Streaming Emergency Department Patients to Primary Care Services: Developing a Consensus in North East London

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Date: March 2009

Funders: NELCRAD

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ISBN :9781900804391

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Acknowledgements: Sharon Germain, Patricia Nasskau, Vinod Dewan, Tejas Khatau, Afia Khatun Ali, Susie Hannah, Samantha Joseph, Jean Lyon, Nunu Miah and other Staff at the 6 Trusts where the research was carried out

1. INTRODUCTION

Over the last ten years the number of people attending hospital emergency departments (A&Es) in the United Kingdom has increased by almost 2 million (over 16%) (DoH, 2001). East London's A&Es have experienced an increase of 61.2% in attendances between the years of 2001-2004 (DoH, 2007). East London has also experienced a population growth of 35% since 1991 (BBC, 2002). It is recognized that a substantial proportion of visits to A&Es are made by patients with non-urgent complaints which could be treated in primary care (Coleman et al, 2001; Salisbury and Munro, 2003). Moreover, there is a strong feeling among service providers locally, that patients in East London use A&E services in preference to primary care services. The increased emphasis on patient choice (DoH, 2003) means that these preferences need to be ascertained and included in local service development plans.

The policy literature highlights a lack of consensus about the future role and function of A&Es. The British Association for Accident and Emergency Medicine (1998) advocates meeting increasing demand by applying a tighter definition of core activity to A&Es in order to limit attendances. In contrast, the expansion of the role of the pharmacist, the introduction of Walk-in Centres (WiCs) and of GP services in A&Es provides an expanded primary care role for A&Es which increasingly blurs the distinction between primary care and acute emergency medicine. This problem was recognized in the national evaluation of WiCs (Salisbury et al, 2004) which highlighted the importance of developing a coherent vision of what each service (WiC, GPs, pharmacists and A&Es) offer and how they fit together. Similar confusion over the role of primary care practitioners in A&Es has been highlighted (Freeman et al, 1992).

Such confusions about roles and functions are exacerbated by considerable local service diversity, particularly in the WiCs and expanding pharmacy services. For instance, there is considerable variation in the skill mix of WiC staff and the policies and patient care directives which govern nursing practice in WiCs (Salisbury et al, 2002), and WiC nurses are recruited from a wide range of clinical backgrounds (Abbott et al, 2004). Unsurprisingly, professionals believe that as a result patients often present to a less appropriate service when seeking help.

The study reported here builds on a pilot study (Bickerton et al, 2005) that aimed to see if NHS staff, using only the information available at initial presentation, could identify specific

groups of patients who received treatment in A&Es, but who might have been more appropriately directed to a WiC. The pilot study found that experienced health care professionals had difficulty classifying patients based on the information available at first presentation. There was as much disagreement between the WiC staff as between the A&E and WiC staff, so it is unlikely that a lack of clarity about departmental function was the root cause.

The study was carried out in the area served by three inner city boroughs in North East London. All three areas have deprived, multi-ethnic populations that are younger than the national average, and there are high rates of migration into and out of these areas. Table 5 below gives more detail about ethnicity.

2. AIMS AND OBJECTIVES

Aim

To identify the appropriate service provider for a sample of patients attending A&Es and WiCs in three inner NE London boroughs and to match this to local service provision and patient choice.

Objectives

- To conduct a survey of patients attending A&Es and WiCs to identify why they chose to use that service
- To identify the level of agreement between NHS primary care staff on the appropriate service (A&E, WiC, GP, Pharmacist) to treat a sample of patients attending A&Es and WiCs in NE London
- To tabulate how many of the patients identified as more appropriately treated in primary care actually have recorded access to a GP locally
- To identify the impact of professional skill mix and local clinical governance policies on the range and scope of primary care provision in NE London

3. METHODS

This study had three phases. First, a survey of patients using A&Es and WiCs in NE London was conducted, asking demographic details, whether they considered their problem an emergency and questions around prior treatment, questions relating to registration with a general practitioner, why they chose that service and who they expected to see and the expected outcome. Second, a GP, a nurse consultant and a community pharmacist with both

WiC & A&E experience independently reviewed the presenting information of a random sample of patients attending these sites, nominating the most appropriate service to meet each patient's needs; the degree of similarity / dissimilarity between nominations was then identified. Finally, the results were discussed by a group of A&E staff and the research team.

Relevant services in each of the three inner city boroughs of NE London agreed to take part in the study: this comprised two WiCs and their associated A&E Departments as a separate service and a combined WiC & A&E service.

Phase 1

The patient survey: All non-critical patients over the age of 16 attending each of the five services during one week were asked to complete an anonymous questionnaire while waiting for treatment and to return it in a post box located by the reception desk. They were given an information leaflet with the questionnaire; posters were displayed explaining the purpose of the study; and a member of the research team was present whenever possible to facilitate distribution, completion and return of the questionnaires. Although the questionnaire was only available in English, reception staff who spoke relevant languages were asked to offer language support and translation whenever possible.

Patients were asked whether they were registered with a GP, and if so where the GP was located; their reasons for attending the A&E or Walk in Centre and why they chose this service in preference to others. (See Appendix 1 for questionnaire.) The questionnaire was piloted prior to the main study. Patient symptoms were coded and categorised and up to four symptoms were recorded for each person (Appendix 2). Data were entered into Excel spreadsheets and transferred to and analysed using SPSS v 15, comparing respondents using each service, each type of service (A&E, WiC, mixed) and area (A, B and C).

The survey was carried out over 12 days and was staggered at each of the sites during March, May and July 2006.

Phase 2

Retrospective analysis of presenting information: A retrospective analysis was undertaken of the anonymised notes of a random sample of patients. Each participating site was stratified according to four time groups 0.00hrs to 05 hrs 59 mins; 06.00 hrs to 11hrs 59 mins; 12.00

hrs to 17 hrs 59 mins; 18.00 hrs to 23 hrs 59 mins. Cases were randomly selected according to the proportions attending in each time slot each day, across each site of attendance over the respective period which corresponded with the patient survey at each site.

Clerical staff in each department photocopied and anonymised only the initial assessment of the patient which contains the presenting information. The anonymised information sent by the clerical staff was checked to ensure that it was consistent and reflected the criteria for inclusion in the study, and was then independently reviewed by a pharmacist, a GP, and a nurse consultant from a WiC. Each patient was independently classified by each assessor using one of the following categories:

- 'suitable for A&E';
- 'suitable for GP';
- 'suitable for community pharmacist';
- 'suitable for WiC';
- 'suitable for other NHS facility'; or
- 'suitable for other non-NHS facility'.

Assessors were sent a leaflet for the directions for clinicians streaming patients for the study (Appendix 3).

The sample size for the retrospective analysis of case notes is based on the calculation for inter-observer agreement (Donner, 1998). A sample of 200 patients from each of the three participating sites (600 total) was required to detect an average kappa level of agreement of 0.42 based on the pilot study (Bickerton et al, 2005) and the findings from a study of previous professional comparisons (O'Cathain et al, 2003) with 90% power and 5% significance. This assumes that there are an agreed proportion of necessary attendances triaged to A&Es by each person of 62% (based on average sensitivity (O'Cathain et al, 2003).

Data were entered into an Excel spreadsheet. This spreadsheet had protected details of the presenting complaint, past medical history, medications and history of presenting complaint. There was a drop down menu for the assessors to make their choice for each person. General descriptive statistics were employed. The kappa statistic was used to measure the degree of

agreement between the staff and was calculated using Stata v 9. Kappa value descriptions are based on Altman (1996).

Phase 3

Deriving a Consensus: The research team facilitated a focus group following the analysis of the patient survey and patient notes data. The assessors, nurses, GPs, medical staff and pharmacists from the PCTs, Walk in Centres and A&Es in NE London were all invited to participate. The results of the retrospective analysis were presented and cases selected about which there was total agreement, total disagreement and mixed agreement between the assessors. Discussants were invited to make their own suggestions for the right destination for these patients, and to explore possible reasons why assessors had made different decisions.

4. ETHICAL APPROVAL

The study was reviewed by the local NHS research ethics committee and approval was given to undertake this study.

5. RESULTS OF THE PATIENT SURVEY

Results are based on the 1145 usable questionnaires that were returned. It is not known what proportion of those eligible to take part in the survey this represents. There were 398 from the WiCs, 420 from the A&Es and 327 from the combined service. By geographical area, the returns were: Area A (combined WiC and A&E 327), Area B (429) and Area C (389).

In the tables that follow, numbers do not always sum to the relevant total, due to missing data (incomplete questionnaires).

5.1 Demographic information

Key findings: demography

Younger rather than older people use all the services in the study. This is most noticeable in WiCs, and in Area C.

Broadly, the ethnicity of services users is similar to that of the general population, although fewer white people in Area A and Bangladeshi people in Area C responded to the survey than the general population ethnicity would predict.

Women are more likely to use WiCs, and men are more likely to use A&E.

The ethnicity of respondents was recorded for 1145 participants. Four hundred and ninety two (43.8%) were of white origin, 57 (5.1) were Indian, 61 (5.4%) were Pakistani, 130 (11.6%) were Bangladeshi, 125 (11.1%) were Black African, 97 (8.6%) were Black Caribbean and 162 (14.4%) were of other origins which included: mixed ethnicity; other Asian; other Black; Chinese; other.

The ages ranged from 16 to 100 years with a mean age of 35.6 years (sd 15.5). Nine hundred and seventy-seven respondents indicated their gender, 433 men (44.3%) and 544 women (55.7%). The mean age of the women was 35.5 years (sd 16.1) and men was 36.2 years (sd 15.5); a mean difference of 0.7 years (95% CI -1.26, 2.74). The main problem people attended for was accidental injuries, followed by hearing and ear nose and throat problems (HEENT), then abdominal and musculo-skeletal problems. This can be seen in Table 1.

Table 1 – Symptoms

	Responses		
Presenting Complaint	**N**	**Percent**	**Percent of Cases**
Hearing, ear, nose and throat	218	15.8%	19.9%
Respiratory	80	5.8%	7.3%
Heart	83	6.0%	7.6%
Infectious diseases	9	.7%	.8%
Contraception	12	.9%	1.1%
Allergic reactions	5	.4%	.5%
Abdomen	158	11.5%	14.4%
Musculo-skeletal	125	9.1%	11.4%
Skin	80	5.8%	7.3%
Wound care	12	.9%	1.1%
Pregnancy	43	3.1%	3.9%
Mental health	8	.6%	.7%
Accidental injuries	268	19.4%	24.4%
Fever	31	2.2%	2.8%
Back pain	41	3.0%	3.7%
Endocrine	4	.3%	.4%
Diabetes Mellitus	7	.5%	.6%
Other pain	54	3.9%	4.9%
Information	2	.1%	.2%
Weak	65	4.7%	5.9%
Other/none/prefer not to state	50	3.6%	4.6%
Blood tests	9	.7%	.8%
Accompanying	14	1.0%	1.3%
TOTAL	1378	100.0%	125.5%

Table 2 shows that people aged 34 or less were more likely to use WiCs (65.3%) than A&Es (55.2%), while the reverse is true for those aged 35 or more.

Table 2 - Age of respondents by service type

Age band	A&E n (%)	WiC n (%)	Mixed WiC & A&E n (%)	Total n (%)
16-34	232 (55.2)	260 (65.3)	181 (55.4)	673 (58.8)
35-54	129 (30.7)	103 (25.9)	99 (30.3)	331 (28.9)
55-74	44 (10.5)	28 (7.0)	34 (10.4)	106 (9.3)
75+	15 (3.6)	7 (1.8)	13 (4.0)	35 (3.1)
TOTAL	420 (100)	398 (100)	327 (100)	1145 (100)

There were significant differences in the age of attendees and the different services used (χ_6^2=13.117, p=0.041). More of the younger age group attended the WiCs than the other services. In the WiCs 9% of attendees were above the age of 55, whereas in the A&E & combined service there were 14% above the age of 55.

The ethnic distribution between services and geographical areas is shown in Tables 3 & 4 and in Figure 1.

Table 3 - Ethnicity by service type

	A&E n (%)	WiC n (%)	Mixed WiC & A&E n (%)
White	188 (45.6)	176 (44.8)	128 (40.1)
Indian	20 (4.9)	27 (6.9)	10 (3.1)
Pakistani	27 (6.6)	25 (6.4)	9 (2.8)
Bangladeshi	72 (17.5)	54 (13.7)	4 (1.3)
Black African	37 (9.0)	42 (10.7)	46 (14.4)
Black Caribbean	20 (4.9)	19 (4.8)	58 (18.2)
Other	48 (11.7)	50 (12.7)	64 (20.1)
TOTAL	412 (100)	393 (100)	319 (100)

Figure 1 - Ethnicity by service type

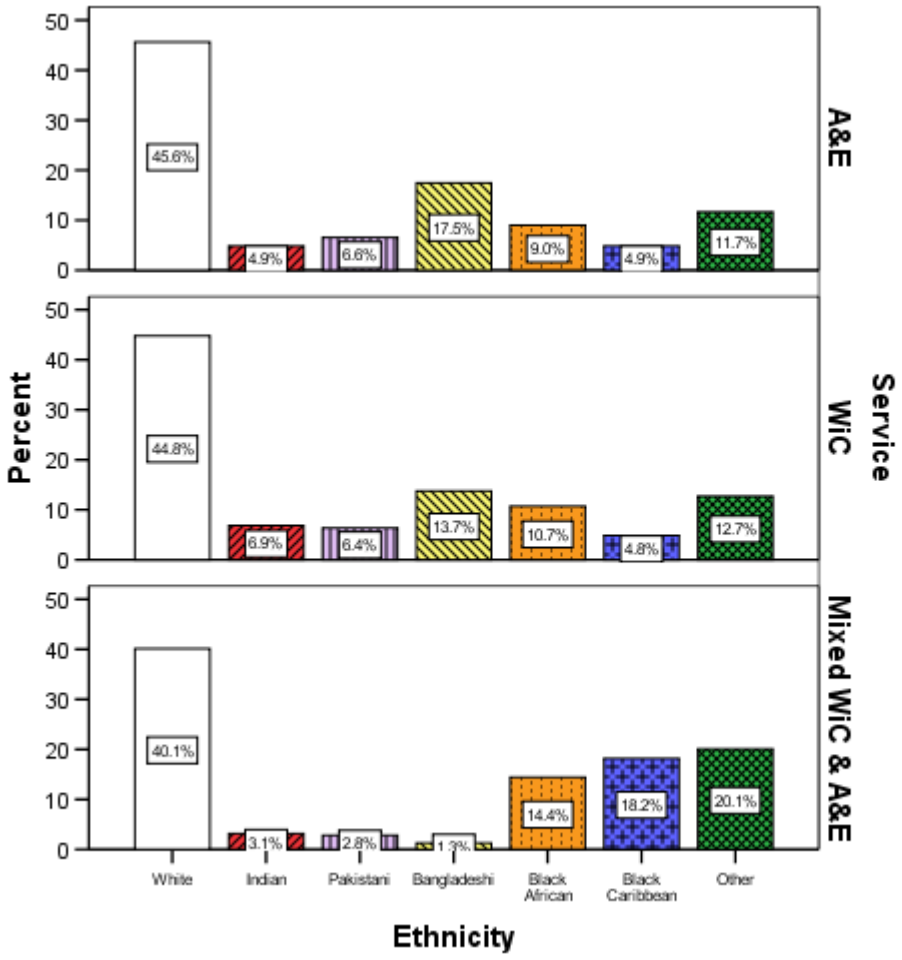


Table 4 - Ethnicity by Geographical area

	Area A n (%)	**Area B n (%)**	**Area C n (%)**
White	128 (40.1)	175 (41.4)	189 (49.5)
Indian	10 (3.1)	37 (8.7)	10 (2.6)
Pakistani	9 (2.8)	45 (10.6)	7 (1.8)
Bangladeshi	4 (1.3)	30 (7.1)	96 (25.1)
Black African	46 (14.4)	59 (13.9)	20 (5.2)
Black Caribbean	58 (18.2)	29 (6.9)	10 (2.6)
Other	64 (20.1)	48 (11.3)	50 (13.1)
TOTAL	319 (100)	423 (100)	382 (100)

Broadly speaking the ethnic profile, of respondents in our study, mirrors that of the population of the geographical areas in which the services are situated (see Table 5). The

main divergences between study and general populations are in Area A, where whites form about 60% of the population but only 40% of respondents, and in Area C, where Bangladeshis form a third of the general population but only a quarter of respondents. (The latter finding may reflect the language issue: when the WiC was busy, which is often the case, it was not possible for reception staff to offer to translate the questionnaire). These differences are significant for Area A (χ_6^2=86.493, p<0.001) and Area C (χ_6^2=42.399, p<0.001) but there were no significant differences for Area B (χ_6^2=8.681, p=0.192).

Table 5 - Ethnicity of respondents compared with that of general populations by Geographical area

Ethnicity	% of respondents / % of general population, 2001 census		
	Area A	**Area B**	**Area C**
White	40.1 / 60.3	41.4 / 39.4	49.5 / 51.4
Indian	3.1 / 3.7	8.7 / 12.1	2.6 / 1.5
Pakistani	2.8 / 1.0	10.6 / 8.5	1.8 / 0.8
Bangladeshi	1.3 / 3.0	7.1 / 8.8	24.7 / 33.4
Black African	14.4 / 11.6	13.9 / 13.1	5.2 / 3.4
Black Caribbean	18.2 / 10.0	6.9 / 7.4	2.6 / 2.7
Other *	20.1 / 10.4	11.3 / 10.7	13.1 / 6.9

* Includes mixed ethnicity; other Asian; other Black; Chinese; other
Source ONS: http://neighbourhood.statistics.gov.uk/dissemination/

Table 6 shows that women are slightly more likely to use WiCs than other services, and men are more likely to use A&E but these differences were not quite significant (χ_2^2=5.366, p=0.068)

Table 6 - Service type preferences by gender

	A&E n(%)	**WiC n (%)**	**Mixed WiC & A&E n (%)**	**Total n (%)**
Male	171 (39.5)	149 (34.4)	113 (26.1)	433 (100)
Female	176 (32.4)	209 (38.4)	159 (29.2)	544 (100)

5.2 Is the reason for attending seen as an emergency?

Key finding

A majority of service users think their problem is an emergency, particularly at A&Es.

Table 7 sets out the data in detail. It was significantly more likely that respondents using A&Es perceived their problem as an emergency (χ_2^2=30.782, p<0.001). This suggests that patients do discriminate to a certain extent between services within geographical areas.

Table 7 - Rates of perceived emergency, by service type

Emergency?	A&E n (%)	WiC n (%)	Mixed WiC & A&E n (%)
Yes	324 (80.2)	242 (62.4)	213 (70.3)
No	80 (19.8)	146 (37.6)	90 (29.7)
TOTAL	404 (100)	388 (100)	303 (100)

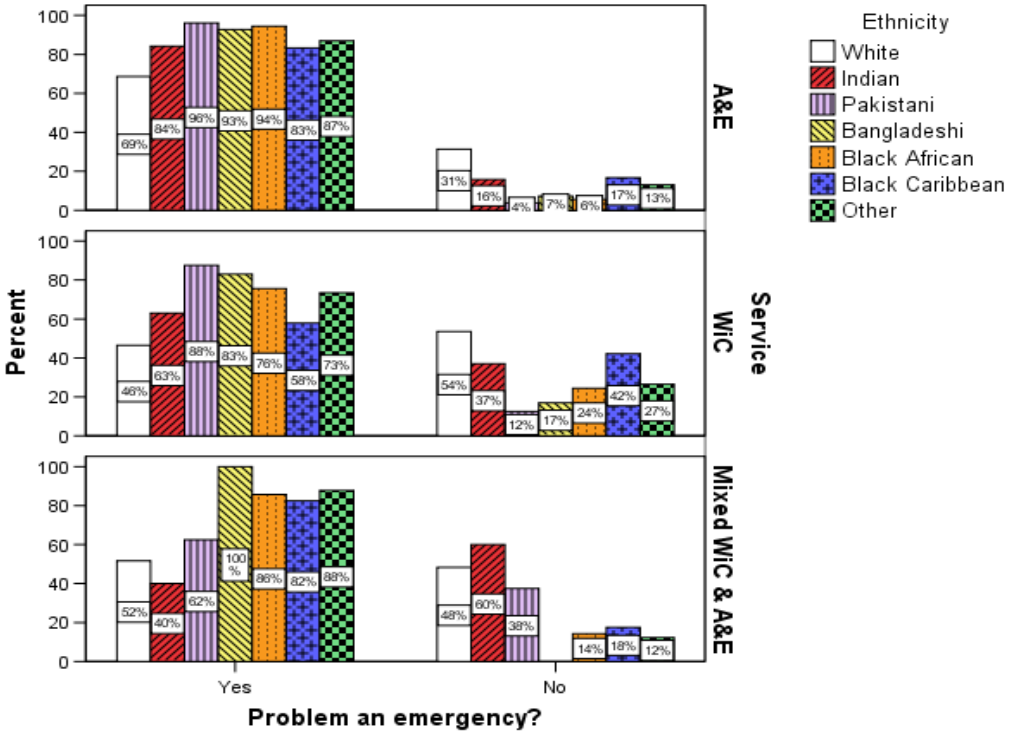
Table 8 shows this data by geographical area. Although Area B has a slightly higher proportion who think their problem is an emergency it can be seen that the percentages are very similar and there is no statistically significant difference between the geographical areas (χ_2^2=5.274, p=0.072).

Table 8 - Rates of perceived emergency by geographical area

Emergency?	Area A n (%)	Area B n (%)	Area C n (%)
Yes	213 (70.3)	311 (74.9)	255 (67.6)
No	90 (29.7)	104 (25.1)	122 (32.4)
TOTAL	303 (100)	415 (100)	377 (100)

It can be seen in Figure 2 that of the 182 White's attending A&E 69% of those thought it was an emergency. Similarly of the 19 Indian's attending that service 84% thought it an emergency. The other ethnic categories are similarly higher than the White category for all service types.

Figure 2 - Ethnicity by problem an emergency or not by service



Overall significantly fewer whites considered their problem to be an emergency than a number of other ethnicities (χ_6^2=101.006, p<0.001) (Table 9).

Table 9 - Ethnicity by problem an emergency or not

	Problem an emergency n(%)		
Ethnicity	**Yes**	**No**	**Total**
White	265 (56.4)	205 (43.6)	470 (100)
Indian	37 (66.1)	19 (33.9)	56 (100)
Pakistani	51 (87.9)	7 (12.1)	58 (100)
Bangladeshi	112 (88.9)	14 (11.1)	126 (100)
Black African	101 (84.9)	18 (15.1)	119 (100)
Black Caribbean	73 (77.7)	21 (22.3)	94 (100)
Other	126 (82.9)	26 (17.1)	152 (100)

Significantly more females (74%) considered their problem to be an emergency than males (66%) (χ_1^2=6.740, p=0.009). There were no significant differences between the age groups, nor between geographical areas.

5.3 Duration of health problem

Key finding

About one third of respondents came with a problem less than twenty-four hours old, and nearly another third had had their problem for up to a week.

Table 10 records how long respondents had had the health problems they sought help for. There were significant differences between services in the length of time the patient had had the problem ($_8^2$=53.642, p<0.001) but not between geographical areas (χ_8^2=11.784, p=0.161) (Table 11). Those attending A&Es were more likely to have had their problem less than twenty-four hours, and those attending WiCs more likely to have had it for between one and seven days.

Table 10 - Duration of health problem, by service type

Had problem	**A&E n (%)**	**WiC n (%)**	**Mixed WiC & A&E n (%)**
less than 24 hours	188 (45.9)	97 (25.6)	101 (32.9)
one to seven days	120 (29.3)	156 (41.2)	93 (30.3)
one week to a month	38 (9.3)	70 (18.5)	56 (18.2)
one to six months	31 (7.6)	34 (9.0)	38 (12.4)
more than six months	33 (8.0)	22 (5.8)	19 (6.2)
TOTAL	410 (100)	379 (100)	307 (100)

Figure 3 shows the breakdown of how long participants had had their symptoms. Of the 37.4% attending the A&E 17% had their symptoms for less than 24 hours, 11% had their symptoms from between 24 hours and one week, approximately 3 % had their symptoms in each of the other time categories. The other services tended to have slightly higher percentages in the categories longer than 24 hours and fewer in the less than 24 hour category.

Figure 3 - Length of time had problem by service used

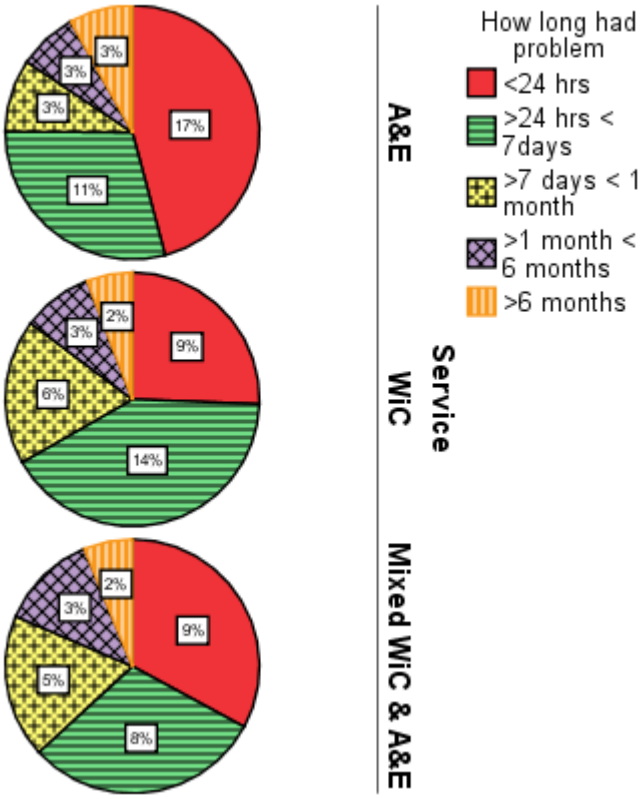


Table 11 - Duration of health problem, by geographical area

Had problem	Area A n (%)	Area B n (%)	Area C n (%)
less than 24 hours	101 (32.9)	148 (36.1)	137 (36.1)
one to seven days	93 (30.3)	135 (32.9)	141 37.2)
one week to a month	56 (18.2)	61 (14.9)	47 (12.4)
one to six months	38 (12.4)	35 (8.5)	30 (7.9)
more than six months	19 (6.2)	31 (7.6)	24 (6.3)
TOTAL	307 (100)	410 (100)	379 (100)

5.4 Registered with GP?

Key findings

Most respondents were registered with a GP, though a third who attended the WiC in Area C were not. More users of Area C services were registered with GPs elsewhere than were of

Area B and Area A services. Those not registered were predominantly younger, and gave a wide range of reasons for not being registered.

Figure 4 shows that the vast majority are registered with a GP.

Figure 4 - Registered or not with a GP

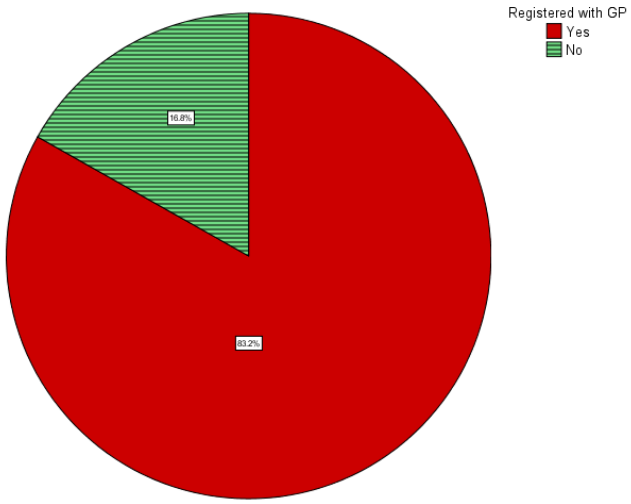


Table 12 shows that most of the respondents were registered with a general practitioner, although over 20% of those attending a WiC were not, a significant difference (χ_2^2=14.877, p=0.001).

Table 12 - Registered with a General Practitioner or not by service

Registered with a GP	A&E n (%)	WiC n (%)	Mixed WiC & A&E n (%)	Total n (%)
Yes	366 (88.6)	307 (78.7)	261 (81.6)	934 (83.2)
No	47 (11.4)	83 (21.3)	59 (18.4)	189 (16.8)
TOTAL	413 (100)	390 (100)	320 (100)	1123 (100)

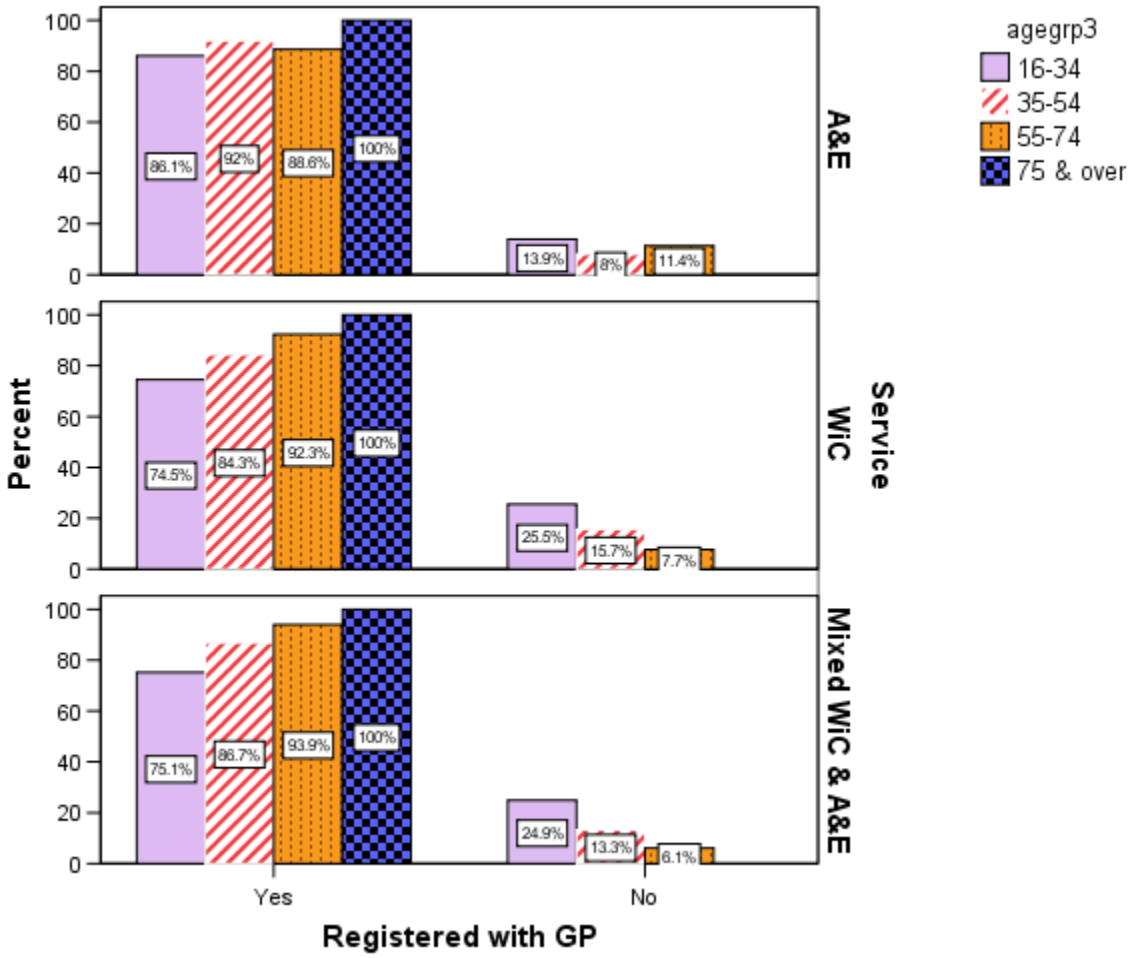
Significantly more females (462/535, 86%) were registered with a GP than males (334/426, 78%) (χ_1^2=10.543, p=0.001).

Significantly fewer 16 to 34 year olds were registered with GP 79% (521/662) than the older age groups (35 to 54: 88%; 55 to 74: 91%; 75 & over: 100%) (χ_3^2=26.359, p<0.001). Figure 5 and Table 13 show the age breakdown by service of those registered or not with a GP.

Table 13 - Age group by registered or not with GP by service type

		Service			
Age group	**Registered with GP?**	**A&E n (%)**	**WiC n (%)**	**Mixed WiC & A&E n (%)**	**Total n (%)**
16-34	**Yes**	198 (86.1)	190 (74.5)	133 (75.1)	521 (78.7)
	No	32 (13.9)	65 (25.5)	44 (24.9	141 (21.3)
TOTAL		230	255	177	662
35-54	**Yes**	115 (92.0)	86 (84.3)	85 (86.7)	286 (88.0)
	No	10 (8.0)	16 (15.7)	13 (13.3)	39 (12.0)
TOTAL		125	102	98	325
55-74	**Yes**	39 (88.6)	24 (92.3)	31 (93.9)	94 (91.3)
	No	5 (11.4)	2 (7.7)	2 (6.1)	9 (8.7)
TOTAL		44	26	33	103
75 & over	**Yes**	14 (100	7 (100)	12 (100)	33 (100)
	No				
TOTAL WITHIN SERVICE		413	390	320	1123

Figure 5 - Age group by service by registered with a GP or not



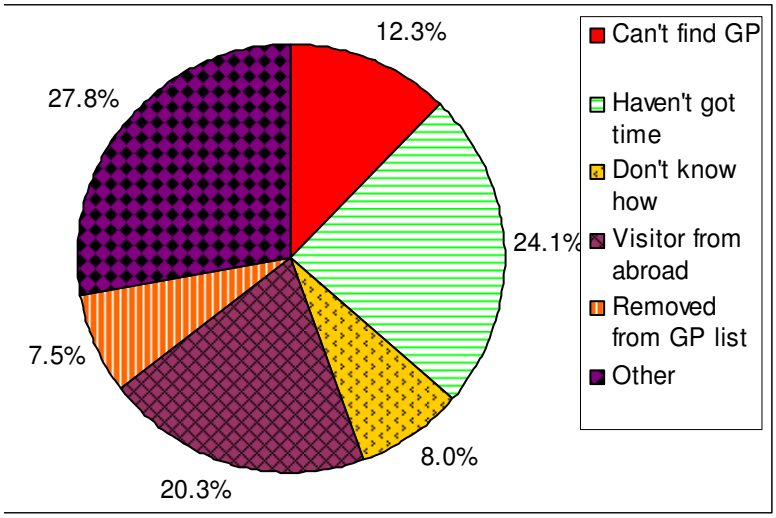
Whites and 'other' ethnic groups were least likely to be registered with a GP (78% and 80% respectively were registered), while Bangladeshis (94%) were the most likely to be registered (χ_6^2= 26.596, p<0.001) (Table 14).

Table 14 - Whether registered with a GP or not by ethnicity

	Registered with a GP?	
Ethnicity	**Yes** **n (%)**	**No** **n (%)**
White	378 (78.1)	106 (21.9)
Indian	50 (89.3)	6 (10.7)
Pakistani	56 (91.8)	5 (8.2)
Bangladeshi	119 (93.7)	8 (6.3)
Black African	103 (85.1)	18 (14.9)
Black Caribbean	85 (88.5)	11 (11.5)
Other	127 (80.4)	31 (19.6)
TOTAL	918 (83.2)	185 (16.8)

There were 189 informants not registered with a GP. Most of those were aged between 16 and 34 (144, 76.2%). All 189 were asked why they were not registered. Only 23 (12.2%) said that they could not find a GP, while a further 38 (20.1%) were visitors from abroad. Fourteen (7.4%) had been removed from a GP list, and 15 (7.9%) did not know how to register. Forty-five (23.8%) said that they did not have time to register. Sixty-three (36.3%) ticked 'not relevant' or 'other' (23 who ticked other explained that they had just moved house, and a further five were in the process of registering). 'Not having time to register' may refer to the need to take a day off work to register, a point made in one or two comments by those who ticked 'other'. This may be seen in Figure 6.

Figure 6 - Reason not registered with a GP



Of those who gave reasons for not being registered that were not in the list of choices, the largest number (21) said that they had either moved into the area from another UK location or from abroad. Some were scheduled to register and hence were not currently but some had registered but were waiting confirmation . A small number said that they "rarely fall sick" so obviously thought it unnecessary to register. A few said that the GP lists were closed and one person did not like the "state of the GP" and another said "the doctor was too busy". One person had no proof of address and one had no proof of ID.

Respondents were asked whether their GP was local, elsewhere in London, or outside London. There were significant differences between services and whether patients' GPs were local or not (χ_4^2=16.089, p=0.003) with WiCs having fewest local and more outside London. Such differences also existed between geographical areas, with Area C having fewer local and more outside London (χ_4^2=38.093, p<0.001) (see Tables 15 & 16).

Table 15 - Service type by GP location

GP location	Service type			
	A&E n(%)	WiC n(%)	Mixed WiC & A&E n(%)	Total n(%)
Local	234 (63.2)	177 (56.4)	165 (61.3)	576 (60.4)
Rest of London	108 (29.2)	90 (28.7)	87 (32.3)	285 (29.9)
Outside London	28 (7.6)	47 (15.0)	17 (6.3)	92 (9.7)
TOTAL	370	314	269	953

Table 16 - Geographical area by GP location

GP location	Geographical area			
	Area A n(%)	Area B n(%)	n(%)Area C	Total n(%)
Local	165 (61.3)	261 (69.4)	150 (48.7)	576 (60.4)
Rest of London	87 (32.3)	88 (23.4)	110 (35.7)	285 (29.9)
Outside London	17 (6.3)	27 (7.2)	48 (15.6)	92 (9.7)
Total	269	376	308	953

NB: Totals for 'Yes, registered with GP' should equal the sum of GP locations reported, but the latter often exceed the former, indicating that these questions were not always completed accurately.

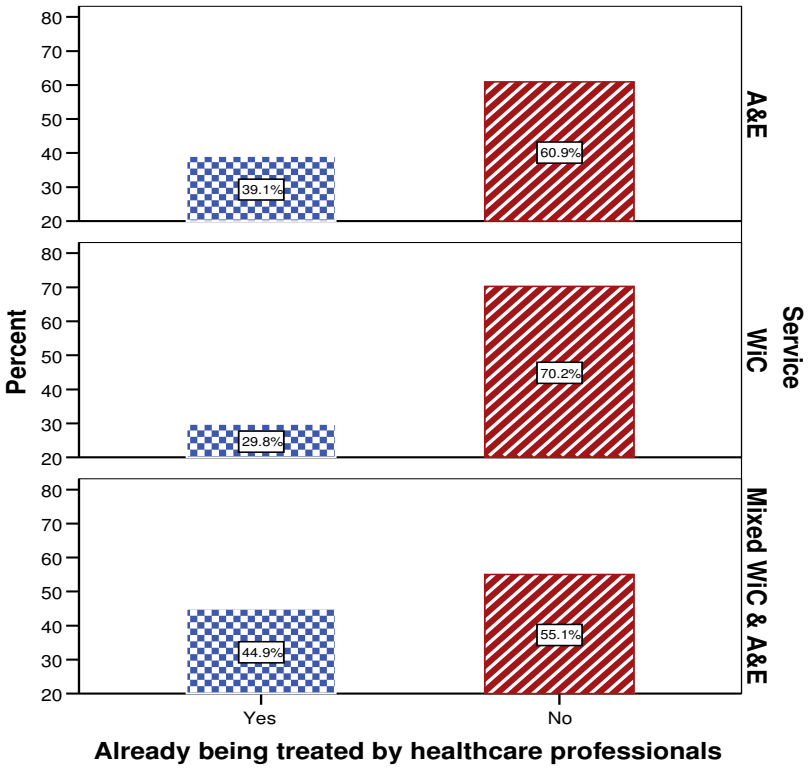
5.5 Were respondents already being treated by health care professional?

Key finding

Over one third of respondents were already receiving treatment for the problem they were seeking help with.

Table 17 shows how many people using each service were already being treated by a health care professional for the problem that they were seeking help with, and when they last saw that professional. This is illustrated in Figure 7.

Figure 7 - Percentage already being treated by a healthcare professional by service type



Of those who thought their problem an emergency, 41.7% (283 / 679) were already being treated for the problem.

Table 17 - Whether respondents are being treated for the problem, and if so when they last saw the relevant health professional, by geographical area

Being treated?	Area A n (%)	Area B n (%)	Area C n (%)	Total n(%)
Yes	133 (44.9)	138 (38.0)	105 (30.8)	376 (37.6)
No	163 (55.1)	225 (62.0)	236 (69.2)	624 (62.4)
TOTAL	298	363	341	1000
Seen health professional Within last 24 hours	35 (26.1)	38 (30.9)	34 (33.0)	107 (29.7)
1- 7 days	40 (29.9)	43 (35.0)	29 (28.2)	112 (31.1)
1-4 weeks	28 (20.9)	15 (12.2)	15 (14.6)	58 (16.1)
1-6 months	31 (23.1)	27 (22.0)	25 (24.3)	83 (23.1)
TOTAL	134	123	103	360

Table 18 shows that were large differences in those that were already being treated and the service type. Significantly more people who were already being treated attended either the Mixed service or A&E than the WiC service (χ_2^2=16.173, p<0.001). However, there were no significant differences between the services and how long ago it had been since they consulted about their problem (χ_6^2=9.512, p=0.147).

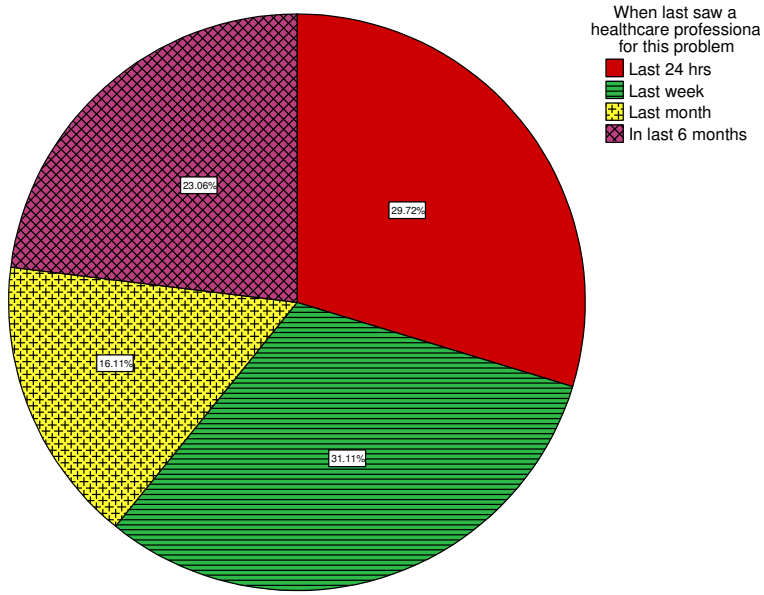
Table 18 - Whether respondents are being treated for the problem, and if so when they last saw the relevant health professional, by service

	Service type			
Being treated	**A&E n(%)**	**WiC n(%)**	**Mixed WiC & A&E n(%)**	**Total n(%)**
Yes	140 (39.1)	103 (29.8)	133 (44.9)	376 (37.6)
No	218 (60.9)	243 (70.2)	163 (55.1)	624 (62.4)
TOTAL	358	346	296	1000
Seen health professional Within last 24 hours	51 (37.2)	21 (23.6)	35 (26.1)	107 (29.7)
1- 7 days	41 (29.9)	31 (34.8)	40 (29.9)	112 (31.1)
1-4 weeks	18 (13.1)	12 (13.5)	28 (20.9)	58 (16.1)
1-6 months	27 (19.7)	25 (28.1)	31(23.1)	83 (23.1)
TOTAL	137	89	134	360

Of those who had already seen a health care professional about their problem one third (89/268, 33.2%) had seen the professional within the last twenty four hours, nearly one third had consulted within the last week (86/268, 32.1%), forty two (15.7%) had consulted within the last month and fifty-one (19.0%) had within the last 6 months. This indicates that most people (65.3%) had consulted between twenty four hours and a week ago.

Figure 8 shows for those that had seen a health professional for their problem how long ago it was since the person saw the health professional.

Figure 8 - Length of time since seeing a health professional for their problem



5.6 Why did you use this service?

Key finding

The commonest reasons for using these services was the inability to go get an emergency GP appointment, and the hope of being seen more quickly.

Table 19 records the reasons respondents gave for using the particular service. Respondents were able to tick more than one box. The category "Other" includes responses such as: was passing by, visiting from outside London, NHS publicity, NHS Direct & other reasons. The inability to access primary care as provided by general practice is the major reason for use of these services, particularly WiCs.

Two options given to respondents are not included in the table: 'live in local area' and 'work in local area'. Overall, 25.0% and 10.9% of respondents ticked these boxes, although it seems most unlikely that the 64.1% of respondents neither lived nor worked locally to the service they were using. For example, it appears to be at odds with the data on being registered with a local GP (see 4.4) above). Thus, the answers to this question cannot be taken as fully valid indicators of where respondents lived or worked. Though living and/or working locally are almost certainly reasons for using the services in the study, they are 'distal' (background) rather than 'proximal' (foreground) causes, and therefore presumably did not come to mind. For these reasons, these data are excluded from the table.

Of the 286 respondents who replied to 'lived in the area' only 18 (6.3%) also worked in the area. However, given one of the purposes of WiCs (to be convenient access points to those who work full-time), it is of interest that of those who did tick these boxes, 107/803 (13.3%) worked in the area but did not live there. 17/327 (5.2%) in Area A; 26 / 429 (6.1%) at Area B; 64 / 389 (16.5%) in Area C. In fact, numbers in this category using WiC and A&E were equal in both Area B and Area C.

Table 19 - Reasons for using the service

	Service type			
Why attended this facility	**A&E n(%)**	**WiC n(%)**	**Mixed WiC & A&E n(%)**	**Total n(%)**
Unable to get emergency GP appointment	79 (20.6)	157 (41.5)	95 (32.1)	331 (31.3)
Hope to be seen more quickly	88 (22.9)	97 (25.7)	80 (27.0)	265 (25.0)
Directed by GP practice	63 (16.4)	24 (6.3)	42 (14.2)	129 (12.2)
Been before & found helpful	44 (11.5)	34 (9.0)	40 (13.5)	118 (11.1)
Unable to get convenient appointment	22 (5.7)	70 (18.5)	24 (8.1)	116 (11.0)
Recommended by family/friends	47 (12.2)	46 (12.2)	18 (6.1)	111 (10.4)
Don't know where else to go	32 (8.3)	42 (11.1)	33 (11.1)	107 (10.1)
Other	89 (23.1)	74 (19.6)	57 (17.4)	220 (20.8)
Total	384	378	296	1058

5.7 Whom did you expect to see at the service?

Key finding

Over half of respondents expected to see a doctor, and one quarter expected to see a nurse.

Respondents were asked whom they expected to treat them at the service: a pharmacist, a nurse, a doctor, or other. Over half (647, 56.5%) expected to see a doctor. Just over a quarter (309, 27.0%) expected to see a nurse, fifteen per cent did not know, and only 2.4% (28) replied 'other'. Mostly these did not specify whom they meant by this, though eight thought that they would receive an X-ray or see a radiographer or radiologist, while six expected to see a physiotherapist. Just 12 (1.0%) expected to see a pharmacist. It can be seen in Table 20 that higher percentages of respondents attending a WiC expect to see a pharmacist than those

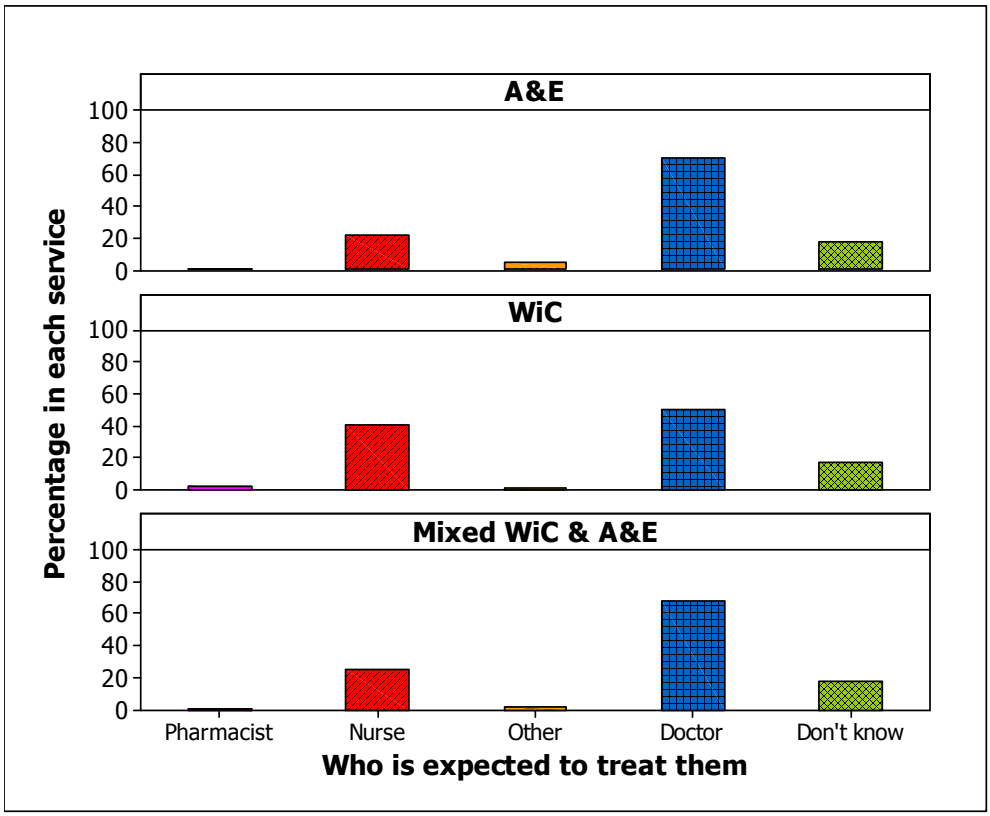
attending the mixed service or A&E only service. However there are still 50% expecting to see a doctor in a WiC. These results show that patients still expect to see a doctor rather than a nurse even though services such as WiCs, are nurse led.

Table 20 - Whom patients expect to see at the service

	Service		Total responses	
	A&E n (%)	**WiC n (%)**	**Mixed WiC & A&E n (%)**	
Pharmacist	2 (0.5)	8 (2.2)	2 (0.7)	12
Nurse	81 (21.8)	152 (41.0)	76 (25.9)	309
Other	16 (4.3)	5 (1.3)	7 (2.4)	28
Doctor	258 (69.4)	186 (50.1)	203 (69.0)	647
Don't know	63 (16.9)	65 (17.5)	52 (17.7)	180
TOTAL RESPONDENTS	372	371	294	1037/1176

Percentages and totals are based on respondents. This is illustrated in Figure 9.

Figure 9 - Which health professional patients expected to treat them by service



It can be seen that in each of the three geographical areas that most people expect to see a doctor and the least expect to see a pharmacist. This is shown in Table 21.

Table 21 - Whom patients expect to see by geographical area

	Geographical area			Total responses
	Area A n (%)	Area B n (%)	Area C n (%)	
Pharmacist	2 (0.7)	8 (2.2)	2 (0.5)	12
Nurse	76 (25.9)	146 (38.2)	87 (24.1)	309
Other	7 (2.4)	12 (3.1)	9 (2.5)	28
Doctor	203 (69.0)	208 (54.5)	236 (65.4)	647
Don't know	52 (17.7)	69 (18.1)	59 (16.3)	180
TOTAL RESPONDENTS	294	382	361	1037/1176

Percentages and totals are based on respondents

5.8 What treatment did you expect?

Key finding

A third of respondents expected a prescription (more at WiCs, fewer at A&Es), and a third health advice or reassurance.

Table 22 records in detail what people were expecting in response to their problem. Over a third expected to be given a prescription, though this was much higher at WiCs than at A&Es. Nearly as many wanted reassurance and advice at all services. That a minority of people using WiCs expected to see a specialist or to access hospital services suggests a degree of misunderstanding of what WiCs offer. There was an expectation of seeing a specialist of some sort particularly at the A&E facilities. Nearly seven per cent wanted a second opinion.

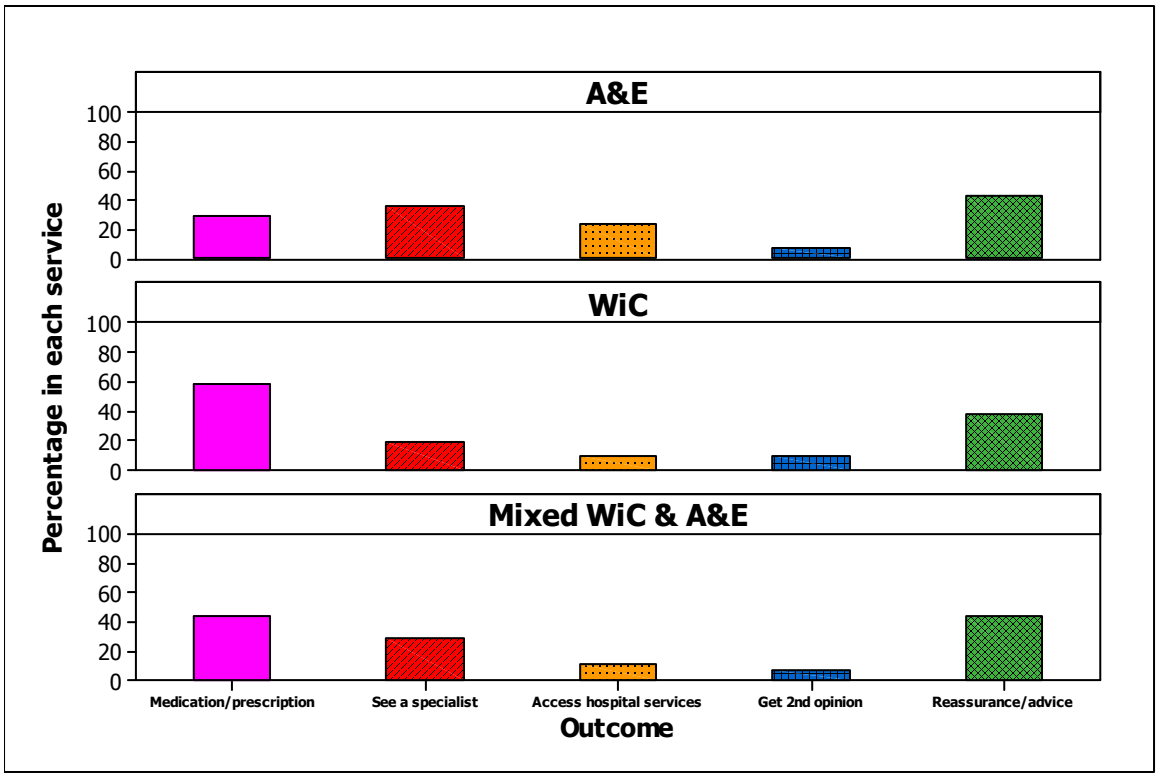
The majority of patients expect to receive medication of some sort in the WiCs and the mixed service. However, in the A&Es the majority wish for reassurance and advice or to see a specialist.

Table 22 - Expected outcome of service use

	Service			Total responses
	A&E n (%)	WiC n (%)	Mixed WiC & A&E n (%)	
Medication prescription	101 (29.4)	202 (58.6)	115 (44.1)	418
See a specialist	123 (35.8)	67 (19.4)	74 (28.4)	264
Access hospital services	81 (23.5)	35 (10.1)	28 (10.7)	144
Get 2nd opinion	24 (7.0)	33 (9.6)	19 (7.3)	76
Reassurance or advice	126 (36.6)	112 (32.5)	101 (38.7)	339
TOTAL RESPONDENTS	344	345	261	950/1241

Percentages and totals are based on respondents. This is shown in Figure 10.

Figure 10 - Treatment expected by patients by service type



When examined by geographical area the majority still expected to receive medication but respondents in Area B had the lowest expectation of this compared to Area A and Area C. Area B had slightly greater expectation of seeing a specialist than the other two geographical areas. Area A had a slightly greater percentage wanting reassurance or advice compared to Area B and Area C (Table 23).

Table 23 - Expected outcomes of service used by geographical area

	Geographical area			Total responses
	Area A n (%)	**Area B n (%)**	**Area C n (%)**	
Medication prescription	115 (44.1)	135 (39.1)	168 (48.8)	418
See a specialist	74 (28.4)	106 (30.7)	84 (24.4)	264
Access hospital services	28 (10.7)	67 (19.4)	49 (14.2)	144
Get 2nd opinion	19 (7.3)	32 (9.3)	25 (7.3)	76
Reassurance or advice	101 (38.7)	118 (34.2)	120 (34.9)	339
TOTAL RESPONDENTS	261	345	344	950/1241

Percentages and totals are based on respondents

5.9 Why did you choose this particular facility?

There were nine hundred and sixty eight responses to this question and they mirrored the responses in question 6.

4.10 If the facility attended (A&E or WiC) was not open today where would you have gone?

Key finding

One fifth of those responding would have gone to their GP and nearly as many were at a loss as to what to do

Eight hundred and ninety three people answered this question. The majority of people (474, 53%) would have chosen to either go to a hospital or another hospital (286, 32%) or their GP (188, 21%). Very few responded that they would either go to another or find a WiC (64, 7.2%). Over one hundred and fifty (17%) said that they just did not know what they were going to do and over two hundred (23%) said they would either go home or wait or treat

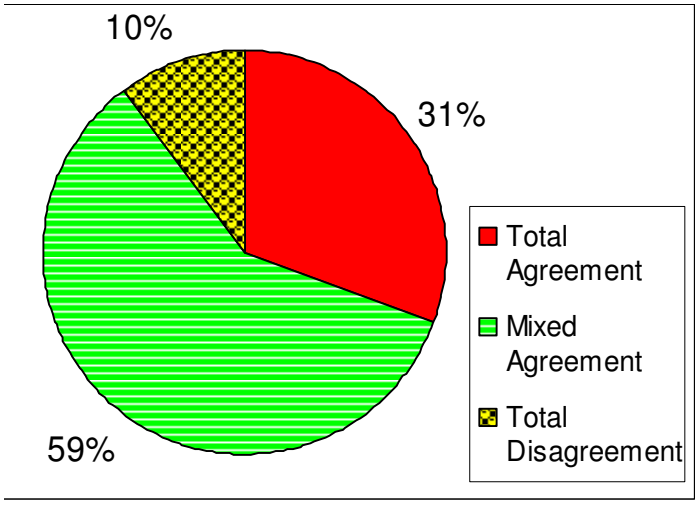
themselves with a few mentioning that would go to a pharmacist and some said they would go to a doctor as a private patient. Some of the patients obviously felt very ill as there were comments such as "suffer in silence" or "go home and die" or "call a priest".

6. RESULTS OF THE RETROSPECTIVE ANALYSIS OF PRESENTING INFORMATION

Six hundred and nine cases were randomly selected for this part of the study. Of those all three assessors coded 584 to the various services, in nine cases only one assessor or another out of the three coded the streaming service thought to be appropriate and there were 16 cases where there were no recommendations for streaming.

There was total agreement on the service required in 178 cases (30.5%), mixed agreement by two assessors out of three for 346 cases (59.2%) and total disagreement for 60 cases (10.3%). This is illustrated in Figure 11.

Figure 11 - Agreement by the three assessors



The kappa values, for level of agreement on the outcome, are shown in Table 24. There was moderate agreement for 'other NHS' services, fair agreement for sending to a GP & also for sending to an A&E, poor agreement on sending to a Community Pharmacist and Walk in Centre and agreement worse than chance agreement on 'other non-NHS'. The combined kappa level was only fair on which was an appropriate service to stream patients to.

Since only one person streamed to 'other non-NHS' this category was excluded to see whether this improved the levels of agreement. It did but only marginally and did not change any of the descriptions on agreement, as is also shown in Table 24.

Table 24 - Kappa values for the level of agreement on where patients should be streamed

Where patients should be streamed	Kappa/ Kappa–other non-NHS
A&E	0.305 / 0.308
GP	0.263 / 0.266
Community pharmacist	0.191 / 0.190
Walk in Centre	0.163 / 0.168
Other NHS	0.448 / 0.456
Other non-NHS	-0.005 / N/A
Overall	0.237 / 0.242

The kappa values for the level of agreement between the three assessors, is shown in Table 25**.** Theses values also exclude the 'other non-NHS' category. There is marginally more agreement between the GP & the nurse than the GP and the pharmacist. The best agreement is between the nurse consultant and pharmacist but this is still only a 'fair' level of agreement.

Table 25 - Kappa values for level of agreement between assessors

	Nurse Consultant	Pharmacist
GP	0.231	0.225
Pharmacist	0.316	

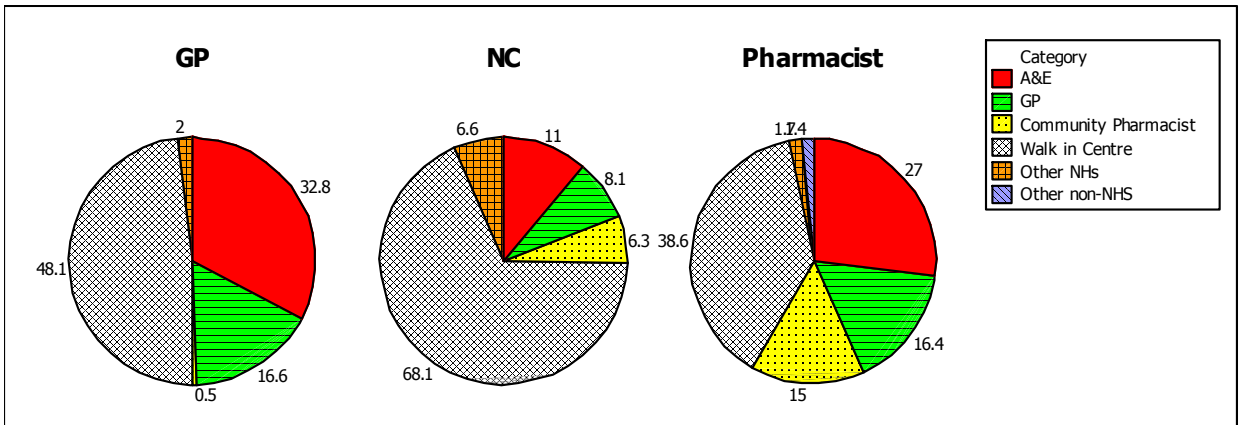
There are interesting differences between the three assessors but also similarities. All three assessed the majority of the patients as suitable for a WiC with A&E as the next most frequent it was just that there was not agreement on the individual cases. The different proportions are shown in Table 26 and are based on the numbers coded.

Table 26 - Streaming preference for each of the assessors

	General Practitioner n (%)	Nurse Consultant n (%)	Pharmacist n (%)
A&E	194 (32.8)	65 (11.0)	158 (27.0)
GP	98 (16.6)	48 (8.1)	96 (16.4)
Community Pharmacist	3 (0.5)	37 (6.3)	88 (15.0)
Walk in Centre	285 (48.1)	403 (68.1)	226 (38.6)
Other NHS	12 (2.0)	39 (6.6)	10 (1.7)
Other non-NHS	0	0	8 (1.4)
Total	592	592	586
Not coded	17	17	23

This is illustrated in Figure 12.

Figure 12 - Service each assessor would use



7. RESULTS OF THE CONSENSUS EXERCISE

All of the above results were presented at a meeting of the research team and staff working in relevant local services. Those attending were:

NHS personnel:

- Four senior nurses working in services involved in the study (A&E or mixed A&E/WiC)
- One community pharmacist

All three geographical areas were represented. The above list includes two of the three assessors taking part in the retrospective analysis; the GP assessor had planned to attend but in the event was unable to do so.

City University personnel

- two presenters
- one facilitator
- two lecturers with extensive recent experience of a WiC included in the study
- one researcher

The purpose of the meeting was to discuss the results of the study as a whole, and in particular to explore why the retrospective analysis of presenting information had showed a lack of consensus in many cases.

This exploration was structured as a case-by-case consideration of a stratified random sample of fifteen cases: five in which the three assessors had agreed, five where one had disagreed with the other two, and five where all three had disagreed. Discussants were asked to consider each case and suggest and debate the reasons for the decisions and, where relevant, the differences between them. Detailed notes were taken throughout the discussion of cases, and these form the basis of this section of the report. Case summaries appear in Appendix 4.

It was clear that the lack of consensus among assessors was by no means a chance result; on this occasion too, there was considerable disagreement. Indeed, the assessors present occasionally disagreed with their own earlier decisions. Thus, the discussion provided further evidence of contestability in streaming decisions.

Interestingly, the four NHS nurses present all had considerable A&E experience, whereas none of the assessors did. Nevertheless, the discussants endorsed (a) the assessors' decisions in all five cases where there was agreement; and (b) the majority decision in all five cases where one assessor disagreed with the other two. Discussion about the first group were short and straightforward, while those about the second group tended to be longer and more wide-ranging, suggesting that assessor disagreement had reflected the nature of the cases being considered rather than any aspect of the assessors themselves. Unsurprisingly, the most

extensive discussions were had about the five cases about where all three assessors had disagreed.

The criteria for streaming decisions articulated during the discussion were as follows:

- the risks to health of delay;
- availability of and access to services;
- the knowledge and skills of staff at different services;
- the equipment available at different services;
- patient's convenience.

A further influence on decisions was ignorance on the part of assessors/discussants as to exactly what local services are able to offer.

6.1 The risks of delay

This was at times difficult to discuss because of the limited information available. Discussants tried to infer risk from the duration of the episode and the severity of signs and symptoms, but the latter would be much clearer in real life when the clinician was talking with the patient; what was recorded in the notes was minimal. Some disagreements arose from different interpretations of this brief information, and may be regarded as an artefact of the exercise rather than evidence of actual differences between assessors and/or discussants. Nevertheless, there were instances when even the information available led discussants to different conclusions. For example, in the case of a man aged 28, who had had headache and nausea for a month and also reported a migraine and a cough (case 77), one view was that he was young and had had symptoms for some time, so the case was not urgent and he should be seen by a GP; another, that the migraine gave cause for concern, so a WIC consultation would be better (because quicker). The discussants speculated on the reasons why one assessor had streamed him to A&E, and thought this was probably to ensure that all the investigations likely to be relevant could be carried out straight away. In only one case (303, 35-year old male with dizziness, vomiting, headache, neck pain and blurred vision) were discussants agreed that an assessor's judgement was simply wrong (he should not be sent to a WIC but to A&E).

6.2 Availability of and access to services

In a number of cases, discussants thought that GPs would have sufficient knowledge to diagnose and treat the patient appropriately, but that the patient would probably be unable to get an appointment immediately, and should therefore go to the WIC or A&E. A WIC was suggested for a patient needing emergency dental treatment in order to be given pain relief (case 376). In another case (338), it was thought that the GP would not have time in a normal appointment (7-10) minutes to do an adequate assessment, although it was thought s/he would have the knowledge and skills. Discussants thought that since there was a chance that patient 268 might have to be sent from a WIC to A&E, she should go to A&E at the outset to save time.

6.3 The knowledge and skills of staff

In a small number of cases, the decision was based on the different knowledge and skills of staff in the different services. A community pharmacist might not carry out an adequate assessment of case 285 (but see 6.6 below). (Also, though this is not a matter of knowledge and skills, a pharmacist might not have the ability to refer case 77 to a chest clinic, even though s/he could diagnose accurately.) One discussant would have sent a patient with a shoulder injury (338) to be referred to a service where physiotherapy was available, while in the case of a patient who had bitten her tongue when eating and had swallowed metal (277), it was felt that knowledge of the toxicity of metals, and of whether stitching would be necessary, would only be found in A&E departments.

6.4 Equipment

A&E was also considered the right option for cases 277 and 343 because X-ray equipment would be available (but see 6.6 below). Case 279 might have suffered brain injury and facial fractured, and this would require diagnostic facilities only available at A&E.

6.5 Patients convenience

Occasionally, issue of patient convenience were mentioned. For example, case 188 (substance in the eye) could have gone to the A&E department of a specialist eye hospital, but this would have involved a much longer journey than the local A&E. The discussion about case 343 (foot pain requiring pain relief) considered the issue of prescription charges, an important aspect of service access in very deprived populations such as those in this study.

In fact, one local minor ailment pharmacy service would be able to provide analgesia free of charge.

6.6 Assessor/discussant ignorance of services' scope

At a number of points in the discussion, it became clear that disagreements arose from different understanding of what services were able to provide. For example, it was stated several times that patients needing X-ray should go to A&E, though X-ray is in fact available at WICs too. The minor ailment pharmacy scheme noted above only existed in one of the boroughs in the study, and was a recent innovation, and clinicians might not be aware of it: this was also the case with a pilot scheme of giving intravenous antibiotics in the community in two of the boroughs. The suggestion that case 285 (neck pain) might require a fuller assessment than a community pharmacy could carry out was met with a further suggestion that A&E nurses do not necessarily know what services community pharmacies offer.

There were thus a range of reasons why there was no 'right answer' to the questions of how patients should be streamed. Limited information meant that different clinical inferences were made, and different judgments about how important speed of access was; and there was variation in participant awareness of what local services could offer. Although the exercise was in one sense artificial (apart from NHS Direct, clinicians can normally observe and interact with patients), it is nevertheless true that risk assessment can never be an exact science, and clinicians' knowledge of available services is bound to be imperfect in the context of continuing service change and development.

7. DISCUSSION

This study across six trusts in the North East of London identified that the majority of health users of Accident and Emergency Departments and adjacent Walk-in Centres or primary care urgent centre, thought their health concerns were emergencies, particularly those attending emergency departments, with the health user survey showing younger rather than older people using the services. Over 40% of respondents were attending the services because they had been unable to get either a convenient or an emergency appointment with their general practice, an observation that is echoed by the professional focus group. When asked what they might do if the Accident and Emergency Department and Walk in Centre

services weren't available one fifth of those responding said would go back to their GP but nearly as many were at a loss as to what to do.

The ethnic mix of service users is similar to that of the general population in North East London although fewer white people in Area A and Bangladeshi people in Area C responded to the survey than the general population ethnicity would predict. Ethnic minorities are more likely than the white population to consider their health complaint to be an emergency and to attend the Accident and Emergency Department rather than the Walk-in Centre,

Health consumers appear to be self-selecting appropriately to either WiC or A&E services in that they were more likely to have had their problem less than twenty-four hours in A&E, and from between one and seven days at the WiC. The top health presentations for all respondents included accidental injuries, hearing, ear nose and throat problems (HEENT), abdominal and muscular-skeletal complaints that may or may not have been identified by a health professional as an emergency.

More than 50% of health consumers attending both services were not seeing another health professional for their problem, although of those who thought their problem an emergency, 41.7% were already being treated for the problem. Over one third of respondents as a whole were already receiving treatment for the problem they were seeking help with, and approximately one third of respondents came with a problem less than twenty-four hours old, while nearly a further third had had their problem for up to a week.

When asked what professional they expected to see in either services, over half of respondents expected to see a doctor, one quarter expected to see a nurse and only one percent expected to see a pharmacist. Interestingly more respondents expected a prescription

from a visit to a WiC whereas, in the A&E Department a third of respondents sought health advice or reassurance.

The study identified little level of agreement between health professionals when streaming agreeing with an earlier pilot study completed in one of the three Accident and Emergency departments (Bickerton et al, 2005). A general practitioner, nurse practitioner and pharmacist, with data collected during the survey, and prospectively streamed health users to Accident and Emergency Departments, General Practice, Pharmacies, Walk-in Centres, other NHS or non NHS services. There was agreement in 30.5% of cases, with 59.2% agreement by two assessors out of three and in 10.3% there was total disagreement.

There are interesting differences between the results of the three assessors but also similarities. All three identified the majority of the patients as suitable for a WiC, with the A&E Department as the next most frequent; but they provided no agreement on individual cases. The best agreement was for "other NHS" which included streaming to NHS service such as dental, mental health and physiotherapy and there tended to be consensus with streaming to the A&E perhaps as the complaints required specific treatments such as a blood transfusion, to see gynaecologist/obstetrician or the surgeons.

A focus group including academics, clinicians and managers discussed the findings and the various professional choices suggesting that genuine agreement or differences in professional opinion about patient streaming often depends on a structural understanding of local services and personal clinical experience of these services as much as professional competency in general.

This problem was recognized in the national evaluation of WiCs (Salisbury et al, 2004) which highlighted the importance of developing a coherent vision of what each service (WiC, GPs, pharmacists and A&Es) offer and how they fit together.

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Appendix 1 - Patient Questionnaire

Walk In Centre / A&E Patient Survey

About You (the patient):

Date of Birth ……

Sex (please circle): Male Female

Postcode ……..

Ethnicity (please tick):
White
Mixed
Asian: Indian Asian; Pakistani Asian; Bangladeshi Asian; Other Asian;
Black African Black Caribbean Black Other
Chinese
Other Ethnic Group

About Your Visit to the Walk-In Centre / A&E:

1) What health problem has led to you attending here today?

2a. Do you consider your problem an emergency? (please tick) Yes No

2b. Why?

3) How long have you had this problem? (please tick)

Under 24 Hours
Under 7 days
More than 7 days
More than one month
More than 6 months

4) Are you registered with a GP? (please tick) Yes No
*If "**YES**", go to 4a. If "**NO**", go to 5a.*

4a. Where is your GP located? (please tick)

Local; London; Outside London

5a. If you are not registered with a GP is it because (please tick):
Can't find a GP
Haven't got time
Not relevant
Do not know how
Visitor from abroad
Removed from GP list
Other *(please state):*

5b. Are you being treated by a health care professional, e.g. doctor/nurse/pharmacist/ physiotherapist etc) for this complaint? (please tick) Yes No
*If "**NO**", go to question 6.*

5c. Have you seen your health care professional regarding this problem (please tick):

In the last 6 months

Last month

Last week

In the last 24 hours

5d. What advice / treatment have you been give about your problem by your health care professional?

6) Have you come here today because? (*tick as many as apply)*:

Unable to get emergency GP appointment

Unable to get convenient appointment

Live in local area

Work in local area

Hope to be seen more quickly

Been before and found it helpful

NHS publicity

NHS Direct

Did not know where else to go

Recommended by family / friend

Visiting from outside London

Directed by GP practice

Passing by

Other (Please state)

7) Who do you expect to treat you today (please tick)?

Pharmacist

Nurse

Other

Doctor

Don't know

(please state)

8a. What is your expected outcome (please tick)?

A medication prescription

See a specialist

Access hospital services

Get a second opinion

Get health advice

Reassurance / Advice

8b. Why did you choose the A&E / Walk-In Centre?

8c. If the A&E / Walk-In Centre was not available today, where would you have gone / what would you have done?

Thank you very much for your time in completing this survey. Please return your questionnaire in the box provided

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Appendix 2 - Patient Presenting Complaint Categories

1. **HEENT**:
   HEADACHE-EARS-EYES-THROAT-COLD-FLU
2. **RESPIRATORY**:
   BREATHING PROBLEMS-COUGH-ASTHMA
3. **HEART**:
   BLOOD PRESSURE-CIRCULATORY-CHEST PAIN-DVT
4. **INFECTIOUS DISEASES**:
   MUMPS-MEASLES-CHICKENPOX ETC-VIRUS
5. **CONTRACEPTION**
6. **ALLERGIC REACTIONS**
7. **ABDOMEN**:
   STOMACH PAIN-DYSURIA-LIVER-FIBROIDS-NAUSEA-DIARRHOEA-FOOD POISONING
8. **MUSCULAR SKELETAL**:
   PHYSIO-STIFFNESS-LIMBS & LIMB SWELLING-PAIN
9. **SKIN**:
   LUMPS-BITES
10. *DRESSING-ROS-***WOUND CARE**
11. **PREGNANCY:**
    VAGINAL BLEEDING-VAGINAL BLEEDING-GYNAE
12. **MENTAL HEALTH:**
    ALCOHOL ABUSE
13. **ACCIDENTS/INJURIES&FRACTURES**:
    CUTS-BRUISES-VIOLENCE-WOUNDS-SWELLING-MINOR SURGERY-INFECTION
14. **FEVER**
15. **BACK PAIN**
16. **ENDOCRINE**:
    THYROID
17. **DM**:
    KETOACIDOSIS
18. **OTHER PAIN**
19. **INFO:**
    TRANSLATION
20. **WEAK**:
    FAINT-DIZZY-NOT WELL-COLLAPSED-NUMB
21. **OTHER**:
    NONE-PREFER NOT TO STATE
22. **BLOOD TESTS**
23. **ACCOMPANYING**:
    RELATIVE/FRIEND/PARTNER, ETC

Appendix 3
Directions for Clinicians Streaming Patients for the A&E Study

Patients are streamed to the GP practice if the primary care problem is not urgent in the practitioner's opinion and would be better attended to by their GP

Patients are streamed to the WiC if they present with minor ailments and minor injuries. The WiC has the facility to order and read x-rays as well as electrocardiograms

Patients are streamed to Accident and Emergency if their condition requires emergency treatment that would not be appropriate for the WiC or a GP practice.

Appendix 4 - Cases for Focus Group Discussions

Total Disagreement

Res. ID	D o B	Age	M / F	Presenting Complaint	Past Medical History	Medication	History of Com
77		28	M	Headache and Nausea	None	None	1/12 headac cough, phle sudden ons migraine, w
113		27	M	Lump Leg	None	Neurofen, Cocodamol, Penicillin, Flucloxacillin	2-3/7 large abscess L l proximal tul
186		41	M	Substance into Eye	None	Chromglycute Eye Drops	Burning sen sprayed gra chlormic
343	05 Aug 1968		F	Foot Pain	Nil	Nil	Noticed left this week. on dorsal m No trauma
597		42	F	Vaginal Bleeding	None	None	Has been b the past 3 d been very h flooding
5	1	4	5	5	5	5	

Mixed Agreement

Res. ID	D o B	Age	M / F	Presenting Complaint	Past Medical History	Medication	History of Pr Compla
268	08 April 1985		F	Headache	Migraine	None	Headache, blu vision, neck st
285	09 Jan 1967		F	Neck Pain	None	None	Neck pain tem
303	15 July 1972		M	Unwell	BP	None	Dizzy, vomitin headache, nec blurred vision
473		33	M	Cough	None	None	Cough since y could not get appointment w
585		41	F	Pain in Leg	None	None	Pain when wa and down stai

5	3	2	5	5	5	5	past week; no pain in left leg time

Total Agreement

Res. ID	D o B	Age	M / F	Presenting Complaint	Past Medical History	Medication	History o Cor
195		66	M	Abdo Pain	None	Codeine, Gaviscon, Diabetic, Choltab, Amoxicillin	Upper abdo p dib
277	01 May 1973		F	Bite on Tongue	None	None	Bit tongue wh swallowed m
279	16 Jan 1977		M	Assault	None	None	Assaulted blu pain, vomiting
338	28 Aug 1951		M	Shoulder Injury	None	Neurofen off and on	Was at footba ago; he was p onto left shou continued pai
376	13 May 1961		F	Dental Pain			Dental pain fo extracted toot pain is not im pain killers wi advised to go review and m seek medical symptoms wo
5	4	1	5	5	5	5	

Appendix 5 – contribution of authors

Susan Procter
Principal investigator

Jane Bickerton
Principal investigator
Teresa Allan
Teresa Allan's involvement was in a) the design and powering of the study for funding, b) randomisation of the records for inclusion in analysis during the study plus general advice c) the statistical analysis of all the data, d) writing the results section of the report, e) correcting, modifying and advising on other aspects of the report.

Helen Davies

Stephen Abbott

Daniel Apau
Daniel was involved in the project from when a meeting was conducted by the principal investigators for submission of proposal to NELCRAD for approval. He played an active role in developing questionnaires for the project based on his vast experience as Clinical Lead for Newham walk in Centre. For phase 2 of the project he worked tireless with the Ambi Nijjar and Jacqueline Davies collecting data from patients. He helped in signposting and coordinating collection of survey questionnaire when project assistants were between different sites. Daniel Apau coordinated collection of patient data during the period, extracting data onto excel for randomisation by principal investigators. He was involved in series of meetings during phase 2 with Jane Bickerton and other WiC and Emergency Department colleagues in looking at randomised patients' notes. The outcome of these meeting gave the researchers what information they should use for streaming.

Vinod Dewan

Andrew Frazer
Andrew was involved in the initial research design considering appropriate questions for the questionnaire. During the data collection phase Andrew assisted with the collection, storage and subsequent randomisation of notes at the Newham A&E site. Andrew also participated in the focus group discussion which examined the appropriateness of patient's and professional's decisions relating to the "correct" patient placement.

Antonia Lynch
Antonia facilitated data collection at Barts and The London NHS Trust Emergency Department. She was a member of the team which developed the survey tools for the study and was involved in the evaluation and peer assessment process in stage two.

Gary Wych
Gary's involvement was at the design stage of the research. He met with Jane, Sue, Daniel and Helen. He was primarily involved in questionnaire design and wording of questions, as well as the design of the priject in general. His research background has been in social sciences.

Ambi Nijjar
Ambi was first involved in working on the amendments for the ethics form. Across the research sites she gave a lot of energy to collecting data from WiCs and A&E departments as well as training and supporting health care assistants to collect data for stage 1. She was involved in categorisign the symptoms for the data entry and input all the data and prepared it for analayis. Her contract expired around the time of phase 2.

Jacqueline Davies
Jacqueline was involved in the project from when approval was given to the principle investigators to undertake the project. For phase 1 she participated in meetings to set up data collection and negotiating site ethics, and with Ambi Nijjar trained health care assistants who were involved in data collection at one of the sites. Drawing on her considerable experience of surveys, she made some late amendments to the questionnaire and piloted the final version at one of the sites. She played a major role in data collection in phase 1, supporting patients to complete questionnaires. J Davies participated in meetings throughout phase one and during the early stages of phase two. She was involved in organizing the randomization for phase two and drawing the notes for use in phase two. She participated in the meeting to set up and discuss the outcomes of phase two.