated	yes, definitely	71.2%	82.0%	80.8%	77.9%
	yes, to some extent	23.5%	15.9%	13.9%	17.2%
	no	5.3%	2.1%	5.3%	4.8%
Total		100.0%	100.0%	100.0%	100.0%

staff gave contradictory opinions/ advice * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
staff gave contradictory opinions/ advice	yes, definitely	18.1%	10.5%	11.4%	13.4%
	yes, to some extent	8.8%	9.0%	13.1%	11.1%
	no	73.1%	80.5%	75.5%	75.5%
Total		100.0%	100.0%	100.0%	100.0%

appropriate amount of involvement in decision-making * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
appropriate amount of involvement in decision-making	yes, definitely	55.8%	58.2%	57.2%	56.9%
	yes, to some extent	32.4%	28.7%	30.4%	30.7%
	no	11.8%	13.1%	12.4%	12.3%
Total		100.0%	100.0%	100.0%	100.0%

clear explanation of tests * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
clear explanation of tests	yes, definitely	75.6%	72.3%	67.4%	70.7%
	yes, to some extent	14.8%	18.3%	23.9%	20.3%
	no	9.6%	9.4%	8.7%	9.0%
Total		100.0%	100.0%	100.0%	100.0%

staff tried to contol pain * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
staff tried to contol pain	yes, definitely	57.0%	55.6%	53.2%	54.7%
	yes, to some extent	19.8%	26.5%	24.9%	23.6%
	no	23.2%	17.9%	21.9%	21.7%
Total		100.0%	100.0%	100.0%	100.0%

overall rating of care received * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
overall rating of care received	excellent	23.6%	30.6%	26.4%	26.2%
	very good	33.9%	35.6%	39.3%	37.0%
	good	23.6%	16.9%	17.7%	19.4%
	fair	9.8%	13.8%	8.5%	9.8%
	poor	4.1%	1.7%	4.0%	3.7%
	very poor	5.0%	1.3%	4.1%	4.0%
Total		100.0%	100.0%	100.0%	100.0%

main problem dealt with satisfactorily * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
main problem dealt with satisfactorily	yes, definitely	56.4%	58.0%	60.3%	58.7%
	yes, to some extent	32.7%	33.4%	30.0%	31.3%
	no	10.9%	8.6%	9.7%	9.9%
Total		100.0%	100.0%	100.0%	100.0%

treated with dignity and respect * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
treated with dignity and respect	yes, all of the time	70.5%	78.6%	75.0%	74.1%
	yes, some of the time	27.1%	18.9%	20.1%	22.1%
	no	2.5%	2.5%	4.9%	3.7%
Total		100.0%	100.0%	100.0%	100.0%

information given about danger signals * a&e or wic Crosstabulation

% within a&e or wic

		a&e or wic			
		intervention A&E	intervention WIC	control A&E	Total
information given about danger signals	yes, definitely	42.7%	42.1%	34.1%	38.1%
	yes, to some extent	23.5%	20.6%	19.6%	21.0%
	no	18.4%	20.2%	24.4%	21.9%
	did not need explanation	15.3%	17.0%	21.9%	19.1%
Total		100.0%	100.0%	100.0%	100.0%