BMJ Open

Access to medicines by child refugees in the East Midlands region of England – a cross-sectional study

Journal:	*BMJ Open*
Manuscript ID:	bmjopen-2014-006421
Article Type:	Research
Date Submitted by the Author:	21-Aug-2014
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Primary Subject Heading:	Paediatrics
Secondary Subject Heading:	Pharmacology and therapeutics, Health services research, Health policy, Global health
Keywords:	Health policy < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Rationing < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, PRIMARY CARE

Access to medicines by child refugees in the East Midlands region of England – a cross-sectional study

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Abstract

Objectives: To explore access to health care and drug therapy by refugee children in the East Midlands region of England.

Design: Interviews with refugees with children and a control group of British parents with children.

Setting: East Midlands region of England

Participants: 50 refugees with children and a control group of 50 parents with children.

Main outcome measures: Number of medicines used by children in the last month and the last six months. Health of parents and children. Registration with a GP.

Results: Refugee parents were more likely to have ill health than control parents (18v5, p=0.002). All families in both groups were registered with a GP. There was no difference in the number of children in the two groups experiencing illnesses .In the last month,30 refugee children received 60 medicines and 31 control children 63 medicines. In the last 6 months, 48 refugee children received 108 medicines and 43 control children 96 medicines. There was no difference between the two groups of children in relation to the likelihood of receiving any medicines in either the last month (P=0.839) or the last 6 months (P=0.081). Children in the refugee group were more likely to receive prescribed medicines for both the last month (p=0.008) and the last six months (p<0.001). They were also less likely to receive OTC medicines in the last 6 months (P=0.009).

Conclusions: Refugee children in the East Midlands have access to health care, medicines and a family doctor. They are more likely to receive prescribed medicines and less likely to receive OTC medicines.

Keywords: access, medicines, refugees, OTC medicines

Article Summary:

Article Focus

- Adult refugees are likely to experience problems in accessing healthcare in the UK
- Refugee children are a vulnerable group of children who may have difficulties experiencing healthcare
- There may be a link between access to healthcare and the number of medicines received by children

Key Messages

- Refugee children in the East Midlands of England were immunised and registered with a GP
- Refugee children receive the same number of overall medicines as control children
- Refugee children were less likely to receive over the counter medicines and more likely to receive prescribed medicines

Strengths and limitations of this study

- This study shows that it is possible to use the number of medicines used by children as a marker of access to healthcare
- The refugee families included in the study had all made contact with a charity dealing with refugees and may therefore experience better healthcare than others

Introduction

Children have the right to access health care and receive medicines that are scientifically evaluated for both efficacy and safety. Research has mainly focused on clinical trials that have evaluated efficacy. Access is an area that has been inadequately explored [1]. Problems with acccess to health care and medicines are well recognised in low and lower middle income countries. More recent research in North America has revealed that in both the United States and Canada, children of different ethnic groups or without insurance may be less likely to receive medicines [2-5].

Refugee children are a highly vulnerable group of children who are less likely to receive full access to medicines and health care [6]. Adult refugees are likely to experience significant problems in accessing health care and medical treatment [6-8]. There have been relatively few studies looking at access to health care for refugee children in the UK and to date there have been no studies in the UK on whether these children receive satisfactory drug therapy. We have used the term 'refugees' to include both those who have been awarded refugee status and those seeking asylum. The aim was to explore access to health care and drug therapy in this vulnerable group of children.

Methods

Ethical approval was obtained from the University of Nottingham Medical School Research Ethics Committee (Reference G/6/2010). Initial contact with both asylum seekers and refugees was made by Refugee Action (Nottingham branch). Parents, who Refugee Action staff identified as possibly being interested in participating in the research, were approached by the research investigators (SA and JC). Parents who then agreed to take part in the study were interviewed within a private room in the offices provided by Refugee Action in Nottingham. If the participants did not speak/understand English/Arabic, then an intepreting service was used. Additional interviews were performed at a refugee drop in centre and a Muslim community centre in Derby. The interview involved collecting the following data, using a questionnaire (see supplementary Table 1).

a) demographic data regarding age and number of children
b) data regarding health of the family, children, registration with the GP and immunisation status of the children
c) whether any of the children had been ill in the last month and if they had received any medicines, if so, from whom
d) similar questions regarding illness and number of medicines for the last six months

The interviews were perfomed between November 2010 and November 2011.

A control group of parents were obtained in a local shopping centre. Random parents with children were approached by the investigators and if consent was given, the interview was performed within

the shopping centre. Interviews with the control group of parents were performed between November 2011 and January 2012.

Statistical analysis was performed by using the Mann Whitney test for demographic data. The Chi-Squared test was used to compare the number of children with illnesses, number of illnesses, number of medicines (both prescribed and OTC). It was not possible to perform a power calculation to determine the sample size as there was insufficient information available regarding the number of medicines used by children in the UK. It was therefore decided to aim for 50 parents in each group. This was a pragmatic decision based on discussions with Refugee Action. The research was performed as a pilot study in order to test the feasibility of parents recalling such information and in order to obtain pharmacoepidemiological data that would be useful for power calculations for subsequent national studies.

Results

Sixty six parents of children who were refugees/asylum seekers were invited to participate. Sixteen declined (reasons not given for declining), i.e. 50 agreed to participate. Thirty eight of the 50 parents who agreed to participate were male. Most refugees were from Iraq, Pakistan, Afghanistan and Nigeria. The median age of the parents was 36 years (range 24-58 years) and all were born outside the UK. They had lived in the UK for a median of 6.25 years. Eighteen had been awarded refugee status. One parent had been refused refugee status and was lodging an appeal. The remaining 31 were seeking asylum but their cases had not been heard as yet. Eighteen parents reported that they had a chronic illness (four chronic back pain, four depression, two diabetes, two disabilities and six other illnesses). Eighteen parents were employed, five did not state their occupation and 27 were unemployed (Table 1).

The control group consisted of 50 parents of whom 44 were female. Twenty one parents declined to participate in the study. Their ages ranged from 19 to 46 years with a median age of 34.5 years. Most of the parents were fit and well but five reported health problems (three asthma and two depression/stress). Twenty six of the control parents were employed. As expected, the control group of parents had lived in the current locality for a longer period (17.5 vs 4.75 median years). Refugee parents were more likely to have health problems.

Access to health care and medicines

All families were registered with a GP. There was no significant difference in the number of days since the last visit to the GP (14 vs 15 days, refugees vs control). All but one of the refugee parents and all but five of the control group families had visited the GP in the past six months.

There was a significant difference (p=0.008) in that nine of the refugee parents stated that they had experienced difficulties visiting the GP in relation to affording the travel costs and language problems. None of the control group parents stated they had any difficulties.

Children's health

There were 117 children in the refugee group and 99 in the control group. The median number of children per family was two in both groups (p=0.22). The median ages of the children were five and four years respectively (refugees vs control). The interquartile ranges for ages of the children were 2.25-8 and 1.9-8 years respectively in the two groups and there was no significant difference in the ages (p=0.13). All but one child in the refugee group were immunised. Four children in the refugee group had chronic medical problems (congenital heart disease, asthma, cancer and poor growth). Seven children in the control group had chronic medical problems (asthma (4), epilepsy, ADHD and arthritis).

There were 29 refugee families and 30 control families with an ill child in the last month. In the last month 30 refugee children received 60 medicines and 31 control children received 63 medicines (Table 2). The majority of the medicines for refugee children were prescribed (41 out of 60). In contrast, the majority of medicines for control children were OTC medicines (37 out of 63).

In the last 6 months, all 50 refugee families and 45 control families had an ill child. In the last 6 months, 48 refugee children received 108 medicines and 43 control children received 96 medicines (Table 3). The majority of the medicines for refugee children were prescribed (83 out of 108). In contrast, the majority of the medicines for control children were OTC Medicines (52 out of 96).

There was no difference between the two groups of children in relation to the likelihood of receiving any medicines in either the last month (P=0.839) or the last 6 months (P=0.081). Children in the refugee group were more likely to receive prescribed medicines for both the last month (p=0.008) and the last six months (p<0.001). They were also less likely to receive OTC medicines in the last 6 months (P=0.009. Analgesics/anti-pyretics were the most frequently used medicines in both the last month and the last six months (Table 2).

Discussion

Child refugees were similar to the control group of children in relation to the presence of chronic medical problems and immunisation status. The main aim of this study was to compare the number of medicines used by refugee children in comparison with control children. It was reassuring to see that the total number of medicines used by both groups of children in both the past month and the past six months was similar. Alongside the fact that all families were registered with a GP suggests that refugee parents are managing to access health care and ensure that their children receive adequate treatment. Refugee children were, however, less likely to receive over the counter (OTC) medicines and more likely to receive prescribed medicines than control children.

A study in Dutch adolescents demonstrated that a higher socioeconomic status was associated with an increase in OTC drug use [9]. Similar findings were reported in German children and adolescents [10]. A study in the UK identified that the cost of OTCs affected only the most deprived sections of the population [11]. Refugees face considerable financial difficulties in that asylum seekers are not allowed to work and receive significantly less financial assistance than others on welfare benefits [12]. Analgesics/antipyretics are the most frequently purchased OTC medicines by parents for children in the UK [11]. The two most common reasons for buying OTC medicines by British parents included; 1) not wishing to bother a GP for minor illness and 2) to have a medicine in case of future need [11]. It is likely that the lower OTC use in refugee children is related to the financial cost of OTC medicines.

Adult refugees were more likely to have health problems than the control parents in this study. This is in keeping with previous studies as refugees often come from countries affected by armed conflict and are likely to have experienced bereavement, displacement or torture [12]. It is important to recognise that there are many differences in refugees worldwide and that the health problems of refugees from the Middle East in the UK are likely to be different to those of South-East Asian refugees in Canada [13].

There have been very few studies looking at access to health care by refugee children [14, 15]. Additionally, there have been no previous studies specifically looking at the pharmacoepidemiology of medicines received by refugee children. Our small study shows that it is possible to use both the number of medicines used by children over the last month or the last six months as a marker of access to health care. It is important to recognise the limitations of our study. Firstly, most of the refugees interviewed had been in contact with Refugee Action. These were refugees who had made contact with a charity and were therefore fully informed of their rights, especially with regards to health care. Unfortunately, due to government cutbacks, the Nottingham office of Refugee Action has now closed down and the nearest Refugee Action office is in Leicester, which is 40 km away. Although

From April 2014 Refugee Action no longer has a grant agreement with the Home Office to provide advice and support (formally One Stop Shop) to individuals and families going through the asylum system. This work is now provided through another agency; Migrant Help. Migrant Help services are split into Asylum Support Applications UK and Asylum Advice UK and are provided across the UK mainly through a national telephone service with some limited outreach (for the East Midlands in Derby, Nottingham and Leicester one day per week respectively). Refugee Action continue to provide a national Assisted Voluntary Returns project; Choices. A project for vulnerable destitute women in Leicester; Fresh Start and a volunteer run project for vulnerable people; Prevention of Asylum Homelessness which helps people to appeal refusals of support under s4 of the Immigration and Asylum Act 1999, It is also likely that if we had looked at a different group of children, for example refugee children presenting to the Emergency Department, our findings may have been different. A small study in Ireland of 25 refugees found that 20% of refugees were not registered with a GP [15]. Additionally, we did not look at the access to health care and medicines of refugee children held in immigration detention centres. Others have highlighted that these children experience significant health problems [16]. It was not possible to match controls and refugee parents by socio economic status. This is impossible in the UK as asylum seekers receive less financial support than others on welfare benefit [12]. It is important to recognise that the number of people seeking refugee status in the UK is actually quite low (less than 20,000 in 2011) [17]. Unfortunately, the main political parties and a large section of the media wishes to restrict access to health care for both refugees and economic migrants [18]. It is likely, therefore, that in the future refugee children in the UK will experience more difficulties in accessing both health care and medicines.

Contributors

IC conceived the original idea and study design. This was modified following discussion with SA,CM,HS,RH and KG. SA and JC performed the interviews and collected all the data. KG helped facilitate the collection of the data. Data was analysed by IC,RH,SA,JC,HS and KG. All authors contributed to the writing of the paper and approved the final manuscript.

Competing interests

None

Funding

This research received no specific grant from any funding agency in the public, commercial or not for profit sectors.

Data sharing

No additional data available

Table 1 Sociodemographics of parents

	Refugee	Control	p-value
Median age (y)	36	34.5	0.12
Male	38	6	<0.001
Ill health	18	5	0.002
Employed	18	26	0.24
No of years in current accommodation	2.3	7.4	<0.001
No of years in current locality	4.8	17.5	< 0.001

Table 2 Medicines used in the last month

Medicines	**Refugee**			**Control**		
	Prescribed	OTC	**Total**	Prescribed	OTC	**Total**
Paracetamol	20	2	**22**	10	14	**24**
Ibuprofen	2	0	**2**	2	6	**8**
Antibiotics	7	0	**7**	6	0	**6**
Inhalers	3	0	**3**	5	0	**5**
Cough supressants	1	2	**3**	3	1	**4**
Topical	0	0	**0**	0	1	**1**
Vitamins	1	2	**3**	0	10	**10**
Teething medicines	0	0	**0**	0	3	**3**
Lactulose	2	0	**2**	0	0	**0**
Honey	0	8	**8**	0	0	**0**
Herbal	0	4	**4**	0	1	**1**
Others	3	1	**4**	0	1	**1**
Unknown	2	0	**2**	0	0	**0**
Total	**41**	**19**	**60**	**26**	**37**	**63**

Table 3 Medicines used in the last 6 months

Medicines	**Refugee**			**Control**		
	Prescribed	OTC	**Total**	Prescribed	OTC	**Total**
Paracetamol	39	4	**43**	19	23	**42**
Ibuprofen	2	0	**2**	2	10	**12**
Antibiotics	10	0	**10**	10	0	**10**
Inhalers	4	0	**4**	5	0	**5**
Cough supressants	6	2	**8**	4	2	**6**
Topical	8	0	**8**	2	1	**3**
Vitamins	2	2	**4**	0	10	**10**
Teething medicines	0	1	**1**	0	4	**4**
Lactulose	2	0	**2**	0	0	**0**
Oral Rehydration	1	0	**1**	2	1	**3**
Honey	0	8	**8**	0	0	**0**
Herbal	0	5	**5**	0	1	**1**
Others	2	3	**5**	0	0	**0**
Unknown	4	0	**4**	0	0	**0**
Iron	3	0	**3**	0	0	**0**
Total	**83**	**25**	**108**	**44**	**52**	**96**

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Children's Access to Medicines in the East Midlands
Parental interview

A. BACKGROUND

Age (years): …… **Male / Female**

No. of adults living in the home: ……

No. of children: ……

Age of children: ……

Occupation: ……

Country of birth: ……

If applicable

Country left: ……

Reasons for leaving: ……

Date of entry to the UK: ……

Have you had a decision on your asylum claim: ……

Duration of time in present accommodation: ……

Duration of time in current locality: ……

Contacts in current locality: ……

Links with community:
……

B. HEALTH

Are you registered with a GP?

Yes ☐ No ☐

If no, why is that?
……

Date of last visit to GP: ……

Are you well?

Yes ☐ No ☐

Are you on any medicines?

Yes ☐ No ☐

If so, which medicine and from whom do you obtain the medicine?

……

……

……

……

Are your children normally fit and well?

Yes ☐ No ☐

If not, please give details.

……

……...

What do you normally do when your child is unwell?

……

……

……...

Have your children received their immunisations?

Yes ☐ No ☐

If so, which?

……

……...

C. LAST MONTH

Have any of the children been ill in the last month?

Yes ☐ No ☐

If so, have they seen a health professional? If so, state which type?

……

……

……

……

Have any of your children received any medicines in the last month?

Yes ☐ No ☐

If so, which medicines?

……

……

Were the medicines prescribed and, if so, by whom?

……

Where did you get the medicines from?

……

Did you have to pay for the medicines?

Yes ☐ No ☐

……

Were there any difficulties in obtaining the medicines? (Include travel costs)

Yes ☐ No ☐

……

……

Have any of your children received any medicines (including herbal or homeopathic remedies) in the last month that you have bought from a chemist or obtained from any other individual?

Yes ☐ No ☐

If so, which medicines and from whom?

……

……

D. LAST SIX MONTHS

Have any of the children been ill in the last six months?

Yes ☐ No ☐

If so, have they seen a health professional? If so, state which type?

……

……

……

……

Have any of your children received any medicines in the last six months?

Yes ☐ No ☐

If so, which medicines?

……

……

Were the medicines prescribed and, if so, by whom?

……

Where did you get the medicines from?

……

Did you have to pay for the medicines?

Yes ☐ No ☐

……...

Were there any difficulties in obtaining the medicines? (Include travel costs)

Yes ☐ No ☐

……...

……...

Have any of your children received any medicines (including herbal or homeopathic remedies) in the last six months that you have bought from a chemist or obtained from any other individual?

Yes ☐ No ☐

If so, which medicines and from whom?

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BMJ Open

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Date Submitted by the Author:	16-Oct-2014
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Abstract

Objectives: To explore access to primary health care and drug therapy by refugee children in the East Midlands region of England.

Design: Interviews with refugees with children and a control group of British parents with children.

Setting: East Midlands region of England

Participants: 50 refugees with children and a control group of 50 parents with children.

Main outcome measures: Number of medicines used by children in the last month and the last six months. Health of parents and children. Registration with a GP.

Results: Refugee parents were more likely to have ill health than control parents (18v5, p=0.002). All families in both groups were registered with a GP. There was no difference in the number of children in the two groups experiencing illnesses .In the last month,30 refugee children received 60 medicines and 31 control children 63 medicines. In the last 6 months, 48 refugee children received 108 medicines and 43 control children 96 medicines. There was no difference between the two groups of children in relation to the likelihood of receiving any medicines in either the last month (P=0.839) or the last 6 months (P=0.81). Children in the refugee group were more likely to receive prescribed medicines for both the last month (p=0.008) and the last six months (p<0.001). They were also less likely to receive OTC medicines in the last 6 months (P=0.009).

Conclusions: The refugee children in this study in the East Midlands had access to primary health care, medicines and a family doctor. They were more likely to receive prescribed medicines and less likely to receive OTC medicines, especially paracetamol.

Keywords: access, medicines, refugees, OTC medicines

Article Summary:

Article Focus

- Adult refugees are likely to experience problems in accessing healthcare in the UK
- Refugee children are a vulnerable group of children who may have difficulties experiencing healthcare
- There may be a link between access to healthcare and the number of medicines received by children

Key Messages

- The group of refugee children in this study in the East Midlands of England were immunised and registered with a GP
- The refugee children received the same number of overall medicines as control children
- The refugee children were less likely to receive over the counter medicines and more likely to receive prescribed medicines (especially paracetamol)

Strengths and limitations of this study

- This study shows that it is possible to use the number of medicines used by children as a marker of access to primary healthcare
- The refugee families included in the study had all made contact with a charity dealing with refugees and may therefore experience better healthcare than others

Introduction

Children have the right to access health care and receive medicines that are scientifically evaluated for both efficacy and safety. Research has mainly focused on clinical trials that have evaluated efficacy. Access is an area that has been inadequately explored [1]. Problems with acccess to health care and medicines are well recognised in low and lower middle income countries. More recent research in North America has revealed that in both the United States and Canada, children of different ethnic groups or without insurance may be less likely to receive medicines [2-5].

Refugee children are a highly vulnerable group of children who are less likely to receive full access to medicines and health care [6]. Adult refugees are likely to experience significant problems in accessing health care and medical treatment [6-8]. There have been relatively few studies looking at access to health care for refugee children in the UK and to date there have been no studies in the UK on whether these children receive satisfactory drug therapy. We have used the term 'refugees' to include both those who have been awarded refugee status and those seeking asylum. The aim was to explore access to health care and drug therapy in this vulnerable group of children.

Methods

Ethical approval was obtained from the University of Nottingham Medical School Research Ethics Committee (Reference G/6/2010). Initial contact with both asylum seekers and refugees was made by Refugee Action (Nottingham branch). Parents, who Refugee Action staff identified as possibly being interested in participating in the research, were approached by the research investigators (SA and JC). Parents who then agreed to take part in the study were interviewed within a private room in the offices provided by Refugee Action in Nottingham. Written informed consent was obtained. If the participants did not speak/understand English/Arabic, then an intepreting service was used. Additional interviews were performed at a refugee drop in centre and a Muslim community centre in Derby. The interview involved collecting the following data, using a questionnaire (see Appendix 1).

a) demographic data regarding age and number of children
b) data regarding health of the family, children, registration with the GP and immunisation status of the children
c) whether any of the children had been ill in the last month and if they had received any medicines, if so, from whom
d) similar questions regarding illness and number of medicines for the last six months

The interviews were perfomed between November 2010 and November 2011.

A control group of parents were obtained in a local shopping centre. The investigators wore University t-shirts and ID badges and were provided with a quiet area with seating within the shopping centre.

Random adults were approached by the investigators and asked two questions :(1) Did they have children? (2) Were they British? If they answered yes to both questions and written informed consent was given, the interview was performed within the quiet seated area. Interviews with the control group of parents were performed between November 2011 and January 2012. Interviews took 10-20 minutes and the same questions were asked as for the refugee group.

Statistical analysis was performed by using the Mann Whitney test for demographic data. The Chi-Squared test was used to compare the proportion of children with illness, and the proportion of children receiving medicines (both prescribed and OTC). It was not possible to perform a power calculation to determine the sample size as there was insufficient information available regarding the number of medicines used by children in the UK. It was therefore decided to aim for 50 parents in each group. This was a pragmatic decision based on discussions with Refugee Action. The research was performed as a pilot study in order to test the feasibility of parents recalling such information and in order to obtain pharmacoepidemiological data that would be useful for power calculations for subsequent national studies.

Results

Sixty six parents of children who were refugees/asylum seekers were invited to participate. Sixteen declined (reasons not given for declining), i.e. 50 agreed to participate. Thirty eight of the 50 parents who agreed to participate were male. Most refugees were from Iraq(20), Pakistan(6), Afghanistan(4) and Nigeria(4).There were one to two refugees from each of the following countries – Ethiopia,Somalia,Zimbabwe(all 2); Gambia,Iran,Tunisia, East Africa,Kenya, Sudan, Zambia, Vietnam (all one). Two refugees did not state their country of origin. The median age of the parents was 36 years (range 24-58 years) and all were born outside the UK. They had lived in the UK for a median of 6.25 years. Eighteen had been awarded refugee status. One parent had been refused refugee status and was lodging an appeal. The remaining 31 were seeking asylum but their cases had not been heard as yet. Eighteen parents reported that they had a chronic illness (four chronic back pain, four depression, two diabetes, two disabilities and six other illnesses). Eighteen parents were employed, five did not state their occupation and 27 were unemployed (Table 1).

The control group consisted of 50 parents of whom 44 were female. Twenty one parents declined to participate in the study. Their ages ranged from 19 to 46 years with a median age of 34.5 years. Most of the parents were fit and well but five reported health problems (three asthma and two depression/stress). Twenty six of the control parents were employed. As expected, the control group of parents had lived in the current locality for a longer period (17.5 vs 4.75 median years). Refugee parents were more likely to have health problems.

Access to health care and medicines

All families were registered with a GP. There was no significant difference in the number of days since the last visit to the GP (14 vs 15 days, refugees vs control). All but one of the refugee parents and all but five of the control group families had visited the GP in the past six months.

There was a significant difference (p=0.008) in that nine of the refugee parents stated that they had experienced difficulties visiting the GP in relation to affording the travel costs and language problems. None of the control group parents stated they had any difficulties.

Children's health

There were 117 children in the refugee group and 99 in the control group. The median number of children per family was two in both groups (p=0.22). The median ages of the children were five and four years respectively (refugees vs control). The interquartile ranges for ages of the children were 2.25-8 and 1.9-8 years respectively in the two groups and there was no significant difference in the ages (p=0.13). All but one child in the refugee group were immunised. Four children in the refugee group had chronic medical problems (congenital heart disease, asthma, cancer and poor growth). Seven children in the control group had chronic medical problems (asthma (4), epilepsy, ADHD and arthritis).

There were 29 refugee families and 30 control families with an ill child in the last month. In the last month 30 refugee children received 60 medicines and 31 control children received 63 medicines (Table 2). Paracetamol was the most frequently used medicine in both groups. The majority of the medicines for refugee children were prescribed (41 out of 60). In contrast, the majority of medicines for control children were OTC medicines (37 out of 63).

In the last 6 months, all 50 refugee families and 45 control families had an ill child. In the last 6 months, 48 refugee children received 108 medicines and 43 control children received 96 medicines (Table 3).). Paracetamol was the most frequently used medicine in both groups .The majority of the medicines for refugee children were prescribed (83 out of 108). In contrast, the majority of the medicines for control children were OTC Medicines (52 out of 96).

There was no difference between the two groups of children in relation to the likelihood of receiving any medicines in either the last month (P=0.839) or the last 6 months (P=0.81). Children in the refugee group were more likely to receive prescribed medicines for both the last month (p=0.008) and the last six months (p<0.001). They were also less likely to receive OTC medicines in the last 6 months (P=0.009. Analgesics/anti-pyretics were the most frequently used medicines in both the last month and the last six months (Table 2).

Discussion

Based on the answers given by the parents,child refugees were similar to the control group of children in relation to the presence of chronic medical problems and immunisation status. The main aim of this study was to compare the number of medicines used by refugee children in comparison with control children. It was reassuring to see that the total number of medicines used by both groups of children in both the past month and the past six months was similar. Alongside the fact that all families were registered with a GP suggests that refugee parents in this study were managing to access primary health care and ensure that their children receive adequate treatment.This is despite the difficulties in travel costs and language noted by refugee parents. Refugee children were, however, less likely to receive over the counter (OTC) medicines and more likely to receive prescribed medicines than control children.

A study in Dutch adolescents demonstrated that a higher socioeconomic status was associated with an increase in OTC drug use [9]. Similar findings were reported in German children and adolescents [10]. A study in the UK identified that the cost of OTCs affected only the most deprived sections of the population [11]. Refugees face considerable financial difficulties in that asylum seekers are not allowed to work and receive significantly less financial assistance than others on welfare benefits [12]. Analgesics/antipyretics are the most frequently purchased OTC medicines by parents for children in the UK [11]. The two most common reasons for buying OTC medicines by British parents included; 1) not wishing to bother a GP for minor illness and 2) to have a medicine in case of future need [11]. It is likely that the lower OTC use in refugee children is related to the financial cost of OTC medicines.

Adult refugees were more likely to have health problems than the control parents in this study. This is in keeping with previous studies as refugees often come from countries affected by armed conflict and are likely to have experienced bereavement, displacement or torture [12]. It is important to recognise that there are many differences in refugees worldwide and that the health problems of refugees from the Middle East in the UK are likely to be different to those of South-East Asian refugees in Canada [13].

There have been very few studies looking at access to health care by refugee children [14, 15]. Additionally, there have been no previous studies specifically looking at the pharmacoepidemiology of medicines received by refugee children. Our small study shows that it is possible to use both the number of medicines used by children over the last month or the last six months as a marker of access to health care. It is important to recognise the limitations of our study. Firstly, most of the refugees interviewed had been in contact with Refugee Action. These were refugees who had made contact with a charity and were therefore fully informed of their rights, especially with regards to health care. Unfortunately, due to government cutbacks, the Nottingham office of Refugee Action has now closed down and the nearest Refugee Action office is in Leicester, which is 40 km away. From April 2014 Refugee Action no longer has a grant agreement with the Home Office to provide advice and support (formally One Stop Shop) to individuals and families going through the asylum system. This work is now provided through another agency; Migrant Help. Migrant Help services are split into Asylum Support Applications UK and Asylum Advice UK and are provided across the UK mainly through a national telephone service with some limited outreach (for the East Midlands in Derby, Nottingham and Leicester one day per week respectively). Refugee Action continue to provide a national Assisted Voluntary Returns project; Choices. A project for vulnerable destitute women in Leicester; Fresh Start and a volunteer run project for vulnerable people; Prevention of Asylum Homelessness which helps people to appeal refusals of support under s4 of the Immigration and Asylum Act 1999,

It is also likely that if we had looked at a different group of children, for example refugee children presenting to the Emergency Department, our findings may have been different. A small study in Ireland of 25 refugees found that 20% of refugees were not registered with a GP [15]. Additionally, we did not look at the access to health care and medicines of refugee children held in immigration detention centres. Others have highlighted that these children experience significant health problems [16]. It was not possible to match controls and refugee parents by either socio economic status or gender. The former is impossible in the UK as asylum seekers receive less financial support than others on welfare benefit [12]. The latter was not possible for cultural reasons – many of the refugees were from countries where it is expected that men answer the questions for the family. It is important to recognise that the number of people seeking refugee status in the UK is actually quite low (less than 20,000 in 2011) [17]. Unfortunately, the main political parties and a large section of the media wishes to restrict access to health care for both refugees and economic migrants [18]. It is likely, therefore, that in the future refugee children in the UK will experience more difficulties in accessing both health care and medicines.

Contributors

IC conceived the original idea and study design. This was modified following discussion with SA,CM,HS,RH and KG. SA and JC performed the interviews and collected all the data. KG helped

facilitate the collection of the data. Data was analysed by IC,RH,SA,JC,HS and KG. All authors contributed to the writing of the paper and approved the final manuscript.

Competing interests

None

Funding

This research received no specific grant from any funding agency in the public, commercial or not for profit sectors.

Data sharing

No additional data available

Table 1 Sociodemographics of parents

	Refugee	Control	p-value
Median age (y)	36	34.5	0.12
Male	38	6	<0.001
Ill health	18	5	0.002
Employed	18	26	0.24
No of years in current accommodation	2.3	7.4	<0.001
No of years in current locality	4.8	17.5	< 0.001

Table 2 Medicines used in the last month

Medicines	**Refugee**			**Control**		
	Prescribed	OTC	**Total**	Prescribed	OTC	**Total**
Paracetamol	20	2	**22**	10	14	**24**
Ibuprofen	2	0	**2**	2	6	**8**
Antibiotics	7	0	**7**	6	0	**6**
Inhalers	3	0	**3**	5	0	**5**
Cough supressants	1	2	**3**	3	1	**4**
Topical	0	0	**0**	0	1	**1**
Vitamins	1	2	**3**	0	10	**10**
Teething medicines	0	0	**0**	0	3	**3**
Lactulose	2	0	**2**	0	0	**0**
Honey	0	8	**8**	0	0	**0**
Herbal	0	4	**4**	0	1	**1**
Others	3	1	**4**	0	1	**1**
Unknown	2	0	**2**	0	0	**0**
Total	**41**	**19**	**60**	**26**	**37**	**63**

Table 3 Medicines used in the last 6 months

Medicines	**Refugee**			**Control**		
	Prescribed	OTC	**Total**	Prescribed	OTC	**Total**
Paracetamol	39	4	**43**	19	23	**42**
Ibuprofen	2	0	**2**	2	10	**12**
Antibiotics	10	0	**10**	10	0	**10**
Inhalers	4	0	**4**	5	0	**5**
Cough supressants	6	2	**8**	4	2	**6**
Topical	8	0	**8**	2	1	**3**
Vitamins	2	2	**4**	0	10	**10**
Teething medicines	0	1	**1**	0	4	**4**
Lactulose	2	0	**2**	0	0	**0**
Oral Rehydration	1	0	**1**	2	1	**3**
Honey	0	8	**8**	0	0	**0**
Herbal	0	5	**5**	0	1	**1**
Others	2	3	**5**	0	0	**0**
Unknown	4	0	**4**	0	0	**0**
Iron	3	0	**3**	0	0	**0**
Total	**83**	**25**	**108**	**44**	**52**	**96**

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Access to medicines by child refugees in the East Midlands region of England – a cross-sectional study

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Abstract

Objectives: To explore access to primary health care and drug therapy by refugee children in the East Midlands region of England.

Design: Interviews with refugees with children and a control group of British parents with children.

Setting: East Midlands region of England

Participants: 50 refugees with children and a control group of 50 parents with children.

Main outcome measures: Number of medicines used by children in the last month and the last six months. Health of parents and children. Registration with a GP.

Results: Refugee parents were more likely to have ill health than control parents (18v5, p=0.002). All families in both groups were registered with a GP. There was no difference in the number of children in the two groups experiencing illnesses .In the last month,30 refugee children received 60 medicines and 31 control children 63 medicines. In the last 6 months, 48 refugee children received 108 medicines and 43 control children 96 medicines. There was no difference between the two groups of children in relation to the likelihood of receiving any medicines in either the last month (P=0.839) or the last 6 months (P=0.81). Children in the refugee group were more likely to receive prescribed medicines for both the last month (p=0.008) and the last six months (p<0.001). They were also less likely to receive OTC medicines in the last 6 months (P=0.009).

Conclusions: The refugee children in this study in the East Midlands had access to primary health care, medicines and a family doctor. They were more likely to receive prescribed medicines and less likely to receive OTC medicines, especially paracetamol.

Keywords: access, medicines, refugees, OTC medicines

Article Summary:

Article Focus

- Adult refugees are likely to experience problems in accessing healthcare in the UK
- Refugee children are a vulnerable group of children who may have difficulties experiencing healthcare
- There may be a link between access to healthcare and the number of medicines received by children

Key Messages

- The group of refugee children in this study in the East Midlands of England were immunised and registered with a GP
- The refugee children received the same number of overall medicines as control children
- The refugee children were less likely to receive over the counter medicines and more likely to receive prescribed medicines (especially paracetamol)

Strengths and limitations of this study

- This study shows that it is possible to use the number of medicines used by children as a marker of access to primary healthcare
- The refugee families included in the study had all made contact with a charity dealing with refugees and may therefore experience better healthcare than others

Introduction

Children have the right to access health care and receive medicines that are scientifically evaluated for both efficacy and safety. Research has mainly focused on clinical trials that have evaluated efficacy. Access is an area that has been inadequately explored [1]. Problems with acccess to health care and medicines are well recognised in low and lower middle income countries. More recent research in North America has revealed that in both the United States and Canada, children of different ethnic groups or without insurance may be less likely to receive medicines [2-5].

Refugee children are a highly vulnerable group of children who are less likely to receive full access to medicines and health care [6]. Adult refugees are likely to experience significant problems in accessing health care and medical treatment [6-8]. There have been relatively few studies looking at access to health care for refugee children in the UK and to date there have been no studies in the UK on whether these children receive satisfactory drug therapy. We have used the term 'refugees' to include both those who have been awarded refugee status and those seeking asylum. The aim was to explore access to health care and drug therapy in this vulnerable group of children.

Methods

Ethical approval was obtained from the University of Nottingham Medical School Research Ethics Committee (Reference G/6/2010). Initial contact with both asylum seekers and refugees was made by Refugee Action (Nottingham branch). Parents, who Refugee Action staff identified as possibly being interested in participating in the research, were approached by the research investigators (SA and JC). Parents who then agreed to take part in the study were interviewed within a private room in the offices provided by Refugee Action in Nottingham. Written informed consent was obtained. If the participants did not speak/understand English/Arabic, then an intepreting service was used. Additional interviews were performed at a refugee drop in centre and a Muslim community centre in Derby. The interview involved collecting the following data, using a questionnaire (see Appendix 1).

a) demographic data regarding age and number of children
b) data regarding health of the family, children, registration with the GP and immunisation status of the children
c) whether any of the children had been ill in the last month and if they had received any medicines, if so, from whom
d) similar questions regarding illness and number of medicines for the last six months

The interviews were perfomed between November 2010 and November 2011.

A control group of parents were obtained in a local shopping centre. The investigators wore University t-shirts and ID badges and were provided with a quiet area with seating within the shopping centre.

Random adults were approached by the investigators and asked two questions :(1) Did they have children? (2) Were they British? If they answered yes to both questions and written informed consent was given, the interview was performed within the quiet seated area. Interviews with the control group of parents were performed between November 2011 and January 2012. Interviews took 10-20 minutes and the same questions were asked as for the refugee group.

Statistical analysis was performed by using the Mann Whitney test for demographic data. The Chi-Squared test was used to compare the proportion of children with illness, and the proportion of children receiving medicines (both prescribed and OTC). It was not possible to perform a power calculation to determine the sample size as there was insufficient information available regarding the number of medicines used by children in the UK. It was therefore decided to aim for 50 parents in each group. This was a pragmatic decision based on discussions with Refugee Action. The research was performed as a pilot study in order to test the feasibility of parents recalling such information and in order to obtain pharmacoepidemiological data that would be useful for power calculations for subsequent national studies.

Results

Sixty six parents of children who were refugees/asylum seekers were invited to participate. Sixteen declined (reasons not given for declining), i.e. 50 agreed to participate. Thirty eight of the 50 parents who agreed to participate were male. Most refugees were from Iraq(20), Pakistan(6), Afghanistan(4) and Nigeria(4).There were one to two refugees from each of the following countries – Ethiopia,Somalia,Zimbabwe(all 2); Gambia,Iran,Tunisia, East Africa,Kenya, Sudan, Zambia, Vietnam (all one). Two refugees did not state their country of origin. The median age of the parents was 36 years (range 24-58 years) and all were born outside the UK. They had lived in the UK for a median of 6.25 years. Eighteen had been awarded refugee status. One parent had been refused refugee status and was lodging an appeal. The remaining 31 were seeking asylum but their cases had not been heard as yet. Eighteen parents reported that they had a chronic illness (four chronic back pain, four depression, two diabetes, two disabilities and six other illnesses). Eighteen parents were employed, five did not state their occupation and 27 were unemployed (Table 1).

The control group consisted of 50 parents of whom 44 were female. Twenty one parents declined to participate in the study. Their ages ranged from 19 to 46 years with a median age of 34.5 years. Most of the parents were fit and well but five reported health problems (three asthma and two depression/stress). Twenty six of the control parents were employed. As expected, the control group of parents had lived in the current locality for a longer period (17.5 vs 4.75 median years). Refugee parents were more likely to have health problems.

Access to health care and medicines

All families were registered with a GP. There was no significant difference in the number of days since the last visit to the GP (14 vs 15 days, refugees vs control). All but one of the refugee parents and all but five of the control group families had visited the GP in the past six months.

There was a significant difference (p=0.008) in that nine of the refugee parents stated that they had experienced difficulties visiting the GP in relation to affording the travel costs and language problems. None of the control group parents stated they had any difficulties.

Children's health

There were 117 children in the refugee group and 99 in the control group. The median number of children per family was two in both groups (p=0.22). The median ages of the children were five and four years respectively (refugees vs control). The interquartile ranges for ages of the children were 2.25-8 and 1.9-8 years respectively in the two groups and there was no significant difference in the ages (p=0.13). All but one child in the refugee group were immunised. Four children in the refugee group had chronic medical problems (congenital heart disease, asthma, cancer and poor growth). Seven children in the control group had chronic medical problems (asthma (4), epilepsy, ADHD and arthritis).

There were 29 refugee families and 30 control families with an ill child in the last month. In the last month 30 refugee children received 60 medicines and 31 control children received 63 medicines (Table 2). Paracetamol was the most frequently used medicine in both groups. The majority of the medicines for refugee children were prescribed (41 out of 60). In contrast, the majority of medicines for control children were OTC medicines (37 out of 63).

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Discussion

Based on the answers given by the parents,child refugees were similar to the control group of children in relation to the presence of chronic medical problems and immunisation status. The main aim of this study was to compare the number of medicines used by refugee children in comparison with control children. It was reassuring to see that the total number of medicines used by both groups of children in both the past month and the past six months was similar. Alongside the fact that all families were registered with a GP suggests that refugee parents in this study were managing to access primary health care and ensure that their children receive adequate treatment.This is despite the difficulties in travel costs and language noted by refugee parents. Refugee children were, however, less likely to receive over the counter (OTC) medicines and more likely to receive prescribed medicines than control children.

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It is also likely that if we had looked at a different group of children, for example refugee children presenting to the Emergency Department, our findings may have been different. A small study in Ireland of 25 refugees found that 20% of refugees were not registered with a GP [15]. Additionally, we did not look at the access to health care and medicines of refugee children held in immigration detention centres. Others have highlighted that these children experience significant health problems [16]. It was not possible to match controls and refugee parents by either socio economic status or gender. The former is impossible in the UK as asylum seekers receive less financial support than others on welfare benefit [12]. The latter was not possible for cultural reasons – many of the refugees were from countries where it is expected that men answer the questions for the family. It is important to recognise that the number of people seeking refugee status in the UK is actually quite low (less than 20,000 in 2011) [17]. Unfortunately, the main political parties and a large section of the media wishes to restrict access to health care for both refugees and economic migrants [18]. It is likely, therefore, that in the future refugee children in the UK will experience more difficulties in accessing both health care and medicines.

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Data sharing

No additional data available

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No of years in current accommodation	2.3	7.4	<0.001
No of years in current locality	4.8	17.5	< 0.001

Table 2 Medicines used in the last month

Medicines	**Refugee**			**Control**		
	Prescribed	OTC	**Total**	Prescribed	OTC	**Total**
Paracetamol	20	2	**22**	10	14	**24**
Ibuprofen	2	0	**2**	2	6	**8**
Antibiotics	7	0	**7**	6	0	**6**
Inhalers	3	0	**3**	5	0	**5**
Cough supressants	1	2	**3**	3	1	**4**
Topical	0	0	**0**	0	1	**1**
Vitamins	1	2	**3**	0	10	**10**
Teething medicines	0	0	**0**	0	3	**3**
Lactulose	2	0	**2**	0	0	**0**
Honey	0	8	**8**	0	0	**0**
Herbal	0	4	**4**	0	1	**1**
Others	3	1	**4**	0	1	**1**
Unknown	2	0	**2**	0	0	**0**
Total	**41**	**19**	**60**	**26**	**37**	**63**

Table 3 Medicines used in the last 6 months

Medicines	**Refugee**			**Control**		
	Prescribed	OTC	**Total**	Prescribed	OTC	**Total**
Paracetamol	39	4	**43**	19	23	**42**
Ibuprofen	2	0	**2**	2	10	**12**
Antibiotics	10	0	**10**	10	0	**10**
Inhalers	4	0	**4**	5	0	**5**
Cough supressants	6	2	**8**	4	2	**6**
Topical	8	0	**8**	2	1	**3**
Vitamins	2	2	**4**	0	10	**10**
Teething medicines	0	1	**1**	0	4	**4**
Lactulose	2	0	**2**	0	0	**0**
Oral Rehydration	1	0	**1**	2	1	**3**
Honey	0	8	**8**	0	0	**0**
Herbal	0	5	**5**	0	1	**1**
Others	2	3	**5**	0	0	**0**
Unknown	4	0	**4**	0	0	**0**
Iron	3	0	**3**	0	0	**0**
Total	**83**	**25**	**108**	**44**	**52**	**96**

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Children's Access to Medicines in the East Midlands
Parental interview

A. BACKGROUND

Age (years): …… **Male / Female**

No. of adults living in the home: ……

No. of children: ……..

Age of children: ……

Occupation: ……

Country of birth: ……..

If applicable

Country left: ……..

Reasons for leaving: ……..

Date of entry to the UK: ……

Have you had a decision on your asylum claim: ……

Duration of time in present accommodation: ……..

Duration of time in current locality: ……

Contacts in current locality: ……

Links with community:
……..

B. HEALTH

Are you registered with a GP?

Yes ☐ No ☐

If no, why is that?
……

Date of last visit to GP: ……..

Are you well?

Yes ☐ No ☐

Are you on any medicines?

Yes ☐ No ☐

If so, which medicine and from whom do you obtain the medicine?

……

……

……

……

Are your children normally fit and well?

Yes ☐ No ☐

If not, please give details.

……

……

What do you normally do when your child is unwell?

……

……

……

Have your children received their immunisations?

Yes ☐ No ☐

If so, which?

……

……

C. LAST MONTH

Have any of the children been ill in the last month?

Yes ☐ No ☐

If so, have they seen a health professional? If so, state which type?

……

……

……

……

Have any of your children received any medicines in the last month?

Yes ☐ No ☐

If so, which medicines?

……

……

Were the medicines prescribed and, if so, by whom?

……

Where did you get the medicines from?

……

Did you have to pay for the medicines?

Yes ☐ No ☐

……..

Were there any difficulties in obtaining the medicines? (Include travel costs)

Yes ☐ No ☐

……..

……..

Have any of your children received any medicines (including herbal or homeopathic remedies) in the last month that you have bought from a chemist or obtained from any other individual?

Yes ☐ No ☐

If so, which medicines and from whom?

……

……

D. LAST SIX MONTHS

Have any of the children been ill in the last six months?

Yes ☐ No ☐

If so, have they seen a health professional? If so, state which type?

……

……

……

……

Have any of your children received any medicines in the last six months?

Yes ☐ No ☐

If so, which medicines?

……

……

Were the medicines prescribed and, if so, by whom?

……

Where did you get the medicines from?

……

Did you have to pay for the medicines?

Yes ☐ No ☐

……..

Were there any difficulties in obtaining the medicines? (Include travel costs)

Yes ☐ No ☐

……..

……..

Have any of your children received any medicines (including herbal or homeopathic remedies) in the last six months that you have bought from a chemist or obtained from any other individual?

Yes ☐ No ☐

If so, which medicines and from whom?

……

……

BMJ Open

Access to medicines by child refugees in the East Midlands region of England – a cross-sectional study

Journal:	*BMJ Open*
Manuscript ID:	bmjopen-2014-006421.R2
Article Type:	Research
Date Submitted by the Author:	28-Nov-2014
Complete List of Authors:	Alkhatani, Saad; University of Nottingham, child Health Cherrill, Janine; University of Nottingham, child Health Millward, Claire; Derbyshire Childrens Hospital, Clinical Psychology Grayson, Keith; Refugee Action, Hilliam, Rachel; Open University, Sammons, Helen; University of Nottingham, child Health Choonara, Imti; Derbyshire Childrens Hospital, Academic Division of Child Health
Primary Subject Heading:	Paediatrics
Secondary Subject Heading:	Pharmacology and therapeutics, Health services research, Health policy, Global health
Keywords:	Health policy < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Rationing < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, PRIMARY CARE

Access to medicines by child refugees in the East Midlands region of England – a cross-sectional study

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Abstract

Objectives: To explore access to primary health care and drug therapy by refugee children in the East Midlands region of England.

Design: Interviews with refugees with children and a control group of British parents with children.

Setting: East Midlands region of England

Participants: 50 refugees with children and a control group of 50 parents with children.

Main outcome measures: Number of medicines used by children in the last month and the last six months. Health of parents and children. Registration with a GP.

Results: All families in both groups were registered with a GP. There was no difference in the number of children in the two groups experiencing illnesses .In the last month, 30 refugee children received 60 medicines and 31 control children 63 medicines. In the last 6 months, 48 refugee children received 108 medicines and 43 control children 96 medicines. There was no difference between the two groups of children in relation to the likelihood of receiving any medicines in either the last month (P=0.839) or the last 6 months (P=0.81). Children in the refugee group were more likely to receive prescribed medicines for both the last month (p=0.008) and the last six months (p<0.001). They were also less likely to receive OTC medicines in the last 6 months (P=0.009).

Conclusions: The refugee children in this study in the East Midlands had access to primary health care, medicines and a family doctor. They were more likely to receive prescribed medicines and less likely to receive OTC medicines, especially paracetamol.

Keywords: access, medicines, refugees, OTC medicines

Article Summary:

Strengths and limitations of this study

- Study in refugee children – a vulnerable group
- The number of medicines used by children as a marker of access to primary healthcare
- The refugee families all had contact with a charity dealing with refugees.

Introduction

The right to access healthcare is included in the Universal Declaration of Human Rights by the United Nations [1]. Children have the right to access health care and receive medicines that are scientifically evaluated for both efficacy and safety [2,3]. Research has mainly focused on clinical trials that have evaluated efficacy. Access is an area that has been inadequately explored [4]. Problems with acccess to health care and medicines are well recognised in low and lower middle income countries. The lack of free universal healthcare in many countries results in people being unable to afford consulatations with health professioanals, unnecessary investigations and medical treatment [1,5]. Only one in four children with diarrhoea in India receive treatment with oral rehydration salts [1,6]. More recent research in North America has revealed that in both the United States and Canada, children of different ethnic groups or without insurance may be less likely to receive medicines [7-10].

Refugee children are a highly vulnerable group of children who are less likely to receive full access to medicines and health care [11]. Adult refugees are likely to experience significant problems in accessing health care and medical treatment [11-13]. In the UK all refugees are entitled to access primary healthcare, which includes registering with a GP [14]. However concern has been raised that both refugees and health professionals are confused about what is avaliable and refugees may not register with a GP because they are unaware that they have that right [14,15].

There have been relatively few studies looking at access to health care for refugee children in the UK and to date there have been no studies in the UK on whether these children receive satisfactory drug therapy. We have used the term ‘refugees’ to include both those who have been awarded refugee status and those seeking asylum. The aim was to explore access to health care and drug therapy in this vulnerable group of children.

Methods

Ethical approval was obtained from the University of Nottingham Medical School Research Ethics Committee (Reference G/6/2010). Initial contact with both asylum seekers and refugees was made by Refugee Action (Nottingham branch). All refugees attending a Refugee Action appointment were asked if they had children and if they would be interested in participating in the research. Those parents, who Refugee Action staff identified as possibly being interested in participating in the research, were approached by the research investigators (SA and JC). Parents who then agreed to take part in the study were interviewed within a private room in the offices provided by Refugee Action in Nottingham. Written informed consent was obtained. If the participants did not speak/understand English/Arabic, then an intepreting service was used. Additional interviews were performed at a refugee drop in centre and a Muslim community centre in Derby, by one of the researchers (SA).

Again refugees were asked if they had children and if they would be interested in participating in the research.The interview involved collecting the following data, using a questionnaire (see Appendix 1).

a) demographic data regarding age and number of children
b) data regarding health of the family, children, registration with the GP and immunisation status of the children
c) whether any of the children had been ill in the last month and if they had received any medicines, if so, from whom
d) similar questions regarding illness and number of medicines for the last six months

The interviews were perfomed between November 2010 and November 2011.

A control group of parents were obtained in a local shopping centre. The investigators wore University t-shirts and ID badges and were provided with a quiet area with seating within the shopping centre. Adults in the shopping centre were approached by the investigators and asked two questions :(1) Did they have children? (2) Were they British? If they answered yes to both questions and written informed consent was given, the interview was performed within the quiet seated area. Interviews with the control group of parents were performed between November 2011 and January 2012. Interviews took 10-20 minutes and the same questions were asked as for the refugee group.

Statistical analysis was performed by using the Mann Whitney test for demographic data. The Chi-Squared test was used to compare the proportion of children with illness, and the proportion of children receiving medicines (both prescribed and OTC). It was not possible to perform a power calculation to determine the sample size as there was insufficient information available regarding the number of medicines used by children in the UK. It was therefore decided to aim for 50 parents in each group. This was a pragmatic decision based on discussions with Refugee Action. The research was performed as a pilot study in order to test the feasibility of parents recalling such information and in order to obtain pharmacoepidemiological data that would be useful for power calculations for subsequent national studies.

Results

Sixty six parents of children who were refugees/asylum seekers were invited to participate. Sixteen declined (reasons not given for declining), i.e. 50 agreed to participate. Thirty eight of the 50 parents who agreed to participate were male. Most refugees were from Iraq(20), Pakistan(6), Afghanistan(4) and Nigeria(4).There were one to two refugees from each of the following countries – Ethiopia,Somalia,Zimbabwe(all 2); Gambia,Iran,Tunisia, East Africa,Kenya, Sudan, Zambia, Vietnam (all one). Two refugees did not state their country of origin. The median age of the parents was 36

years (range 24-58 years) and all were born outside the UK. They had lived in the UK for a median of 6.25 years. Eighteen had been awarded refugee status. One parent had been refused refugee status and was lodging an appeal. The remaining 31 were seeking asylum but their cases had not been heard as yet. Eighteen parents reported that they had a chronic illness (four chronic back pain, four depression, two diabetes, two disabilities and six other illnesses). Eighteen parents were employed, five did not state their occupation and 27 were unemployed (Table 1).

The control group consisted of 50 parents of whom 44 were female. Twenty one parents declined to participate in the study. Their ages ranged from 19 to 46 years with a median age of 34.5 years. Most of the parents were fit and well but five reported health problems (three asthma and two depression/stress). Twenty six of the control parents were employed. As expected, the control group of parents had lived in the current locality for a longer period (17.5 vs 4.75 median years). Refugee parents were more likely to have health problems.

Access to health care and medicines

All families were registered with a GP. There was no significant difference in the number of days since the last visit to the GP (14 vs 15 days, refugees vs control). All but one of the refugee parents and all but five of the control group families had visited the GP in the past six months.

There was a significant difference (p=0.008) in that nine of the refugee parents stated that they had experienced difficulties visiting the GP in relation to affording the travel costs and language problems. None of the control group parents stated they had any difficulties.

Children's health

There were 117 children in the refugee group and 99 in the control group. The median number of children per family was two in both groups (p=0.22). The median ages of the children were five and four years respectively (refugees vs control). The interquartile ranges for ages of the children were 2.25-8 and 1.9-8 years respectively in the two groups and there was no significant difference in the ages (p=0.13). All but one child in the refugee group were immunised. Four children in the refugee group had chronic medical problems (congenital heart disease, asthma, cancer and poor growth). Seven children in the control group had chronic medical problems (asthma (4), epilepsy, ADHD and arthritis).

There were 29 refugee families and 30 control families with an ill child in the last month. In the last month 30 refugee children received 60 medicines and 31 control children received 63 medicines (Table 2). Paracetamol was the most frequently used medicine in both groups. The majority of the medicines for refugee children were prescribed (41 out of 60). In contrast, the majority of medicines for control children were OTC medicines (37 out of 63).

In the last 6 months, all 50 refugee families and 45 control families had an ill child. In the last 6 months, 48 refugee children received 108 medicines and 43 control children received 96 medicines (Table 3).). Paracetamol was the most frequently used medicine in both groups .The majority of the medicines for refugee children were prescribed (83 out of 108). In contrast, the majority of the medicines for control children were OTC Medicines (52 out of 96).

There was no difference between the two groups of children in relation to the likelihood of receiving any medicines in either the last month (P=0.839) or the last 6 months (P=0.81). Children in the refugee group were more likely to receive prescribed medicines for both the last month (p=0.008) and the last six months (p<0.001). They were also less likely to receive OTC medicines in the last 6 months (P=0.009. Analgesics/anti-pyretics were the most frequently used medicines in both the last month and the last six months (Table 2).

Discussion

Based on the answers given by the parents,child refugees were similar to the control group of children in relation to the presence of chronic medical problems and immunisation status. The main aim of this study was to compare the number of medicines used by refugee children in comparison with control children. It was reassuring to see that the total number of medicines used by both groups of children in both the past month and the past six months was similar. Alongside the fact that all families were registered with a GP suggests that refugee parents in this study were managing to access primary health care and ensure that their children receive adequate treatment.This is despite the difficulties in travel costs and language noted by refugee parents. Refugee children were, however, less likely to receive over the counter (OTC) medicines and more likely to receive prescribed medicines than control children.

A study in Dutch adolescents demonstrated that a higher socioeconomic status was associated with an increase in OTC drug use [16]. Similar findings were reported in German children and adolescents [17]. A study in the UK identified that the cost of OTCs affected only the most deprived sections of the

population [18]. Refugees face considerable financial difficulties in that asylum seekers are not allowed to work and receive significantly less financial assistance than others on welfare benefits [19]. Analgesics/antipyretics are the most frequently purchased OTC medicines by parents for children in the UK [18]. The two most common reasons for buying OTC medicines by British parents included; 1) not wishing to bother a GP for minor illness and 2) to have a medicine in case of future need [18]. It is likely that the lower OTC use in refugee children is related to the financial cost of OTC medicines.

Parental recall of medicines administered to children over a 12 month period has been used by researchers in the UK and Australia [20,21]. We used two time periods- one month and six months in our pilot study. Parental recall for the last month is likely to be more accurate than for the six months. We were uncertain however whether a period of one month would generate enough data in relation to the number of medicines given. Based on our pilot study, we would recommend asking about a time period of one month only. We have showed that research in relation to access to medicine in refugee children is feasible by working in conjunction with Refugee Action. We have held discussions with other health professionals in the UK in order to plan larger studies. The data generated by our study will be used for the power calculations for these larger studies.

Adult refugees were more likely to have health problems than the control parents in this study. This is in keeping with previous studies as refugees often come from countries affected by armed conflict and are likely to have experienced bereavement, displacement or torture [19]. It is important to recognise that there are many differences in refugees worldwide and that the health problems of refugees from the Middle East in the UK are likely to be different to those of South-East Asian refugees in Canada [22].

There have been very few studies looking at access to health care by refugee children [23,24]. Additionally, there have been no previous studies specifically looking at the pharmacoepidemiology of medicines received by refugee children. Our small study shows that it is possible to use both the number of medicines used by children over the last month or the last six months as a marker of access to health care. It is important to recognise the limitations of our study. Firstly, most of the refugees interviewed had been in contact with Refugee Action. These were refugees who had made contact with a charity and were therefore fully informed of their rights, especially with regards to health care. Unfortunately, due to government cutbacks, the Nottingham office of Refugee Action has now closed down and the nearest Refugee Action office is in Leicester, which is 40 km away. From April 2014 Refugee Action no longer has a grant agreement with the Home Office to provide advice and support (formally One Stop Shop) to individuals and families going through the asylum system. This work is now provided through another agency; Migrant Help. Migrant Help services are split into Asylum Support Applications UK and Asylum Advice UK and are provided across the UK mainly through a national telephone service with some limited outreach (for the East Midlands in Derby, Nottingham and Leicester one day per week respectively). Refugee Action continue to provide a

national Assisted Voluntary Returns project; Choices. A project for vulnerable destitute women in Leicester; Fresh Start and a volunteer run project for vulnerable people; Prevention of Asylum Homelessness which helps people to appeal refusals of support under s4 of the Immigration and Asylum Act 1999,

It is also likely that if we had looked at a different group of children, for example refugee children presenting to the Emergency Department, our findings may have been different. A small study in Ireland of 25 refugees found that 20% of refugees were not registered with a GP [15]. Additionally, we did not look at the access to health care and medicines of refugee children held in immigration detention centres. Others have highlighted that these children experience significant health problems [25]. It was not possible to match controls and refugee parents by socio economic status . This is impossible in the UK as asylum seekers receive less financial support than others on welfare benefit [19]. Another limitation was the gender inbalance between refugees and controls.

It is important to recognise that the number of people seeking refugee status in the UK is actually quite low (less than 20,000 in 2011)[26]. In May 2014 the Immigration Act received Royal Assent. One of the aims of the Act was to restrict access to public services and people entering the UK illegally.[27] It is uncertain whether this includes people who have been refused asylum. It is likely that in the future refugee children in the UK will experience more difficulties in accessing both health care and medicines.

Contributors

IC conceived the original idea and study design. This was modified following discussion with SA,CM,HS,RH and KG. SA and JC performed the interviews and collected all the data. KG helped facilitate the collection of the data. Data was analysed by IC,RH,SA,JC,HS and KG. All authors contributed to the writing of the paper and approved the final manuscript.

Competing interests

None

Funding

This research received no specific grant from any funding agency in the public, commercial or not for profit sectors.

Data sharing

No additional data available

Table 1 Sociodemographics of parents

	Refugee	Control	p-value
Median age (y)	36	34.5	0.12
Male	38	6	<0.001
Ill health	18	5	0.002
Employed	18	26	0.24
No of years in current accommodation	2.3	7.4	<0.001
No of years in current locality	4.8	17.5	< 0.001

Table 2 Medicines used in the last month

Medicines	**Refugee**			**Control**		
	Prescribed	OTC	**Total**	Prescribed	OTC	**Total**
Paracetamol	20	2	**22**	10	14	**24**
Ibuprofen	2	0	**2**	2	6	**8**
Antibiotics	7	0	**7**	6	0	**6**
Inhalers	3	0	**3**	5	0	**5**
Cough supressants	1	2	**3**	3	1	**4**
Topical	0	0	**0**	0	1	**1**
Vitamins	1	2	**3**	0	10	**10**
Teething medicines	0	0	**0**	0	3	**3**
Lactulose	2	0	**2**	0	0	**0**
Honey	0	8	**8**	0	0	**0**
Herbal	0	4	**4**	0	1	**1**
Others	3	1	**4**	0	1	**1**
Unknown	2	0	**2**	0	0	**0**
Total	**41**	**19**	**60**	**26**	**37**	**63**

Table 3 Medicines used in the last 6 months

Medicines	**Refugee**			**Control**		
	Prescribed	OTC	**Total**	Prescribed	OTC	**Total**
Paracetamol	39	4	**43**	19	23	**42**
Ibuprofen	2	0	**2**	2	10	**12**
Antibiotics	10	0	**10**	10	0	**10**
Inhalers	4	0	**4**	5	0	**5**
Cough supressants	6	2	**8**	4	2	**6**
Topical	8	0	**8**	2	1	**3**
Vitamins	2	2	**4**	0	10	**10**
Teething medicines	0	1	**1**	0	4	**4**
Lactulose	2	0	**2**	0	0	**0**
Oral Rehydration	1	0	**1**	2	1	**3**
Honey	0	8	**8**	0	0	**0**
Herbal	0	5	**5**	0	1	**1**
Others	2	3	**5**	0	0	**0**
Unknown	4	0	**4**	0	0	**0**
Iron	3	0	**3**	0	0	**0**
Total	**83**	**25**	**108**	**44**	**52**	**96**

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Access to medicines by child refugees in the East Midlands region of England – a cross-sectional study

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Abstract

Objectives: To explore access to primary health care and drug therapy by refugee children in the East Midlands region of England.

Design: Interviews with refugees with children and a control group of British parents with children.

Setting: East Midlands region of England

Participants: 50 refugees with children and a control group of 50 parents with children.

Main outcome measures: Number of medicines used by children in the last month and the last six months. Health of parents and children. Registration with a GP.

Results: All families in both groups were registered with a GP. There was no difference in the number of children in the two groups experiencing illnesses .In the last month, 30 refugee children received 60 medicines and 31 control children 63 medicines. In the last 6 months, 48 refugee children received 108 medicines and 43 control children 96 medicines. There was no difference between the two groups of children in relation to the likelihood of receiving any medicines in either the last month (P=0.839) or the last 6 months (P=0.81). Children in the refugee group were more likely to receive prescribed medicines for both the last month (p=0.008) and the last six months (p<0.001). They were also less likely to receive OTC medicines in the last 6 months (P=0.009).

Conclusions: The refugee children in this study in the East Midlands had access to primary health care, medicines and a family doctor. They were more likely to receive prescribed medicines and less likely to receive OTC medicines, especially paracetamol.

Keywords: access, medicines, refugees, OTC medicines

Article Summary:

Strengths and limitations of this study

- Study in refugee children – a vulnerable group
- The number of medicines used by children as a marker of access to primary healthcare
- The refugee families all had contact with a charity dealing with refugees.

Introduction

The right to access healthcare is included in the Universal Declaration of Human Rights by the United Nations [1]. Children have the right to access health care and receive medicines that are scientifically evaluated for both efficacy and safety [2,3]. Research has mainly focused on clinical trials that have evaluated efficacy. Access is an area that has been inadequately explored [4]. Problems with acccess to health care and medicines are well recognised in low and lower middle income countries. The lack of free universal healthcare in many countries results in people being unable to afford consulatations with health professioanals, unnecessary investigations and medical treatment [1,5]. Only one in four children with diarrhoea in India receive treatment with oral rehydration salts [1,6]. More recent research in North America has revealed that in both the United States and Canada, children of different ethnic groups or without insurance may be less likely to receive medicines [7-10].

Refugee children are a highly vulnerable group of children who are less likely to receive full access to medicines and health care [11]. Adult refugees are likely to experience significant problems in accessing health care and medical treatment [11-13]. In the UK all refugees are entitled to access primary healthcare, which includes registering with a GP [14]. However concern has been raised that both refugees and health professionals are confused about what is avaliable and refugees may not register with a GP because they are unaware that they have that right [14,15].

There have been relatively few studies looking at access to health care for refugee children in the UK and to date there have been no studies in the UK on whether these children receive satisfactory drug therapy. We have used the term 'refugees' to include both those who have been awarded refugee status and those seeking asylum. The aim was to explore access to health care and drug therapy in this vulnerable group of children.

Methods

Ethical approval was obtained from the University of Nottingham Medical School Research Ethics Committee (Reference G/6/2010). Initial contact with both asylum seekers and refugees was made by Refugee Action (Nottingham branch). All refugees attending a Refugee Action appointment were asked if they had children and if they would be interested in participating in the research. Those parents, who Refugee Action staff identified as possibly being interested in participating in the research, were approached by the research investigators (SA and JC). Parents who then agreed to take part in the study were interviewed within a private room in the offices provided by Refugee Action in Nottingham. Written informed consent was obtained. If the participants did not speak/understand English/Arabic, then an intepreting service was used. Additional interviews were performed at a refugee drop in centre and a Muslim community centre in Derby, by one of the researchers (SA).

Again refugees were asked if they had children and if they would be interested in participating in the research.The interview involved collecting the following data, using a questionnaire (see Appendix 1).

a) demographic data regarding age and number of children
b) data regarding health of the family, children, registration with the GP and immunisation status of the children
c) whether any of the children had been ill in the last month and if they had received any medicines, if so, from whom
d) similar questions regarding illness and number of medicines for the last six months

The interviews were perfomed between November 2010 and November 2011.

A control group of parents were obtained in a local shopping centre. The investigators wore University t-shirts and ID badges and were provided with a quiet area with seating within the shopping centre. Adults in the shopping centre were approached by the investigators and asked two questions :(1) Did they have children? (2) Were they British? If they answered yes to both questions and written informed consent was given, the interview was performed within the quiet seated area. Interviews with the control group of parents were performed between November 2011 and January 2012. Interviews took 10-20 minutes and the same questions were asked as for the refugee group.

Statistical analysis was performed by using the Mann Whitney test for demographic data. The Chi-Squared test was used to compare the proportion of children with illness, and the proportion of children receiving medicines (both prescribed and OTC). It was not possible to perform a power calculation to determine the sample size as there was insufficient information available regarding the number of medicines used by children in the UK. It was therefore decided to aim for 50 parents in each group. This was a pragmatic decision based on discussions with Refugee Action. The research was performed as a pilot study in order to test the feasibility of parents recalling such information and in order to obtain pharmacoepidemiological data that would be useful for power calculations for subsequent national studies.

Results

Sixty six parents of children who were refugees/asylum seekers were invited to participate. Sixteen declined (reasons not given for declining), i.e. 50 agreed to participate. Thirty eight of the 50 parents who agreed to participate were male. Most refugees were from Iraq(20), Pakistan(6), Afghanistan(4) and Nigeria(4).There were one to two refugees from each of the following countries – Ethiopia,Somalia,Zimbabwe(all 2); Gambia,Iran,Tunisia, East Africa,Kenya, Sudan, Zambia, Vietnam (all one). Two refugees did not state their country of origin. The median age of the parents was 36

years (range 24-58 years) and all were born outside the UK. They had lived in the UK for a median of 6.25 years. Eighteen had been awarded refugee status. One parent had been refused refugee status and was lodging an appeal. The remaining 31 were seeking asylum but their cases had not been heard as yet. Eighteen parents reported that they had a chronic illness (four chronic back pain, four depression, two diabetes, two disabilities and six other illnesses). Eighteen parents were employed, five did not state their occupation and 27 were unemployed (Table 1).

The control group consisted of 50 parents of whom 44 were female. Twenty one parents declined to participate in the study. Their ages ranged from 19 to 46 years with a median age of 34.5 years. Most of the parents were fit and well but five reported health problems (three asthma and two depression/stress). Twenty six of the control parents were employed. As expected, the control group of parents had lived in the current locality for a longer period (17.5 vs 4.75 median years). Refugee parents were more likely to have health problems.

Access to health care and medicines

All families were registered with a GP. There was no significant difference in the number of days since the last visit to the GP (14 vs 15 days, refugees vs control). All but one of the refugee parents and all but five of the control group families had visited the GP in the past six months.

There was a significant difference (p=0.008) in that nine of the refugee parents stated that they had experienced difficulties visiting the GP in relation to affording the travel costs and language problems. None of the control group parents stated they had any difficulties.

Children's health

There were 117 children in the refugee group and 99 in the control group. The median number of children per family was two in both groups (p=0.22). The median ages of the children were five and four years respectively (refugees vs control). The interquartile ranges for ages of the children were 2.25-8 and 1.9-8 years respectively in the two groups and there was no significant difference in the ages (p=0.13). All but one child in the refugee group were immunised. Four children in the refugee group had chronic medical problems (congenital heart disease, asthma, cancer and poor growth). Seven children in the control group had chronic medical problems (asthma (4), epilepsy, ADHD and arthritis).

There were 29 refugee families and 30 control families with an ill child in the last month. In the last month 30 refugee children received 60 medicines and 31 control children received 63 medicines (Table 2). Paracetamol was the most frequently used medicine in both groups. The majority of the medicines for refugee children were prescribed (41 out of 60). In contrast, the majority of medicines for control children were OTC medicines (37 out of 63).

In the last 6 months, all 50 refugee families and 45 control families had an ill child. In the last 6 months, 48 refugee children received 108 medicines and 43 control children received 96 medicines (Table 3).). Paracetamol was the most frequently used medicine in both groups .The majority of the medicines for refugee children were prescribed (83 out of 108). In contrast, the majority of the medicines for control children were OTC Medicines (52 out of 96).

There was no difference between the two groups of children in relation to the likelihood of receiving any medicines in either the last month (P=0.839) or the last 6 months (P=0.81). Children in the refugee group were more likely to receive prescribed medicines for both the last month (p=0.008) and the last six months (p<0.001). They were also less likely to receive OTC medicines in the last 6 months (P=0.009. Analgesics/anti-pyretics were the most frequently used medicines in both the last month and the last six months (Table 2).

Discussion

Based on the answers given by the parents,child refugees were similar to the control group of children in relation to the presence of chronic medical problems and immunisation status. The main aim of this study was to compare the number of medicines used by refugee children in comparison with control children. It was reassuring to see that the total number of medicines used by both groups of children in both the past month and the past six months was similar. Alongside the fact that all families were registered with a GP suggests that refugee parents in this study were managing to access primary health care and ensure that their children receive adequate treatment.This is despite the difficulties in travel costs and language noted by refugee parents. Refugee children were, however, less likely to receive over the counter (OTC) medicines and more likely to receive prescribed medicines than control children.

A study in Dutch adolescents demonstrated that a higher socioeconomic status was associated with an increase in OTC drug use [16]. Similar findings were reported in German children and adolescents [17]. A study in the UK identified that the cost of OTCs affected only the most deprived sections of the

population [18]. Refugees face considerable financial difficulties in that asylum seekers are not allowed to work and receive significantly less financial assistance than others on welfare benefits [19]. Analgesics/antipyretics are the most frequently purchased OTC medicines by parents for children in the UK [18]. The two most common reasons for buying OTC medicines by British parents included; 1) not wishing to bother a GP for minor illness and 2) to have a medicine in case of future need [18]. It is likely that the lower OTC use in refugee children is related to the financial cost of OTC medicines.

Parental recall of medicines administered to children over a 12 month period has been used by researchers in the UK and Australia [20,21]. We used two time periods- one month and six months in our pilot study. Parental recall for the last month is likely to be more accurate than for the six months. We were uncertain however whether a period of one month would generate enough data in relation to the number of medicines given. Based on our pilot study, we would recommend asking about a time period of one month only. We have showed that research in relation to access to medicine in refugee children is feasible by working in conjunction with Refugee Action. We have held discussions with other health professionals in the UK in order to plan larger studies. The data generated by our study will be used for the power calculations for these larger studies.

Adult refugees were more likely to have health problems than the control parents in this study. This is in keeping with previous studies as refugees often come from countries affected by armed conflict and are likely to have experienced bereavement, displacement or torture [19]. It is important to recognise that there are many differences in refugees worldwide and that the health problems of refugees from the Middle East in the UK are likely to be different to those of South-East Asian refugees in Canada [22].

There have been very few studies looking at access to health care by refugee children [23,24]. Additionally, there have been no previous studies specifically looking at the pharmacoepidemiology of medicines received by refugee children. Our small study shows that it is possible to use both the number of medicines used by children over the last month or the last six months as a marker of access to health care. It is important to recognise the limitations of our study. Firstly, most of the refugees interviewed had been in contact with Refugee Action. These were refugees who had made contact with a charity and were therefore fully informed of their rights, especially with regards to health care. Unfortunately, due to government cutbacks, the Nottingham office of Refugee Action has now closed down and the nearest Refugee Action office is in Leicester, which is 40 km away. From April 2014 Refugee Action no longer has a grant agreement with the Home Office to provide advice and support (formally One Stop Shop) to individuals and families going through the asylum system. This work is now provided through another agency; Migrant Help. Migrant Help services are split into Asylum Support Applications UK and Asylum Advice UK and are provided across the UK mainly through a national telephone service with some limited outreach (for the East Midlands in Derby, Nottingham and Leicester one day per week respectively). Refugee Action continue to provide a

national Assisted Voluntary Returns project; Choices. A project for vulnerable destitute women in Leicester; Fresh Start and a volunteer run project for vulnerable people; Prevention of Asylum Homelessness which helps people to appeal refusals of support under s4 of the Immigration and Asylum Act 1999,

It is also likely that if we had looked at a different group of children, for example refugee children presenting to the Emergency Department, our findings may have been different. A small study in Ireland of 25 refugees found that 20% of refugees were not registered with a GP [15]. Additionally, we did not look at the access to health care and medicines of refugee children held in immigration detention centres. Others have highlighted that these children experience significant health problems [25]. It was not possible to match controls and refugee parents by socio economic status . This is impossible in the UK as asylum seekers receive less financial support than others on welfare benefit [19]. Another limitation was the gender inbalance between refugees and controls.

It is important to recognise that the number of people seeking refugee status in the UK is actually quite low (less than 20,000 in 2011)[26]. In May 2014 the Immigration Act received Royal Assent. One of the aims of the Act was to restrict access to public services and people entering the UK illegally.[27] It is uncertain whether this includes people who have been refused asylum. It is likely that in the future refugee children in the UK will experience more difficulties in accessing both health care and medicines.

Contributors

IC conceived the original idea and study design. This was modified following discussion with SA,CM,HS,RH and KG. SA and JC performed the interviews and collected all the data. KG helped facilitate the collection of the data. Data was analysed by IC,RH,SA,JC,HS and KG. All authors contributed to the writing of the paper and approved the final manuscript.

Competing interests

None

Funding

This research received no specific grant from any funding agency in the public, commercial or not for profit sectors.

Data sharing

No additional data available

Table 1 Sociodemographics of parents

	Refugee	Control	p-value
Median age (y)	36	34.5	0.12
Male	38	6	<0.001
Ill health	18	5	0.002
Employed	18	26	0.24
No of years in current accommodation	2.3	7.4	<0.001
No of years in current locality	4.8	17.5	< 0.001

Table 2 Medicines used in the last month

Medicines	**Refugee**			**Control**		
	Prescribed	OTC	**Total**	Prescribed	OTC	**Total**
Paracetamol	20	2	**22**	10	14	**24**
Ibuprofen	2	0	**2**	2	6	**8**
Antibiotics	7	0	**7**	6	0	**6**
Inhalers	3	0	**3**	5	0	**5**
Cough supressants	1	2	**3**	3	1	**4**
Topical	0	0	**0**	0	1	**1**
Vitamins	1	2	**3**	0	10	**10**
Teething medicines	0	0	**0**	0	3	**3**
Lactulose	2	0	**2**	0	0	**0**
Honey	0	8	**8**	0	0	**0**
Herbal	0	4	**4**	0	1	**1**
Others	3	1	**4**	0	1	**1**
Unknown	2	0	**2**	0	0	**0**
Total	**41**	**19**	**60**	**26**	**37**	**63**

Table 3 Medicines used in the last 6 months

Medicines	**Refugee**			**Control**		
	Prescribed	OTC	**Total**	Prescribed	OTC	**Total**
Paracetamol	39	4	**43**	19	23	**42**
Ibuprofen	2	0	**2**	2	10	**12**
Antibiotics	10	0	**10**	10	0	**10**
Inhalers	4	0	**4**	5	0	**5**
Cough supressants	6	2	**8**	4	2	**6**
Topical	8	0	**8**	2	1	**3**
Vitamins	2	2	**4**	0	10	**10**
Teething medicines	0	1	**1**	0	4	**4**
Lactulose	2	0	**2**	0	0	**0**
Oral Rehydration	1	0	**1**	2	1	**3**
Honey	0	8	**8**	0	0	**0**
Herbal	0	5	**5**	0	1	**1**
Others	2	3	**5**	0	0	**0**
Unknown	4	0	**4**	0	0	**0**
Iron	3	0	**3**	0	0	**0**
Total	**83**	**25**	**108**	**44**	**52**	**96**

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Children's Access to Medicines in the East Midlands
Parental interview

A. BACKGROUND

Age (years): …… **Male / Female**

No. of adults living in the home: ……

No. of children: ……..

Age of children: ……

Occupation: ……

Country of birth: ……..

If applicable

Country left: ……..

Reasons for leaving: ……..

Date of entry to the UK: ……

Have you had a decision on your asylum claim: ……

Duration of time in present accommodation: ……..

Duration of time in current locality: ……

Contacts in current locality: ……

Links with community:
……..

B. HEALTH

Are you registered with a GP?

Yes ☐ No ☐

If no, why is that?
……

Date of last visit to GP: ……..

Are you well?

Yes ☐ No ☐

Are you on any medicines?

Yes ☐ No ☐

If so, which medicine and from whom do you obtain the medicine?

……

……

……

……

Are your children normally fit and well?

Yes ☐ No ☐

If not, please give details.

……

……

What do you normally do when your child is unwell?

……

……

……

Have your children received their immunisations?

Yes ☐ No ☐

If so, which?

……

……

C. LAST MONTH

Have any of the children been ill in the last month?

Yes ☐ No ☐

If so, have they seen a health professional? If so, state which type?

……

……

……

……

Have any of your children received any medicines in the last month?

Yes ☐ No ☐

If so, which medicines?

……

……

Were the medicines prescribed and, if so, by whom?

……

Where did you get the medicines from?

……

Did you have to pay for the medicines?

Yes ☐ No ☐

……..

Were there any difficulties in obtaining the medicines? (Include travel costs)

Yes ☐ No ☐

……..

……..

Have any of your children received any medicines (including herbal or homeopathic remedies) in the last month that you have bought from a chemist or obtained from any other individual?

Yes ☐ No ☐

If so, which medicines and from whom?

……

……

D. LAST SIX MONTHS

Have any of the children been ill in the last six months?

Yes ☐ No ☐

If so, have they seen a health professional? If so, state which type?

……

……

……

……

Have any of your children received any medicines in the last six months?

Yes ☐ No ☐

If so, which medicines?

……

……

Were the medicines prescribed and, if so, by whom?

……

Where did you get the medicines from?

……

Did you have to pay for the medicines?

Yes ☐ No ☐

……..

Were there any difficulties in obtaining the medicines? (Include travel costs)

Yes ☐ No ☐

……..

……..

Have any of your children received any medicines (including herbal or homeopathic remedies) in the last six months that you have bought from a chemist or obtained from any other individual?

Yes ☐ No ☐

If so, which medicines and from whom?

……

……