

1 Title Page

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3 Charging of overseas visitors in England and Universal Health Coverage: A cross sectional
4 analysis of NHS Trusts

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6 Authors

7 Joanna Dobbin¹, Adrienne Milner², Alexander Dobbin³, Jessica Potter⁴

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9 ¹Academic Clinical Fellow, Centre for Primary Care and Public Health, University College
10 London, Royal Free Hospital, Pond Street, London, NW3 2QG, United Kingdom

11 ² Senior Lecturer, Department of Health Sciences, College of Health, Medicine and Life
12 Sciences Brunel University London, Mary Seacole Building, Uxbridge, UB8 3PH, United
13 Kingdom

14 ³ Independent researcher, No affiliation

15 ⁴ MRC Fellow, Centre for Primary Care and Public Health, The Blizard Institute, Queen Mary
16 University London, Turner Street, London, E1 2AB, United Kingdom

17

18 Corresponding author

19 Dr Joanna Dobbin MBBS MSc, j.dobbin@ucl.ac.uk 0044 7833457884

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25

1 **Abstract**

2

3 **Background**

4 In 2017, new regulations in England introduced upfront charging for non-urgent care within
5 the NHS. Individuals from outside the European Economic Area who have not paid the
6 immigration surcharge are chargeable for NHS care at 150% of cost.

7

8 **Methods**

9 A freedom of information (FOI) request was sent to 135 acute non-specialist NHS Trusts in
10 England to create a database of overseas visitors charges. This was analysed using multiple
11 linear regression to explore the relationship between sex, age, nationality, ethnicity, urgency
12 and the cost of health care.

13

14 **Results**

15 Of 135 acute non-specialist Trusts in England 64 replied, providing a data set of 13,484
16 patients. Women were found to be invoiced higher amounts than men ($p=0.002$). Patients
17 were more likely to be women (63% vs. 37% men), and within this group, almost half of
18 patients were of reproductive age, with 47.9% (3165) aged 16 to 40 years old. Only seven
19 Trusts supplied data on urgency, and within these trusts the urgency of treatment was
20 significantly related to cost, with the most urgent (immediantly necessary) treatment costing
21 the most ($p<0.001$).

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23 **Conclusion**

24 This research reflects that that migrant women, and particularly undocumented women, are
25 disproportionately impacted by the NHS charging policies in England.

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Word Count

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Introduction

The principles of universal health coverage as laid out by the World Health Organisation state that all people and communities should have access to effective health care without financial hardship. With nearly 2 million migrants arriving in Europe since 2015, how to integrate the health care of this population within host country health systems is a crucial issue.¹ Migrants, of all forms, often suffer from increased barriers to accessing health care, and many are vulnerable due to having suffered both physical and mental trauma during their movement.² With increasing nationalism and migration pressures across Europe,³ how the health community incorporates migrant health into domestic policy is a pressing issue..

The National Health Service (NHS) in England was created in 1948, and since its inception the treatment of foreign visitors has been a point of contention. In 1952 Nye Bevan, credited with founding the NHS wrote, *“one of the consequences of the universality of the British Health Service is the free treatment of foreign visitors. This has given rise to a great deal of criticism, most of it ill-informed and some of it deliberately mischievous”*.⁴ Despite these ‘criticisms’, treatment remained free for all until 1982 when the NHS charges to overseas visitors regulations were introduced,⁵ setting in place legislation that some patients were chargeable for secondary care. These regulations were expanded with the Immigration Act 2014,⁶ and again in 2017 with the introduction of upfront charging, in which 150% of

1 estimated costs must be paid in full before patients receive non-urgent treatment.⁷ The stated
2 purpose of the introduction of these charges was to “*ensure that migrants here temporarily*
3 *make a fair contribution to the cost of health services in the UK*”.⁶ In addition to the
4 introduction of upfront charging, one of the key changes to the policy was the introduction of
5 the concept of ‘ordinary resident’. Whilst the 1982 legislation entitled ‘anyone living in
6 England for the past 12 months’ to healthcare,⁵ the 2014 Act specifically excluded
7 undocumented migrants from its eligibility list (with some key exceptions).⁷ Whilst the full
8 list of concessions is complex, (including those from within the European Economic Area
9 (EEA), and visa holders who pay a health surcharge)⁷ for the purpose of discussion, these
10 rules predominantly impact overseas visitors, British expatriates and undocumented migrants.

11

12 This study presents a demographic survey of who was charged as an overseas visitor within
13 the NHS from 2016 to 2018, and discusses the potential impact of these charges on existing
14 health inequalities for migrants, women and ethnic minorities within England.

15

16 **2. Methods**

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18 **2.1 Data**

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20 A freedom of information (FOI) request was sent to all 135 NHS acute non-specialist hospital
21 Trusts in England, on the 25/04/17 by email or online form (appendix 1). All Trusts were
22 contacted to limit sample bias. Follow-up requests via email were sent again between the 8th
23 of May and 21st of June, with each Trust receiving up to 2 follow up requests. Trusts were
24 asked for data from the financial years for both 2016/17 and 2017/18 to increase data capture.

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1 **2.2 Variables / Data collection**

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3 The following variables were requested from Trusts to be used in our analysis: nationality
4 (individual country or coded by continent), ethnicity (grouped as per Office of National
5 Statistics (ONS) guidance), invoice amount, invoice date, year of entry into the UK, year of
6 birth (or coded to state if they were born before or after 1971), sex and urgency of treatment.
7 Definitions of urgency categories were not supplied in the request.

8

9 **2.3 Data analysis**

10

11 Analysis was carried out using R Console version 3.3.3. The effect of; nationality, sex, age,
12 ethnicity, and Trust on (log)treatment cost were analysed using a linear regression mode.
13 Treatment cost was transformed due to the positive skew in the data, using log function, after
14 which linear regression was applied. An unadjusted model was used to examine the effects of
15 sex and age, and subsequently one model in which age and sex were adjusted for, as these are
16 known to affect the utilisation of NHS in-patient services.⁸ A linear regression model
17 examining urgency data adjusted for age and sex was run separately. Effect sizes were
18 calculated from the unadjusted regression coefficient. Age was deliniated into age brackets
19 based around broad medical needs, and nationality was grouped by continent. All variables
20 were non-parametric with a positive skew, and natural logs were used to transform the data to
21 be normally distributed for analysis.⁹ Cases with missing values were removed from the
22 analysis.

23

24 **3. Results**

25

1 Over 13,484 anonymised patient data from 64 Trusts were collected using an FOI designed to
2 examine charging patterns (figure 1 shows a flow diagram of data supplied by trusts). For
3 each variable, descriptive statistics and significant results from the regression analysis are
4 presented below.

5

6 *(Insert figure 1 here)*

7 Figure 1 – Flow diagram of data sets included in the final analysis

8

9 **3.1 Nationality**

10

11 9953 patients from 44 Trusts were included in the analysis on pay patterns by nationality. A
12 geographical representation of the number of patients charged by nationality is shown in
13 Figure 2. Most patients invoiced were from Nigeria (1436), India (1170), USA (729),
14 Pakistan (606), China (410), Ghana (235) and Canada (206). 2481 patients had data missing
15 on their nationality. 797 patients had their nationality recorded as ‘unknown’, ‘other’ or ‘not
16 stated’. An adjusted linear regression model showed that patients from the continent of North
17 America (USA and Canada) are charged significantly less than those from other continents
18 (B= -2.4,p=0.016; , $f^2<0.02$).

19

Insert Figure 2 here

20 Figure 2 – A geographical representation of nationality of patients charged as overseas
21 visitors in the National Health Service from 2016 to 2018

22

23 **3.2 Sex**

24 64 Trusts responded with information on the sex of the patients they were charging, which
25 created over 10,000 cases. This data showed that the majority (63%) of patients charged

1 were female. . Figure 3 shows the boxplots of cost by sex. The multiple linear regression
2 results show that women are charged on average significantly more money for health care
3 than men, ($B=-3.129$, 0.002), however the effect size was small ($f^2<0.02$).

4 *Insert figure 3 here*

5 Figure 3– Box plot showing median, interquartile range and $1.5 \times$ interquartile range by sex
6

7 **3.3 Age**

8 Examining the total amount charged for each age group by sex shows the large proportion of
9 the total cost that is attributed to women of reproductive age. Nearly a third of all patients
10 invoiced, 30.12% (3165), were women of reproductive age.). Patients over 65 had
11 significantly higher health costs ($B=2.54,0.01$), and those under 16 were charged significantly
12 less ($B= -5.513, p<0.0001$; $f^2<0.02$).

14 **3.4 Ethnicity**

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16 Ethnicity data were provided by 12 Trusts. Of these 2,872 patients had missing data, leaving
17 3,351 eligible for analysis. In this group, the largest patient ethnicity was “any other ethnic
18 group”, with 1,234 patients in this category. After this, those invoiced were most likely to be
19 mixed-ethnic or multi-ethnic, with the largest subgroup being white/Black African (856), (see
20 supplementary table 1). Results from linear regression analysis showed no significant
21 relationship between ethnicity and cost of health care. Statistics on age, sex and ethnicity can
22 be compared with NHS admission episodes of hospital visits.⁸

24 **3.5 Urgency**

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The determined urgency of treatment was provided by only 7 Trusts. Since October 2017 this information has affected patient care as non-urgent care requires upfront payment in full before treatment commences. This provided 559 patients of which the treatment for 268 was deemed immediately necessary, 138 urgent and 153 non-urgent. A linear regression model adjusted for age and sex showed that there was significant difference of the cost of treatment by urgency category ($B= 7.57, p<0.0001$) .with the more urgent the treatment the greater the cost of treatment, with a small to medium effect size ($f^2=0.03$).

4. Discussion

4.1 Main findings of the study

An FOI request was sent to 135 NHS Trusts in England to examine charging of overseas visitors. The key findings include variations in patient costs by sex and age, and variations in cost by urgency category. Overall women’s health costs were significantly higher than men’s ($p=0.002$), women make up the majority of patients (63%), and the highest frequency age bracket of women charged (47.86%) are of reproductive age (16-40 years). Age is significantly related to the cost of health care with patients over 65 paying most ($p=0.011$), and children under 16 paying least ($p<0.001$). Those from North America were found to pay less than those from other continents. There was no demonstratable relationship between ethnicity and cost of treatment, however, there was a high amount of missing data on this particular variable as was there for the variable of urgency, which may have impacted results. The categorisation of treatment by urgency status demonstrates that treatment deemed ‘non-urgent’ costs significantly less than ‘urgent’ care, which is again significantly cheaper than

1 'immediantly necessary' care ($p < 0.001$). The effect sizes for these relationships were small.
2 This implies that there are other potential significant influences on cost of treatment than the
3 demographic factors we have examined, for example, type of treatment (surgical or
4 otherwise), in-patient or out-patient treatment and length of hospital stay.

5

6 The poor response rate must be highlighted, and the range of Trusts which could be included
7 in each descriptor varied between 7 and 64. The greatest number of patient records was able
8 to be included when examining sex, with 64 Trusts included. This accounts for nearly half of
9 NHS Trusts. Conversely, only seven Trusts provided information on urgency, and 12 on
10 ethnicity.

11

12 **4.2 What is already known on this topic**

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14 Estimates suggest there are roughly 618,000 undocumented migrants within the UK, of which
15 about a third are estimated to be women.¹⁰ Research has shown that undocumented migrants
16 in the UK experience high levels of poverty, often with only informal access to health
17 services, no access to health insurance, and barriers to accessing both primary and secondary
18 care.¹¹ Within undocumented migrants, women, children and detainees have been identified
19 as the most vulnerable, with obstetric care being quoted as one of the key drivers for
20 undocumented migrants in Europe seeking healthcare.¹² Studies across Europe show women
21 underutilising services and suffering from poorer maternal outcomes.¹³ International bodies,
22 including the UCL-Lancet commission on migration and health² have voiced concerns over
23 migrants being excluded from universal health care without proper international standards,
24 targets, and public health initiatives in place to address the issue.¹⁴ A systematic review has
25 shown links between immigration policies and worsening health outcomes from

1 undocumented migrants¹⁵ as well as a study from Spain showing a 15% increase in mortality
2 after the country restricted access to health care for non-migrants.¹⁶
3 Further to this, medical professionals and politicians have raised concerns over upfront
4 charging exacerbating health inequities and breaching equality legislation.^{17,18} NHS England
5 has a moral and legal obligation to work within the Equality Act 2010.¹⁹ However despite
6 extensive legislation dating back to the 1960s, inequities for black and ethnic minority
7 patients within the UK are abundant.^{20,21} For example, inequities across maternal mortality
8 outcomes by ethnicity are growing: black women and women from poorer socio-economic
9 circumstances are significantly more likely to die during childbirth.²² The MBRRACE-UK
10 (Mother and babies; Reducing risk through audit and confidential enquiries across the UK)
11 report from 2019 documented three maternal deaths that were potentially attributed to women
12 avoiding NHS care due to fear of being charged.²³ This highlights the intersection between
13 migration and ethnicity and how it can effect health inequalities.

14
15 Women are already known to utilise NHS secondary services more than men. Hospital
16 admitted patient care activity in the NHS in England,^{8,24} showed that in 2017-18, 55% of
17 consultations were with women, with 2.5 times more episodes for women aged 20-39 than
18 their male counterparts, indicating that maternity services are accountable for a large part of
19 this disparity.

20
21 Older people are also known to, on average, access health services more than their younger
22 counterparts. However, socioeconomic deprivation, and consequential poor health, is not
23 equally distributed in older people, but is rather an accumulation of health inequities
24 throughout life.²⁵ Age intersects with the impacts of sex and ethnicity on health. Women are
25 more likely to live in poverty in older age,²⁶ as are some ethnic minorities,²⁷ and older people

1 from lower socioeconomic groups are shown to have increased mortality and morbidity
2 compared with their counterparts.
3
4 There has, of yet, been no economic analysis of the cost of delayed access to healthcare
5 caused by fear of the NHS charging regulations. However there are many studies that show
6 patients are deterred from accessing healthcare due to fear of charging regulations and
7 evidence this may delay access to treatment.^{28,29,30} The cost of delayed diagnosis and
8 treatment will vary for individual cases and diseases. However, to give an example of the cost
9 saving potential of preventative medicine, 80% of the total cost of diabetes treatment in the
10 UK is required to manage the complications of diabetes compared with just 20% for primary
11 care treatment and prevention.³¹ Although this is just one example, similar estimates are
12 made with antenatal care.²⁹ Furthermore, the importance of reducing delayed care is
13 supported by evidence suggesting that regulations which restricted access to public healthcare
14 for undocumented migrants in Spain were reversed after emergency attendances in hospitals
15 increased.¹⁶

16

17 **4.3 What this study adds**

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19 The demographics of patients by age and sex highlights the large proportion of women of
20 reproductive age within this cohort, in alignment with NHS hospital usage data. Although
21 these charging patterns follow known NHS utilization, discrimination becomes an issue when
22 charges are put in place. As discussed above, health inequalities for women, and in particular
23 migrant women and those from ethnic minorities are well documented in the UK. The results
24 from this study on sex, are the most robust, as nearly half of Trusts replied with this
25 information. They demonstrate that the impact of these policies will greatly effect

1 undocumented migrant women, and contribute to the barriers they face in accessing
2 healthcare.²⁹ Concerns around migrants being left behind as steps towards universal health
3 care are made have been echoed by public health experts including those from the Institute of
4 Migration (IOM).² In addition, the World Bank estimates that out of pocket healthcare costs
5 disproportionately affect women.³²

6

7 Our analysis of urgency of treatment demonstrates that the more ‘urgent’ the treatment, the
8 greater the cost. However, these results are tempered by the extremely small number of
9 Trusts that were able to supply this information (only seven). This survey has highlighted that
10 Trusts require a standardised data collection tool, in order that an equality analysis can be
11 performed on the impact of the charging policies. We are unable to infer the number of
12 patients who do not access ‘non-urgent’ care due to upfront charging, or the number driven
13 into the urgent or immediately necessary bracket because of late presentation - a recognised
14 concern of the 2017 amendment.³³ This suggests the economic gains of upfront charging need
15 a comprehensive review with the cost of delayed care taken into account. As previously
16 mentioned, preventative treatment can cost significantly less than reactive care. Furthermore,
17 what constitutes essential or non-urgent is open to interpretation, which can perhaps be both
18 to the benefit and detriment of patients. Further analysis into which treatments are being
19 deemed ‘non-urgent’ would be useful.

20

21 The World Health Organisation (WHO) Sustainable Development Goal (SDG) of Universal
22 Healthcare states that everyone should have access to ‘essential’ services without suffering
23 financial hardship. While there is a debate to be had about what constitutes ‘essential
24 services’, maternity care, under the current NHS guidance, is always considered urgent care
25 and so cannot be withheld, yet this type of care remains chargeable. The Department of

1 Health and Social Care (DHSC) have highlighted that “cost recovery is also compromised by
2 the fact that undocumented migrants make up the largest group of chargeable overseas
3 visitors – approx. 500,000, many of whom have few resources to pay charges incurred” and
4 that “these people would be exposed “to significant financial risk”.³⁴ This study has
5 highlighted that this financial burden risks being disproportionately experienced by women.

7 **4.4 Limitations of the study**

8
9 The major limitation of this study is the variation and discrepancies in information provided
10 by each Trust. Overall the response rate was poor, with only 66 Trusts returning data in a
11 format that could be used, only 12 Trusts providing data on ethnicity, and just seven Trusts
12 providing data relating to ‘urgency’ of care provided. Furthermore, of the Trusts that
13 provided ethnicity data, 2,872 patients had missing data, leaving only 3,351 patients eligible
14 for analysis. The ethnicity data demonstrate the high proportion of non-white overseas
15 visitors being charged, compared to overall use of the NHS, which is majority utilised by
16 those with a classified ‘white’ ethnicity.⁸ This reflects a statement made by the Department of
17 Health and Social Care that ‘non-white people or people for whom English is not their first
18 language are, on some occasions, targeted in the application of the Charging Regulations due
19 to speculation or assumption that they are not resident here’.³⁵ However, due to the small
20 number of Trusts that were able to supply this information as well as the high level of
21 missing data on this variable, the result from the current study that ethnicity is not
22 significantly related to charging are not generalisable.

23
24 Information on year of entry to the UK could not be analysed due to lack of responses. It is
25 well documented that British people born under colonial rule outside of the UK – the so-

1 called Windrush generation - have been incorrectly charged and denied medical care under
2 the NHS charging regulations because they lacked appropriate documentation. Year of entry
3 to the UK and nationality would allow an analysis of the scale of the Windrush scandal.
4 Whether this information was simply not recorded, or whether it was never known at the time
5 of charging is unclear. One of the issues around analysing the implementation of upfront
6 charging is the difficulty establishing how many patients who were not eligible for NHS care
7 received it without having to prove their eligibility. Due to the logistics of asking all patients
8 for documentation, and the variation in how the guidance has been implemented between
9 Trusts, this cannot be estimated with any accuracy. There is bias in the data as some larger
10 Trusts made up a disproportionate amount of the patient encounters. This was reduced by
11 requesting information from all Trusts, and otherwise could not be adjusted for without losing
12 large amounts of the dataset.

13

14 In order to perform a full analysis of the impact of upfront charging in relation to ‘non-
15 urgent’ treatment, and to compare to the WHO recommended access to ‘essential’ services,
16 future studies should seek to collect data on the full range of treatments for which patients
17 were charged.

18

19 **5. Conclusion**

20

21 The health care offered to migrants within Europe has come under scrutiny over the past few
22 years due to the rise in numbers of people migrating. In England, the 2017 amendments to
23 charging of overseas visitors have received criticism for its negative impact on black and
24 ethnic minorities and women.^{29,33} This research, although limited by a poor response rate, has
25 shown the sex and age of those charged is in alignment with patterns of NHS use within

1 England. Nevertheless, we demonstrate charging for these services will disproportionately
2 affect women, particularly those of reproductive age. The goal of universal health care, which
3 falls under WHO sustainable development goal 3, states that ‘nobody should be left behind’,
4 and this should include people who migrate.

5

6 **Declarations**

7

8 **Ethics approval and consent to participate**

9 Not applicable

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11 **Consent for publication**

12 Not applicable

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14 **Availability of data and materials**

15 The data are available on the websites of individual Trusts, published under the Freedom of
16 Information Act. A master database which supports the conclusions of this article is available
17 on request from the author.

18

19 **Competing Interests**

20 None

21

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24 research fellowship, grant number MR/M014517/1.

25

1 **Author’s contributions**

2 JD, JLP and AM designed and wrote the concept note and the FOI request.

3 JD managed the project, contacting Trusts and collating the data.

4 JD and AD analysed the data.

5 JD, JLP and AM edited the manuscript and prepared it for publication.

6

7 **Acknowledgments**

8 Not applicable

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