Quantitative Assessment of Visitor and Migrant Use of the NHS in England

Exploring the Data

Main Report

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This is the report of the "Quantitative Assessment of Visitor and Migrant use of the NHS In England: Exploring the data" completed by Prederi in July to September 2013.

The views expressed are those of the authors and do not necessarily represent those of the Department of Health or Government policy.

3 October 2013

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Summary

1 Summary – approach and key findings

This is the summary of the report of the "Quantitative Assessment of Visitor and Migrant Use of the NHS in England: Exploring the Data", 3 October 2013.

The approach and key findings are presented first. The detail is in the Main Report that follows this Summary section. Definitions of the terms used in this summary are provided in Annex A.

1.1 Approach

This study is looking at the **cost to the NHS in England of providing services to people who are not 'ordinarily resident'**[1] and therefore may not be entitled to healthcare from the NHS free at the point of delivery. It is also looking at groups who may be charged for services in future.

The groups who are **in-scope** of the analysis are: visitors and short-term migrants who are in England for less than a year; students; some non-permanent residents from the EEA[2] who are not settled in the UK; 'irregular migrants'; and 'health tourists'. Also included in the analysis are people from outside the EEA who are resident for more than a year but who are not settled in the UK – typically people with a visa that gives them the right to be in the UK for certain purposes for a set length of time.

Groups who are **not in scope** are migrants who are settled in the UK and some non-permanent residents who are currently eligible for free healthcare. The migrants or non-permanent residents who are currently eligible for free healthcare and for whom there are no proposals to change that eligibility, are principally EEA nationals residing to work, and also those present under humanitarian immigration provisions (refugees and asylum seekers).

The analysis is a top-down estimate based on data from the Census 2011, the International Passenger Survey 2012 and Immigration and other statistics from the Office of National Statistics, the Department of Health and the Home Office. The costs are 2012-13. These are the best available data in the public domain at the time of the analysis (July and August 2013).

The visitor numbers and population estimates have been adjusted to account for the various durations of stay in England to derive a **daily equivalent population** ie the number of people present in England on an average day. This has then been analysed by age and gender to enable the populations to be associated with the relevant health costs.

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[1] Ordinarily Resident (OR): Eligibility for OR is assessed on a case-by-case basis. An individual is OR if they can prove that they are lawfully and properly settled in the UK for the time being. In reality this is assessed using factors such as whether an individual is employed, is a settled resident and the length of time they have been in the country. The individual must be legally entitled to live in the UK.

[2] European Economic Area ie the European Union plus Iceland, Lichtenstein, Norway and (depending on the detail) Switzerland.

Assumptions have been made to allow for differences in underlying **health needs**, using data from the Census, and for differences in the **ability to access the NHS** during the relevant length of stay.

The estimated costs are based on an apportionment of current **total expenditure of NHS England in 2012/13**, covering primary and secondary care. These costs of the NHS services provided to visitors and migrants include fixed costs and other overheads.

Under current domestic and EEA charging rules, **not all of these costs are chargeable to patients**. GP care, A&E and some public health services are available to all free of charge at the point of delivery. Most visitors from the EEA are covered under the EHIC[3] scheme for most services and there are reciprocal arrangements with some countries (notably Australia and New Zealand) to provide urgent care. **The rules are complex** and Annex B summarises the extent to which different visitor and migrant groups may be eligible for free treatment in NHS hospitals.

We have made some estimates of the costs that appear to be **chargeable to patients**. These estimates do not take account possible policy decisions to apply higher or lower charges to those who should pay. Nor do the estimates look at how different charges could change the overall use of the NHS.

Not all the sums that are chargeable are collected as revenue for the NHS. We have looked at the likely rates of identifying people who should be charged, the number of those identified who are then invoiced, and how much of the invoiced sum is collected.

This study forms one part of the 'audit' announced by the Secretary of State at the launch of the consultation. The audit has two phases. Phase 1 is a qualitative assessment based on discussions with clinicians and managers in NHS Trusts and in primary care[4]. This study, Phase 2, is a complementary, top-down quantitative assessment that has, where possible, drawn on the findings from Phase 1.

The depth and completeness of our **analysis has been constrained by the time limitations as well as limitations on the data**. The Department of Health is considering what further work is required to assess the policy options.

[3] European Health Insurance Card

[4] Creative Research, Qualitative Assessment of Visitor and Migrant Use of the NHS in England, DH, October 2013

1.2 Key Findings

The **summary findings** of the study are set out in the tables below. Although the results are presented as single figures, they are points within likely ranges and are subject to various estimating errors. Numbers in the tables and charts may not add exactly due to rounding.

1.2.1 Regular Visitors and non-permanent residents

Table 1 is about **regular visitors and non-permanent residents from the EEA and non-EEA**. This shows our estimates of the annual gross cost to the NHS of the expected use of services by lawful visitors and temporary migrants in the normal course of events (ie routinely arising health needs while here, for which the migrant needs access to NHS services, with or without charge according to current rules).

The table shows that of a daily equivalent population of just under two million, about three-quarters are from non-EEA countries. Non-EEA temporary migrants, mostly in the country to work or study, account for the larger proportion of the total.

The cost per head is the average for that population group of migrants or visitors. It is weighted to adjust for the demographic profile of that group, for differences in health needs and for differences in the ability to access services. This is explained further in chapter 5 below. Expats appear to have the highest average cost per head in the daily equivalent population.

Table 1: Summary of Regular Visitor and Migrant Use of the NHS

Visitor/Migrant Group	In-scope Population (Daily Equivalent, 000s)	Gross Cost (£M)	Weighted average Cost Per Head (£)
Total EEA	**443**	**261**	**588**
Non-EEA			
Visitors (<3 Months)	170	76	449
Temporary Migrants (>3 months, <12 months)	55	49	884
Temporary Migrants (>12 months)	634	521	822
Students (any time period)	603	430	713
Total Non-EEA	**1,461**	**1,075**	**736**
Total Expats	**65**	**94**	**1,449**
Total	**1,969**	**1,430**	**726**

Source: Prederi model

To this baseline cost and use we need to add the impact of groups whose levels of use and resulting cost of healthcare are exceptional. These include irregular migrants (who remain here unlawfully and whose health needs and access are very uncertain and may be untypical of migrants more generally) and 'health

tourists' whose explicit intentions result in higher than normal usage and higher costs per case.

1.2.2 Irregular Migrants

The next table shows the estimated gross costs of the use of the NHS by **irregular migrants**, a group that includes Failed Asylum Seekers (FASs), over-stayers and illegal migrants. These numbers are **very uncertain** and based on historical population estimates, constrained by the lack of detailed up to date statistics from the Home Office. This calculation takes account of assumed higher individual health needs and assumed reduced access to services. The FASs in receipt of support, who are exempt from charges for secondary care, are a small proportion of the total.

Table 2: Irregular Migrant Use of the NHS

Migrant Group	In-scope Population (Daily Equivalent, 000s)	Gross Cost (£M)	Weighted average Cost Per Head (£)
Irregular Migrants			
Irregular migrants excluding supported FASs	*564*	*322*	*571*
Failed Asylum Seekers – in receipt of support	*16*	*8*	*531*
Total - Irregular Migrants	***580***	***330***	***570***

Source: Prederi model

1.2.3 Health Tourists

The definition of **health tourists** can vary widely. Based on the findings of the Creative Research study, we have focused on two groups, namely:

- **Deliberate intent**: people who have travelled with a deliberate intention to obtain free healthcare to which they are not entitled, and therefore use the NHS to a greater extent than they would routinely need during their limited stay. This is typically for urgent or emergency hospital treatment sought on arrival, usually but not always as a one-off, and may include maternity care.
- **Taking advantage**: frequent visitors registered with GPs and able to obtain routine treatment including prescriptions and some elective (non-emergency) hospital referral

As with any irregular activity the numbers are very uncertain and are plausible ranges rather than distinct estimates. These numbers should be used with caution. The table below sets out our estimates, which are plausible ranges of the additional costs, generated by these two groups, over and above the normal use of the NHS by visitors and other migrants.

Table 3: Health Tourism

Health Tourism	Plausible additional cost (£M)	
	Central Estimate	Range
Incremental cost of **deliberate health tourism** for urgent treatment	**60-80**	**20-100**
Incremental cost of regular visitors **taking advantage**	§[5]	**50-200**

Source: Prederi model

1.2.4 Summary of gross costs

We now have estimates for three different groups – the regular visitors and migrants, making normal use of the NHS during their stay; the irregular migrants, about whom there is considerable uncertainty; and people who are deliberately misusing the NHS or taking advantage of the relatively easy access – for this group as with all irregular activity the estimates are very uncertain. The groups are summarised in the table below

The table shows that the **daily equivalent population of visitors and temporary migrants is around 2.5 million and the costs are about £1.8 billion for the normal use of the NHS**. We think that this probably in the range £1.5 billion to £1.9 billion. On top of this, there is a plausible range of around £100m to £300m attributable to health tourism.

Table 4: Summary of Visitor and Migrant Use of the NHS

Visitor/Migrant Group	In-scope Population (Daily Equivalent, 000s)	Gross Cost (£M)	Weighted average Cost Per Head (£)
Total EEA	443	261	588
Total Non-EEA	1,461	1,075	736
Total Expats	65	94	1,449
Total Regular Visitors and Migrants	**1,969**	**1,430**	***726***
Total Irregular Migrants	*580*	*330*	*570*
Total "normal" use of NHS	**2,549**	**1,760**	**690**
Deliberate health tourism for urgent treatment	§[6]	60-80	§
Incremental cost of regular visitors taking advantage	§	50-200	§
Total – 'normal' use plus abuse and misuse	§	**1,870-2,040**	§

[5] § - Unable to estimate
[6] § - Unable to estimate

Source: Prederi model

1.2.5 Chargeability under current rules

We need to make a final set of calculations to assess what sums are chargeable to patients. Within the identified groups of visitors and migrants, some are exempt from charges (e.g. people who are 'ordinarily resident' under the rules). Then for those who are chargeable, charges do not apply to all areas of healthcare (e.g. nobody is charged for primary care or treatment in Accident & Emergency).

Chargeability is based on complex rules that NHS staff must apply on a case-by-case basis. When the complexity of the rules on charging is overlain on the uncertainty inherent in the visitor and migrant numbers, the estimates for what is chargeable become very uncertain when broken down in detail. We have therefore only been able to make a provisional assessment at this time.

In the tables below, the daily equivalent population is shown for various migrant and visitor groups. For each group the estimate of the gross cost is given. These estimates of gross costs cover all of the primary and secondary services that the age-weighted population are likely to require, taking account of lengths stay and health need as discussed above. In the final column of the table is an initial estimate of the sums that might be chargeable to individual patients under the current rules. These charges are predominantly for General & Acute and Maternity care in NHS hospitals for patients who are not otherwise exempt. The estimate of the potentially chargeable values is subject to further uncertainty since the model does not capture the full complexity of the eligibility rules.

Table 5: Summary of potential charges to individuals from EEA countries (current rules)

Visitor/Migrant Group	In-scope Population (Daily Equivalent, 000s)	Gross Cost (£M)	Costs potentially chargeable to individuals (£M)
EEA			
EEA visitors and non-permanent residents	**443**	**261**	**29**
British Expats living in the EEA (here <3 months)	*32*	*44*	*5*
Total Visitors and non-residents from EEA countries	*475*	*305*	*34*

Source: Prederi model

Table 5 shows that in the case of EEA nationals, most of the cost is a recoverable charge due from an individual's home country (Member State) where that state retains competency for the healthcare costs incurred by their citizens. This applies in particular to short term visitors and students using EHIC cards, and state pensioners (under the S1 scheme).

On the face of it, the sum that appears to be potentially recoverable from other member states under the EHIC scheme is considerably more than the amount currently recovered by DH. More analysis is required to unpick the rules of exactly what is recoverable as the detailed arrangements vary from state to state.

The following table sets out the equivalent information for people who are visiting or temporarily resident from non-EEA countries.

Table 6: Summary of potential charges to individuals from non-EEA countries (current rules)

Visitor/Migrant Group	In-scope Population (Daily Equivalent, 000s)	Gross Cost (£M)	Costs potentially chargeable to individuals (£M)	
Visitors (<3 Months)	*170*	*76*	*21*	
Temporary Migrants (>3 months, <12 months)	*55*	*49*	*22*	
Non-EEA - Temporary Migrants (>12 months)	*634*	*521*	*75*	Under consultation[7]
Non-EEA Students (any time period)	*603*	*430*	*19*	
Non-EEA nationals	***1462***	***1076***	***137***	
British Expats from Non-EEA countries	*34*	*50*	*19*	
Total from Non-EEA countries	**1,496**	**1,126**	**156**	

Source: Prederi model

Table 6 shows the **potentially chargeable sums under the current rules**. We explore later how far this is actually collected as revenue for the NHS. The table also highlights the main groups whose eligibility for free health care is the subject of consultation.

We have not shown in Table 6 the potential income from irregular migrants. There are two reasons. First, the estimates for gross costs (£330m) for the use of the NHS by irregular migrants are very uncertain. Second, we would expect many irregular migrants to have no means to pay for chargeable care. To show a large chargeable figure here would give a misleading impression of what revenue is potentially realisable.

The estimates of the chargeable income also exclude the potential charges that might be made for health tourism, which is an additional cost to the regular use of the NHS. It may be reasonable to assume that charges might be made for 'deliberate intent' types of health tourism, since these appear from the Phase 1 evidence to occur mainly in secondary care settings in hospital. However, it seems likely that much of the 'taking advantage' type of tourism is in primary

[7] These are groups where the proposals would change the exemption from 'ordinarily resident' to 'permanently settled' in the UK, which would bring them into the scope of charging.

care settings. In the absence of better evidence we have not made an estimate of chargeability.

1.2.6 Collecting the charges

Having derived some estimates of the sums that could potentially be chargeable to individuals, we have then looked at how these relate to the amounts that are actually billed to individuals by Trusts. A previous DH study has shown that only about £23m is collected of the £57m that is invoiced, a realisation rate of 40%. The £57m represents income from non-EEA patients, so this represents about 37% of the chargeable sums from non-EEA patients as calculated in Table 6 Based on evidence from Phase 1, this suggests to us that about 43% of the chargeable patients are identified as being chargeable and perhaps 85% of the identified cases are subsequently invoiced. Overall, **the indications are that Trusts collect about 15% of the sums that are potentially chargeable to non-EEA patients** (excluding irregular migrants). These figures are uncertain and should only be taken as indicative of the scale of under-collection rather than a sound estimate.

1.2.7 Note of caution

All of the estimates presented are subject to varying degrees of **uncertainty**, relating to the numbers of people and their behaviour. The estimates for the irregular migrants are very uncertain and based on out of date population estimates. The estimates for health tourism, as for any unlawful activity, are impossible to estimate with confidence and are a structured judgment. The estimates for chargeability are also uncertain because of the complexity of the rules. **The estimates are presented as the best that can be made at present, recognising that they are based on incomplete data, sometimes of varying quality, and a large number of assumptions. The analysis is intended to inform policy development around visitor and migrant access to NHS, alongside the DH consultation and work with the NHS.**

Main Report

2 Introduction and background

2.1 Introduction

Following the announcement in the Queen's Speech on 8 May 2013, which set out measures to clamp down on those from overseas who abuse UK public services, the Department of Health (DH) is examining access to the NHS by temporary migrants and visitors to England. A public consultation was launched on 3 July 2013 about how the recognised weaknesses and issues might best be addressed in the NHS in England. The proposals cover a range of options including extending powers to charge to a wider group of migrants in different settings as well as improving practices relating to the charging and recovery from EEA and non-EEA visitors and migrants using the NHS. The Government will be responding to the consultation later this autumn.

2.1.1 The brief

When launching the consultation the Secretary of State announced an 'audit' of the costs of the use of the NHS by those who are currently chargeable and those who might be in future. This is the requirement behind this project. We have been specifically asked to provide:

- "An estimated cost of the current use of the NHS in England by visitors (including health tourists) and non-permanent residents (temporary residents including workers students and others), split by EEA and non-EEA residents
- An estimate of the future costs to the NHS if the current overseas visitors charging system continues.
- How these estimates will change in the future alongside changing composition of migrant users in the identified sub-groups and impact of external factors"
- For each group for which there is an estimated cost this should show the use of Primary, Secondary and A&E services

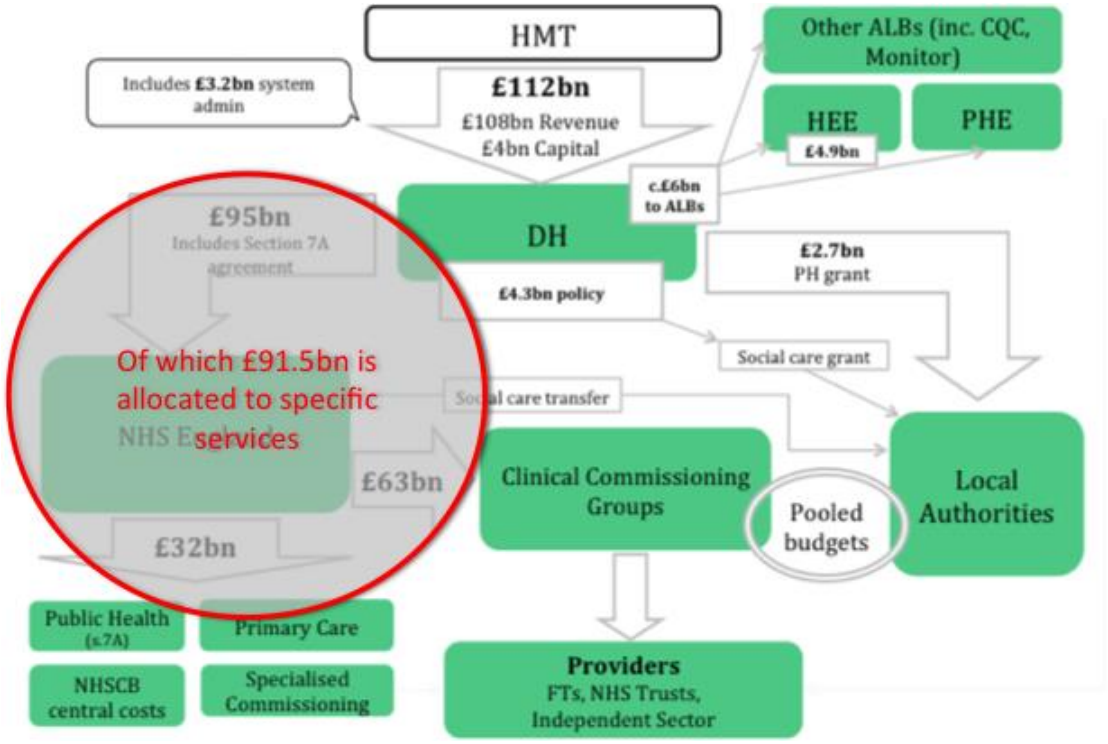
This is not an audit in the traditional sense but an independent assessment of the likely numbers and costs as set out in our brief above. The estimates are presented as what was achievable in the timescale to meet the terms of reference. The analysis deals with a number of complex and contentious topics and the results are presented as the best that can be made at present, recognising that they are based on incomplete data, sometimes of varying quality, and a large number of assumptions and judgments. The analysis is intended to inform policy development around visitor and migrant access to NHS, alongside the DH consultation and work with the NHS.

2.2 Scope

The scope of this review is England since devolved administrations are responsible for health services in other parts of the UK. England accounts for about 84% of the population of the UK but 94% of visitors and 94% of non-UK born people at the time of the Census in 2011.

Within the DH spending total, we have looked at most of the expenditure of NHS England. This accounts for £91.5bn of £95bn spending by NHS England, which in turn makes up most of the £112bn public expenditure on the health system in England. This is illustrated in the diagram (provided by DH) below.

Figure 1: Health Expenditure in England



Source: Department of Health

The NHS England expenditure excludes capital and revenue grants (£203m), which are not allocated to services. The health spending outside the NHS England total is mainly system overheads, some social care and public health services. There seem to be few direct links between the visitor and migrant populations and this expenditure and it was not included in the brief for this study.

It could be argued that some public health expenditure is attributable to the visitor and migrant populations. Public health expenditure covers activities such health improvement initiatives eg smoking cessation, screening and immunisation. These services are not likely to be used by short-term visitors and there is evidence that uptake of public health (PH) services, especially screening, is lower amongst long-term migrant groups. The exception is port health screening, which is for migrants or visitors, but these costs are relatively small. (A 2011 review of border TB screening estimated the cost of port health

screening services to be £2.5 million.[8]) Therefore apportioning PH costs proportionately to the size of the short-term visitor/migrant population would overestimate their resource use.

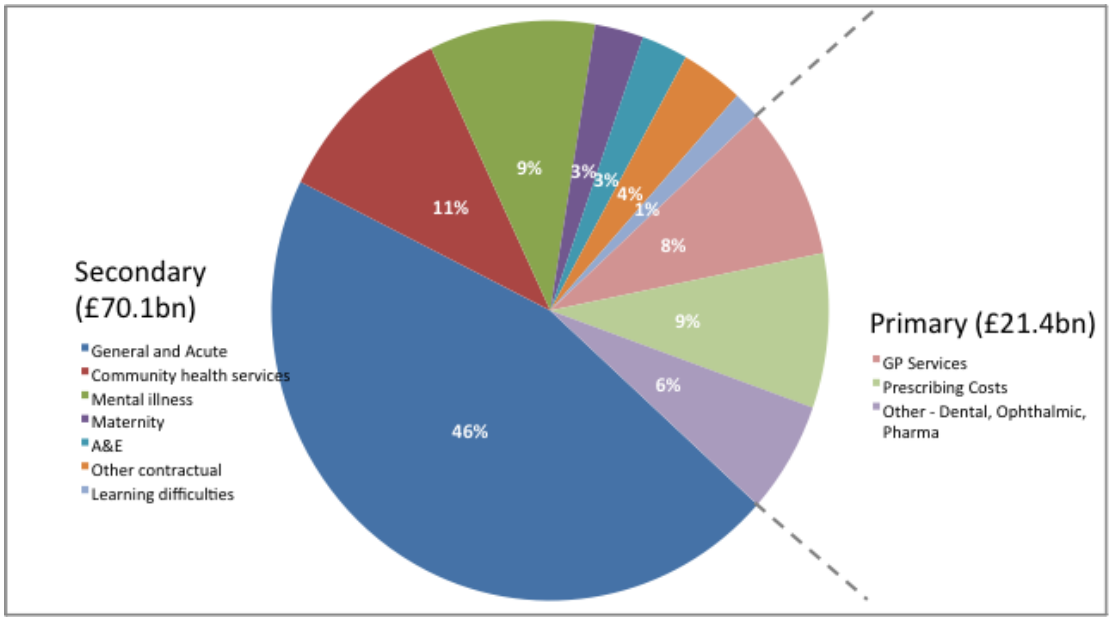
This may change in the future as more services fall within public health budgets. For example, from 2015 health visiting will be commissioned by Local Authorities using public health funding. It is likely that short-term migrants will access these services if they have children under 5. This may have to be factored into future analyses if it is material to the area under investigation.

It is important to distinguish PH services from services to treat infectious diseases such as TB and HIV which under the current rules are not chargeable and will fall under NHS treatment costs not PH services.

2.2.1 Composition of the in-scope expenditure

The costs in scope of the analysis are the operating costs of the health services that are provided by NHS England. In 2012-13 the cost of these services amounted to £91.5Bn (excluding capital and revenue grants (£203m) which, as noted above, are not allocated to services) based on the DH annual report and accounts for 2012-13[9]. We have shown below how this is made up.

Figure 2: Analysis of NHS England expenditure



Source: Department of Health Accounts 2012-13

The largest single element is Secondary – General & Acute services, which, if they are provided in an NHS hospital, can be chargeable to patients who are not

[8] Home Office UK Border Agency. Screening for Tuberculosis and the Immigration Control. UK Border Agency review of current screening activity 2011. (Central Policy Unit).

[9] Department of Health, Annual Report and Accounts 2012-13, 17 July 2013

'ordinarily resident'[10] in the UK. (For the details see Table 7: Eligibility for free NHS hospital treatment)

By using the costs we have, we believe we are incorporating the relevant overheads associated with healthcare. The overall figures we use for health services contain a share for the management of hospitals and other providers. They also include the costs of commissioning.

2.3 Context

Launching the consultation, the Secretary of State for Health made a statement on migrant access to the NHS on 3 July 2013, saying:

> "Our health system is very generous to overseas visitors, perhaps one of the most generous in the world. We allow people who are living here temporarily to use the NHS and exempt many of them from charging, while any visitor, including tourists, can visit a general practitioner free of charge. These sorts of services are often not available for our citizens when they are abroad.
>
> The NHS struggles to identify and recover the cost from those not entitled to free treatment. NHS resources, both financial and clinical, are used to treat and care for people who have no long-term commitment to our country and should contribute towards it."[11]

2.3.1 Initial reactions to the consultation

The announcement received wide publicity and there was a wide range of responses. Even those closely involved, like GPs had contrasting views. On the one hand Dr Clare Gerada, Chair of the Royal College of General Practitioners said:

> "We must make sure that the response is proportionate. What we don't want to do is to put people at risk - not just the migrants but also us. People use the NHS if they've got infections. We don't want people wandering around [with infections] for fear of being charged at the GP surgery.
>
> I don't think we should be turning the GP surgery into a border agency. We should be making sure people that do feel they're ill can come and access us because we don't want people who've got TB or HIV or any infectious disease - or anybody that believes themselves to be ill - to be frightened of seeing a GP."[12]

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[10] Ordinarily Resident: Eligibility for OR is assessed on a case-by-case basis. An individual is OR if they can prove that they are lawfully and properly settled in the UK for the time being. In reality this is assessed using factors such as whether an individual is employed, is a settled resident and the length of time they have been in the country. The individual must be legally entitled to live in the UK.

[11] Hansard 3 July 2013: Column 54WS

[12] BBC website, 3 July 2013, Reaction to "health tourism" plans, http://www.bbc.co.uk/news/health-23159485

On the other hand, London GP Dr Ellie Cannon said:

> "We already have a system in place to check whether patients are in the right catchment area and, if not, they're asked to leave and find a new practice. I don't see why it would be any different for health tourists.
>
> Of course it's only human to treat people in need of emergency care - I'd treat someone in the street - but we're talking about those who are actively seeking out obstetric care or other kinds of treatment.
>
> It's all well and good being liberal and caring and saying "we'll treat anyone" but we have to make cost-savings where we can so the NHS is there for everybody"[13]

Besides the use of emotive language such "health tourist", "immigrant" and "emergency care", there is a problem in understanding the numbers. This problem is not unique to health or immigration, but the cost of health tourism was discussed on the Today programme on 14 August as an example of the confusion around the use of statistics.[14] The essence of the issue is that the lost revenue under debate is measured in 10s or 100s of £m; whereas the cost of the NHS in England is over £100bn. We would note that while £30m may be dismissed as "the equivalent of just two hours of the NHS's annual spending"[15] it is more than the annual budget of Parkinson's UK.

2.4 Current rules

The current rules for visitors and migrants accessing health care from the NHS are complex. We have summarised them in annex 16. The key points are:

- NHS health care is available without charge to people who are "ordinarily resident" in the UK - OR, which is a much easier requirement to meet than being a permanent resident of the UK
- All people can be seen by a GP without charge and will receive free emergency treatment inside an accident and emergency department or equivalent (but not emergency treatment provided after admission to hospital), as well as free treatment for Sexually Transmitted Infections including HIV; treatment for most communicable diseases; family planning services; and care due to being detained under the Mental Health Act
- There are some reciprocal arrangements, notably with Australia and New Zealand, but also with some British overseas territories and countries from the former Soviet Union and former Yugoslavia. These allow visitors from those countries to receive some treatment free of charge. Otherwise, people from outside the EEA are expected to pay for their treatment in NHS hospitals (other than the free to all services).

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[13] As above

[14] See Full Fact website http://fullfact.org/articles/nhs_foreign_health_tourists_costs-29119

[15] Quoted on the BBC website, 3 July 2013, http://www.bbc.co.uk/news/health-23156403

- People from the EEA are managed differently from people from outside the EEA; under EU law costs for any medically necessary care for visitors from Member States or for those studying are recoverable by the UK from the individuals Member State under the EHIC scheme. Similarly costs of those residing as a state pensioner are recoverable under the S1 scheme. The NHS funds the treatment of anybody residing as a worker (or job seeker) as the member state in which an economically active EEA national works is 'competent' for funding his or her healthcare.
- People with irregular status will not usually be entitled to care unless they are asylum seekers, victims of human trafficking, children in local authority care or supported failed asylum seekers or it is for the free to all services.

The eligibility for free treatment in an NHS hospital is summarised in the following table[16]

Table 7: Eligibility for free NHS hospital treatment

Categories of people living in the UK who may or may not be eligible for free NHS hospital treatment
The following groups are all likely to pass the current 'ordinary residence' test and therefore be entitled to free NHS hospital treatment.
British nationals who have a right of abode and who live in the UK: this will include immigrants and/or their descendants who have applied for, and been granted British citizenship.
Migrants with 'indefinite leave to remain' (ILR) who are living in the UK on a permanently settled basis.
European Economic Area (EEA) temporary residents: EEA nationals (and their family members) who are resident in the UK but have not yet acquired permanent residence in the UK. An EEA national has an initial right to reside in the UK for three months. They have an extended right beyond that if exercising 'EU treaty rights' as a worker, a self-employed person, a job-seeker, a student, or a self-sufficient person. Until an EEA national acquires 'ordinarily resident' status, they would be chargeable for their hospital treatment unless covered by an exemption under the charging regulations, e.g. they have an EHIC card or are students. In practice this means that most EEA nationals are entitled to free treatment.
EEA permanent residents: EEA nationals who have been residing in accordance with the above conditions for five continuous years, at which point they acquire a right of permanent residence in the UK, which means they no longer need to exercise treaty rights in order to have a right of residence here.
Non-EEA temporary residents: people from outside the EEA (and their family members) who have been granted a right of residence for a limited period (usually between six months and five years). They may or may not go on to acquire ILR.

[16] Adapted from Creative Research's report - Qualitative Assessment of Visitor and Migrant Use of the NHS in England, DH, October 2013

The following groups (with the possible exception of refugees) will not pass the current OR test, so are chargeable except where exemptions from charge in the Charging Regulations apply.
Asylum seekers: anyone who has made a formal application with the Home Office to be granted temporary protection, asylum or humanitarian protection that has not yet been determined. Formal applications are those made under the 1951 UN Convention and its 1967 Protocol and also some claims made on protection from serious harm grounds under Article 3 of the European Convention on Human Rights. A person whose application for asylum (or humanitarian/temporary protection) is accepted becomes a refugee.
Irregular migrants: any non-EEA national who does not have immigration permission to be in the UK.
British expats: British nationals (or others not subject to immigration control in the UK) who are former residents of the UK but who now live overseas.
Visitors: those, of any nationality, who live overseas, but are visiting the UK.

2.5 Consultation

This study has run in parallel with two consultations: one from DH and one from the Home Office. The Department of Health consultation[17] examines who should be charged in the future for using some NHS services; what services they should be charged for; and how the Department can ensure that the system is better able to identify chargeable patients and recover costs. The DH consultation is looking specifically at the NHS in England, recognizing that changes would also need to be made in the devolved administrations. The Home Office consultation[18] considers three specific elements of UK-wide immigration proposals, namely:

- redefining qualifying residency
- using a visa levy to ensure some migrants make a fair contribution
- extending charging to primary care services.

As the Secretary of State for Health told Parliament:

> "We know that this is a significant problem, but to tackle it we need, for the first time, to understand just how large it is. We have commissioned a two-phase independent 'audit' of NHS use by visitors and temporary migrants. Reporting in the autumn, this work will use information gathered directly from staff on the frontline to estimate the scale of the challenge and the size of the financial burden."

[17] Sustaining services, ensuring fairness: A consultation on non-permanent resident access and their financial contribution to NHS provision in England, Department of Health, 3 July 2013

[18] Controlling Immigration – Regulating Non-permanent resident Access to Health Services in the UK Consultation document, Home Office, 3 July 2013

2.6 Phase 1 report

Phase 1 of the independent 'audit' is a qualitative assessment, carried out independently by Creative Research. This has examined a structured sample of NHS Trusts and seven in depth case studies to establish the nature of the use of NHS services by overseas visitors based on frontline observations and to find out how these are managed by the NHS trusts.

The key points of the report[19] include:

- The complexity of the current rules undermines efficiency and the ability of the NHS Trusts to identify and charge people correctly
- There are differences in the application of the rules in primary care practices
- Data about visitors and migrants is not collected systematically
- NHS Trusts approach the identification and charging of visitors in different ways. Many Trusts involved in the study are not in a position to identify and charge patients
- Overseas Visitor Managers in Trusts acknowledge that not all chargeable patients are being identified, even in Trusts that are actively trying to identify chargeable patients
- There is considerable scope to increase rates of identification and recovery of costs.

The Phase 1 study has had to rely on the voluntary cooperation of the NHS Trusts. This means that the quantitative values in the results are not appropriate to apply observations directly to the populations that we have used in our analysis. The results do however demonstrate plainly that:

- Even where NHS services are being used legitimately by visitors and migrants NHS Trusts do not identify people who should be charged for healthcare and the Trusts realise very little of the income due
- There is evidence of abuse of the system in a variety of settings such as 'health tourism'.

In short, Phase 1 demonstrates that there is a problem with the application of the rules under the current charging arrangements and that there is deliberate abuse of the arrangements. This study, Phase 2, attempts to quantify the scale of the legitimate use of the system, to work out a plausible estimate of the cost of the abuse and to scale the direct financial impact of changing the rules governing Ordinarily Resident.

[19] Creative Research, Qualitative Assessment of Visitor and Migrant use of the NHS in England: Observations from the frontline, DH, October 2013

2.7 Problems with the data

The NHS does not routinely or systematically capture data on the use overseas visitors and migrants make of the NHS in England. The systems are not centrally managed and are run differently by Trusts. In addition, there are well known problems in knowing how many visitors and migrants there are in the UK.

2.7.1 Migration data

The Office of National Statistics (ONS) undertook an improvement programme between 2008 and 2012 [20], which has seen an increase in the amount of data to help understand migration (e.g. the questions in the 2011 Census). However, the benefits take time to flow through to the published information and significant shortcomings remain. The Migration Observatory has produced a lot of helpful material on the issues with the data and the associated implications. The recent comment[21] on the latest ONS statistics shows what has been improved and what remains problematic.

These shortcomings are an issue for a number of policy areas, not just health. The Public Administration Select Committee published on 28 July 2013 its report on Migration Statistics[22] concluding that: "They [migration statistics] are not accurate enough to measure the effect of migration on population, particularly in local areas, and they are not detailed enough to measure the social and economic impacts of migration, or the effects of immigration policy. Current sources of migration statistics were established at a time when levels of migration were much lower than they are today. These sources are not adequate for understanding the scale and complexity of modern migration flows, despite attempts to improve their accuracy and usefulness in recent years."

We recognise the issues raised by the PASC, so we have where possible used the 2011 Census and the International Passenger Survey (IPS) for the visitor and demographic data; we have then supplemented this data with information from the Immigration Statistics and some other sources. The reasons are explained in section 4.3 about the approach to the analysis; the way these sources are used is set out in section 4.4 about the model; and we look at some of the shortcomings and implications in Chapter 9.

2.7.2 Characteristics of the data

One important characteristic of the data is that there are four distinct types of population in the study:

- The mainstream visitors and regular migrants from the EEA and Non-EEA countries. Here there are very big flows of people travelling in and out of the country (around 30 million visitors a year who are in the country for

[20] Office of National Statistics, Migration Statistics Improvement Programme Final Report, March 2012

[21] http://www.migrationobservatory.ox.ac.uk/commentary/untangling-net-understanding-why-non-permanent residents-come-and-go

[22] Public Administration Select Committee (PASC), Migration Statistics, Seventh Report of Session 2013–14, HC 523, 28 July 2013

short periods of time) and big stock (some 7m million people born outside the UK are shown usually resident in the Census). The EEA though is very different from non-EEA in terms of rules and other characteristics e.g. tendency to take up British citizenship; and the visa information only relates to non-EEA citizens
- People with irregular migrant status, such as Failed Asylum Seekers, Visa Overstayers and illegal migrants are considerably smaller flows and stock but with considerable uncertainty about their numbers
- British Ex-Pats are by definition not in the Census as Usual Residents, there are smaller flows and they are hard to identify
- Health tourists – people visiting England for the primary purpose of accessing the NHS without paying – are somewhere among the flows of the other populations, but are not readily identifiable by the information collected about visitors and migrants.

These implications are discussed further in the rest of the report.

2.7.3 Other limitations

Running this study in parallel with the consultation has limited the time available and this has created some constraints on the study, including:

- A cut-off date for new data of 20 August
- Reduced time to validate data sources so reliance on proven data such as the Census and IPS
- No time to generate specific reports from ONS
- No time to engage widely with other researchers

We recognise that these constraints have limited the extent of analysis and the results are presented with that in mind.

2.8 What this report is not about

As we noted above, this report is about an area that combines two of the most contentious and politically charged areas of British political discussion.[23] For the sake of clarity we want to emphasise that this report is NOT looking at:

- The economic or social case for migration
- How far taxes from visitors or migrants cover the costs of health care
- The cost of implementing any changes to the current charging rules in the NHS
- The wider financial and non-financial consequences of introducing new rules for charging particular groups of visitors or migrants
- The moral case for charging particular groups in the population.

[23] See e.g. Ipsos-MORI, Issues Facing Britain – long term trends, http://www.ipsos-mori.com/Assets/Docs/Polls/Aug13issuesindexslides.pdf

3 Migrants use of healthcare services within the UK. Research Findings.

3.1 Aims

A literature review was carried out to identify research within the medical literature that quantified migrant use of healthcare services within the UK. This was done to assess whether migrants were more, as likely or less likely to use healthcare services than the UK born population and whether numerical values could be placed on migrant healthcare use.

Empirical research was identified through a Medline search, hand searching references of relevant articles and an Internet search.

A full report of the literature review is given in Annex B: Migrant use of Healthcare Services: Findings from the literature. A summary is presented here.

3.2 Findings

Results from quantitative research show that recent migrants to the UK are less likely to be registered with a GP and less likely to be the recipients of secondary care services. This excludes use of Accident and Emergency services where empirical research is lacking. However survey and qualitative data show that migrants may be more likely to use A&E in preference to primary care, especially if they are young and male. This applies to migrants from EEA and non-EEA countries. However the extent of this use is unknown including the scale of use compared to the UK born population, especially within a younger, adult male demographic.

Migrants are not a homogenous group and some have higher healthcare needs than others. For example high rates of anxiety and depression have been shown in some low paid migrant workers and occupational injuries are common in manual migrant workers. Undocumented migrants especially refugees and asylum seekers have high documented physical and mental health needs[24].

However these needs do not necessarily translate into greater use of services. There is very little from the quantitative literature that measures attendance/activity rates either in primary or secondary care compared to the non-migrant UK population for specific migrant groups. Available evidence is often equivocal eg primary care consultation rates have been shown to be both higher and lower than those of the non-migrant population[25] [26]. Anecdotally local services have reported migrants as being high users of healthcare

[24] Rechel B. Mladovsky P. Ingleby D. Mackenback J. McKee M. Migration and health in an increasingly diverse Europe. Lancet 2013: 381: 1235-1245

[25] Utiers E. Deville W. Foets M. Spreeuwenberg P. Groenewegen P. Differences between immigrant and non-immigrant groups in the use of primary medical care; a systematic review. BMC Health Services Research 2009; 9: 76.

[26] Norredam M. Nielson S. Krasnik A. Migrants utilization of somatic healthcare services in Europe – a systematic review. European Journal of Public Health 2010: 20: 555-63

resources, not only through high attendance but because language difficulties and different cultural expectations may make consultations longer and more resource intensive eg the need for translation services. However it is also known that migrants have reported facing barriers in accessing healthcare services including language barriers, lack of knowledge of how the system works, perceived unhelpfulness of staff and confusion over entitlement. All this is likely to lead to less use of healthcare, especially routine care, but again it is impossible to quantify by how much. Other factors that may make migrants less likely to use NHS services include access to occupational private healthcare schemes or sufficient income to pay for private care and the willingness to travel either home or another European country to access healthcare there[27].

It is important to note that when studies that measured rates of healthcare use amongst migrant versus non-migrant populations adjusted their findings for underlying need and socioeconomic status on the whole any differences observed in use between the two groups either lessened or went away entirely.

3.3 Health tourism

Empirical knowledge on the magnitude and effect of health tourism is lacking. Research carried out in a third sector provided healthcare setting suggests that it is not an issue[28]. However findings from a review of the general literature[29] show that healthcare providers, both acute trusts and primary care surgeries, anecdotally report abuse of the system of people travelling to the UK to receive medical treatment. No research was identified on healthcare use amongst expatriates.

3.4 Research limitations

Studies assessing migrant healthcare use are limited by poor reporting systems and difficulties in identifying individuals who are born outside of the host country within healthcare databases. European studies show that data availability is a problem across many countries with many having no specific data recording systems[30]. Many studies identify migrants through proxy measures, which can lead to misclassification. There is also a lack of research at a national level and many studies are only applicable to local settings. Additionally studies tend to be cross-sectional in design and give a snapshot of healthcare use that is likely to change over time. Overall findings will mask variations in healthcare use amongst different migrant populations. The focus of academic research within the UK has traditionally been on ethnicity and health, although the effects of being born outside of the UK are being studied more now.

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[27] George A, Meadows P, Metcalfe H, Rolfe H. Impact of migration on the consumption of education and children's services and the consumption of health services, social care and social services. December 2011. National Institute of Social and Economic Research

[28] George et al

[29] Hargreaves S. Jon S Friedland, Alison Holmes. The identification and charging of Overseas Visitors at NHS services in Newham: a Consultation. Final Report. International Health Unit, Imperial College. June 2006.

[30] Health services and the treatment of immigrants: data on service use, interpreting services and immigrant staff members in services across Europe. Kluge U. Bogic M. Deville W. Greacen T. Dauvrin M. et al. European Psychiatry 27 (2012)/S2/S56-S62

3.5 The impact of the findings on the model

Although the findings of the literature review suggest overall that recent migrants are less likely to use UK primary and secondary care services than UK born residents, they do not give rise to a numerical estimation of the likelihood of this use relative to the host population. This conclusion is in line with the work done by George et al. when estimating migrant consumption of health services, who stated:

> "It had been proposed that the initial estimates of migrant consumption of education, health, social services and social care and their costs, would be adjusted in the light of the literature review. However, in practice, the literature did not provide sufficiently reliable data or estimates to do so in a way likely to improve the accuracy of our estimates, so we did not do so."

While we have started from the assumption that migrant propensity to use NHS services (based on cultural preferences) is equivalent to the non-migrant population of the same age and sex we have used the evidence from literature to support the conclusion that there are two adjustments to propensity to use the NHS that can reasonably be made for visitors and migrants. First, the Census has collected data on reported health by country of birth, which we have used as a proxy for health need. (This is explained at section 5.8.1). Second, we decided that we should make an adjustment for length of stay (which would not have been an issue for George et al as they were looking at non-EEA PBS Tier 2 and Tier 4 visa categories where people are typically resident for more than a year).

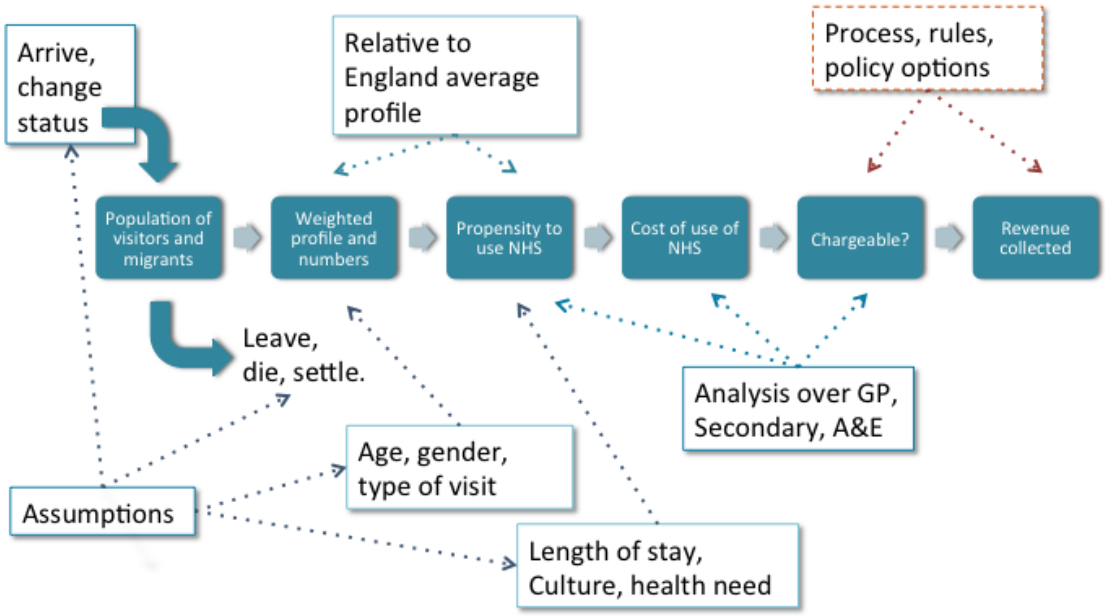
4 Analysis and modelling

This section explains the overall approach to the analysis and the way in which the model was developed and used.

4.1 Overall concept

The way we approached the estimation of the costs of migrants and visitors using the NHS is summarised in the diagram below. We started by trying to work out the daily equivalent population of visitors and migrants ie how many visitors are in England on an average day? We then adjusted the population for the differences in age profile and gender balance compared to the average population in England. Further adjustments have been made to allow for the need to use health services; the desire to use publicly funded health care; and the ability to access NHS services. We then worked out the cost of using the various NHS service categories using the average costs per head. Finally, we explored how the rules on charging for health services and how these are applied, resulting in how much revenue is recovered from patients by the NHS.

Figure 3: Proposed concept of analysis



4.2 Principles of analysis

We have approached the analysis in the following way:

- We have built up the analysis country by country as this seems to be the only reliable way to report on chargeability, since the rules depend on the nationality of the patient
- We have built out from 2011 Census and the International Passenger Survey as these provide the most robust, comprehensive and detailed information. Other information is limited e.g. does not cover EEA and non-EEA or all categories of visitor e.g. the HESA statistics do not cover all types of student visitor. Where further information is required we have used data from the Home Office and other public bodies. All the data we have used is in the public domain with only exceptions being information about DH's outstanding debts from overseas visitors.
- We have simplified the problem and interpolated missing data. The analysis is dealing with a fractal problem in that at every level new layers of complexity are found at the layer below. This is true for the population data, DH costing, definitions of migrant and the rules on eligibility for free treatment. Since information is very often missing at the lower levels, we have been interpolating missing figures. In some cases the analysis uses assumptions to apportion uncertain data within known totals. The result is that the analysis is reasonably robust at the aggregated level, but does become increasingly uncertain as it is broken down.
- Where there is some external data we have used this to check the results e.g. numbers of students in the HESA reports
- We have applied the qualitative evidence where possible; so we have for instance used some information from Creative Research's parallel project and drawn what we can from the literature review
- Basing the main analysis on the Census and the IPS means that separate approaches are needed for irregular migrants (who may not be counted or, if they are counted, they are not identifiable) and British ex-pats (who are either not present in the Census or appear part of the UK nationals).

4.3 Rationale

The reasons that we have adopted this approach include:

- by starting with the total population and the IPS we aim to reduce the chance that separate estimates of independent populations could double count some people or could let some people fall between the cracks
- by trying to use a clear logical framework irrespective of data available we can highlight more clearly the impact of assumptions and weak or missing data can be replaced if it becomes available
- using a disaggregated approach helps to identify specific nationalities or types of visitor or migrant who most shape the results
- using the disaggregated approach should make it easier to assess the impact of the proposed policy changes and therefore help DH to carry policy evaluation later.

4.4 Modelling

4.4.1 Introduction

We now explain how we have modelled the visitor and migrant population. There are five main steps in the model as follows:

1. Countries – about 35 countries (including 9 EEA) which account for over 70% of the visitors and migrants modelled separately plus groups of the rest of the EEA and non-EEA countries
2. Segmentation by purpose of visit, length of stay, age-group and gender
3. Assessment of propensity to use NHS (health x preference x accessibility)
4. Health costs – DH analysis over 10 NHS services
5. Responsibility for funding (UK, other government, self/insurance)

We then look at how some of the issues have been addressed and set out the overall results from the model.

4.4.2 Model specification

The detail of the model is provided in the specification document.[31] The model is a rapid development estimation model. This means that there are a number of points to bear in mind with the approach:

- The model contains a mixture of inputs/assumptions, some at a detailed level, where relevant information exists in a credible and usable form, and some input/assumptions at a less detailed level as the available information is less detailed or unknown.
- The model attempts to avoid spurious accuracy – using granular assumptions where data is not available at the level of granularity.
- All assumptions are documented, together with notes on the reasoning for the values selected and an indication of the influence the assumption has over the final estimates (sensitivity high/medium/low)
- The model is primarily a point estimate tool; as such it is not constructed with a full range of functionality and flexibility.
- The structure is largely fixed based on the structure of the available data.

4.4.2.1 *Scope*

The Scope chapter of the specification document[32] provides the detail on the scope. In summary, the key elements of the scope of the model are as follows:

- Populations within the model represent, or are estimates, for England only, where possible all assumptions relate only to Visitors/Migrants to England.
- Whilst the baseline estimates are for 2013, no actual 2013 data is available. Where prudent the data included will be forecast forward to 2013 levels.
- The model estimates population including the following groups:
    - EEA non-permanent residents and their families, including:
        - Students.
        - Workers.
        - Self-employed.
        - Jobseekers.

[31] Prederi, Specification Document, V0_6. 9 September 2013
[32] Prederi, Specification Document, V0_6. 9 September 2013

        - Economically inactive migrants who do not have a right of residence as a family member.
        - Economically inactive migrants who are state pensioners in another state.
    - Non-EEA migrants and their families, including:
        - Students.
        - Workers.
        - Self-employed.
        - Residents on other basis (e.g. family).
    - British Expats visiting the UK for less than 1 year.
    - Visitors to the UK (EEA & Non-EEA) including:
        - Holidaymakers.
        - Business visitors.
        - Visiting friends or relatives.
    - Asylum seekers.
    - Undocumented Migrants including:
        - Illegal immigrants.
        - Failed asylum seekers.
        - Overstayers.
        - Absconders.
        - Those applying for leave to remain.
    - Health tourists

This list is considered exhaustive and no significant groups of visitors/migrants are excluded i.e. no visitors/migrants groups are excluded, although it should be noted that not all groups are clearly identifiable in the data. The only exception is transiting passengers who are listed in IPS as having a zero length stay and are thus excluded.

The model assesses the costs to the NHS, using costs for the following NHS services:

- Primary – General Practice.
- Primary – Prescribing costs.
- Primary – Other Primary costs (Dental, Ophthalmic, and Pharmaceutical).
- Secondary – Accident and emergency (A&E).
- Secondary – General & Acute.
- Secondary – Mental health.
- Secondary – Community Healthcare.
- Secondary – Learning difficulties.
- Secondary – Maternity.
- Secondary – Other contractual costs.

4.4.2.2 *Treatment of costs and revenue*

These costs incorporate the relevant overheads associated with healthcare, including a share for the management of hospitals and other providers. They also include the costs of commissioning.

The model allocates the responsibility for these costs into five main categories, so costs are covered by one of the following:

- The European Economic Area EHIC agreement.
- The European S1 arrangements
- Other reciprocal arrangements with Nations (Australia and New Zealand).
- The migrant is responsible for the costs.
- The UK is responsible for the costs.

Cost collection processes for the migrant responsible costs is considered as a three step process, the model considers the success of each stage:

- Identify the migrant as not being covered by agreement or UK.
- Collect details and invoice the migrant.
- Pursue & receive payment for the invoice

4.4.3 Design – inputs, calculations and outputs

The central feature of the model is a main database where, for the major data sources and output required, data is gathered and linear calculations are performed in a systematic and graduated manner.

Whilst output remains the overall design objective of the model, much of the structure within the model is driven by the input structure, since there is limited scope to design and collect inputs to any desired specification, other than what information is currently published and available.

Once calculated within the main database, the results can be summarised using either dedicated bespoke output tables or pivot tables. The sheer amount of data and the permutations of output make it difficult to produce all of the potential outputs; therefore pivot tables offer a powerful, almost limitless, option to interrogate the results.

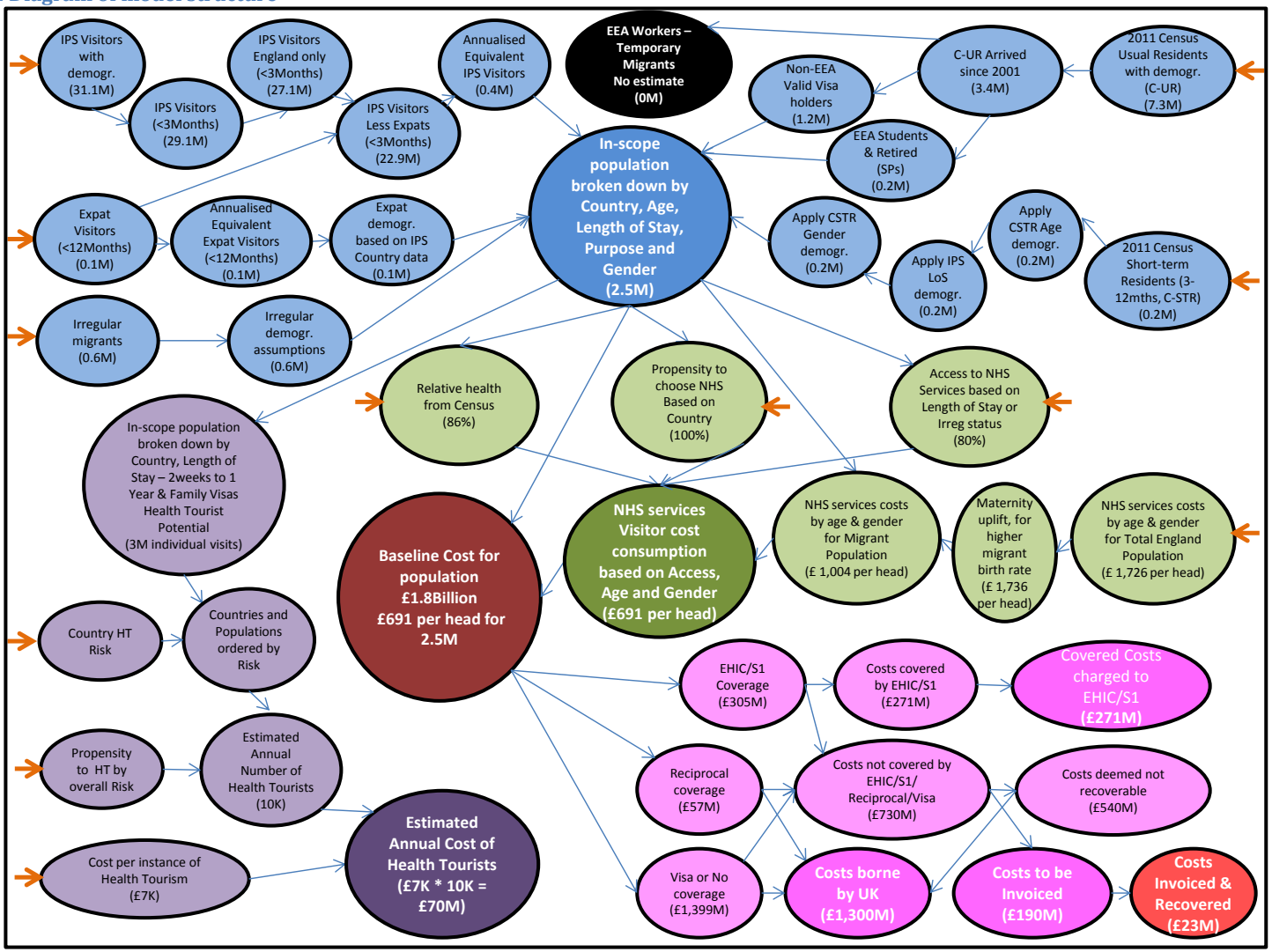
The degree to which outputs are broken down within the main database is determined by the granularity of the inputs and data available, so for certain groups it is not possible to achieve granular output e.g. Expats, Asylum seekers, Health Tourists and irregular migrants.

The model is designed to feature variable (uncertain) elements around some of the key assumptions. For these a range of potential values can be set and the model will iteratively calculate results within this range, to produce a spread of outputs based on this uncertainty. Due to the lack of information around assumptions and estimates, this feature has not been fully developed and only limited iterative variability assessments (Monte-Carlo) have been performed, but the functionality has been retained for possible future use.

Due to limitations on time and resource the model is not designed to be fully flexible, and the range of user inputs is limited. The model is not designed to handle frequent updates of the core data sources. This reflects the relatively static, infrequently updated, nature of the key source data.

The following 'bubble' diagram, Figure 4, is a summary of the model structure (this has been updated to include the results):

Figure 4: Diagram of model structure



4.5 Revenue model

The model has a simplified version of the rules for chargeability that are summarised at 4.4.2 above. Essentially we have separated out the services and the gross cost of the use of those services by the different user groups so that they are grouped into one of four categories:

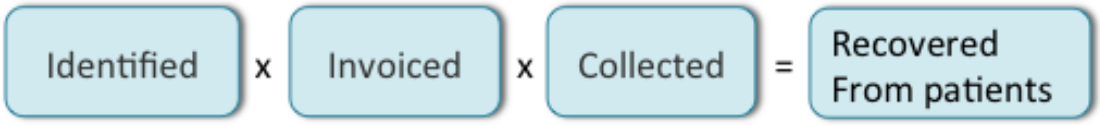
- Costs that are covered by
    - the EHIC scheme
    - a reciprocal arrangement
- Costs that are picked up by the UK government e.g. use of A&E, GP services or non-hospital settings
- Costs that should be charged to patients, calculated as a residual of the other figures.

We have then compared outside the model the costs that appear to be recoverable under the EHIC scheme from other EEA governments.

The costs that are chargeable to patients has been linked to the observed income from Overseas Visitors in the DH Annual Accounts 2012-13 and the values used in the Consultation Document. We have also taken into account the findings from Phase 1, along with information collected in DH from Overseas Visitor Managers.

The framework we have used for revenue collection is:

Figure 5: Revenue Collection



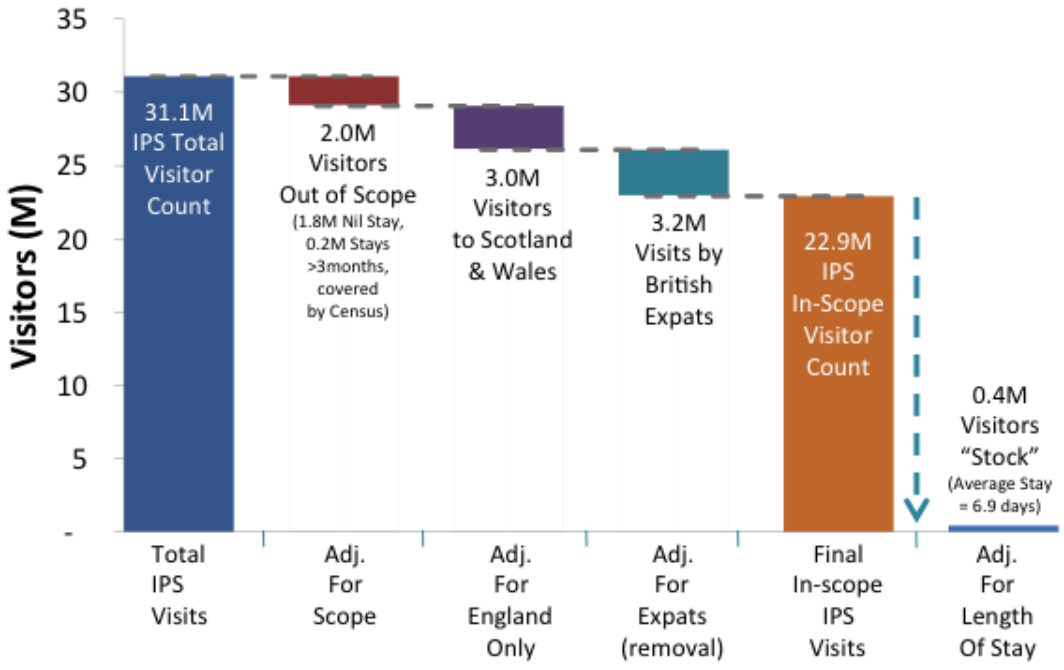
5 Results of the analysis

This section sets out the results from the model. The population figures are rounded to the nearest 1,000 and the gross costs are to the nearest £ million (unless where shown as £ billion in some charts). Costs per head are to the nearest £. Costs are annual at 2012-13 prices.

5.1 Visitors

We start by looking at visitors, excluding British expats (who are dealt with separately to adjust for people returning permanently), as identified in the International Passenger Survey (IPS)[33]. The first point to note is that while there are large numbers of visitors to Britain, around 30m a year, some are not in scope for this exercise – this is an England only review. More significantly, though, most visitors are here for just under a week on average. The equivalent average daily population[34] is therefore much lower – about 0.4m. This is shown in the diagram below.

Figure 6: Daily Equivalent Population of Visitors



Source: Prederi model

[33] International Passenger Survey – a sample survey of passengers arriving at, and departing from, United Kingdom air and sea ports and the Channel Tunnel.

[34] As the ONS explain: "Short-term migration estimates can be used to estimate the impact on the population stock. For example, if four non-permanent residents each stayed in England and Wales for three months, this would be the equivalent of one person for one year, and so the stock count would be 1. Likewise two non-permanent residents staying for six months would give the equivalent of one person staying for one year. In the second example the number of arrivals is half that of the first example, but results in the same stock estimate. Stocks are calculated from the number of stays and the length of stay, so an increase in either can lead to an increase in stocks. Stocks give an average number of non-permanent residents in the country on an average day."

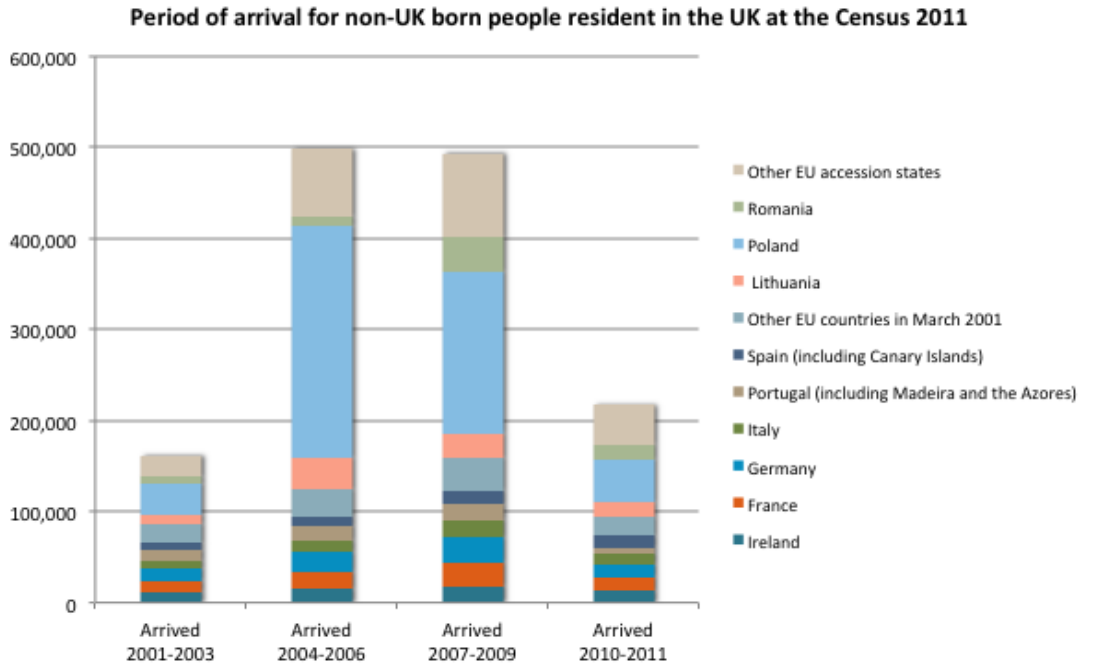
5.2 Short-term migrants (non-EEA) and non-permanent residents (EEA)

We have used the International Passenger Survey to estimate the numbers of short-term migrants, people who are in the country for 3-12 months. This group includes people from the EEA and the non-EEA. The non-EEA migrants will sometimes require visas, but some will be nationals of visa waiver countries. The daily equivalent population is 0.2m, with most people in the 3-6 months category.

We have estimated the numbers of EEA students and pensioners in England as being a daily equivalent population of 0.2m. We have assumed, in discussion with DH, that EEA students are only present in the UK for 9 months of the year, and factored their daily equivalent population to reflect this.

EEA temporary non-permanent residents should include people here to work, study and here reliant on their own means, but while the numbers of students can be discerned from the statistics, it is difficult to identify other migrants. There is some information in the Census about when EEA nationals arrived in the UK, see the diagram below, but this doesn't necessarily equate to whether someone is in the UK temporarily or not.

Figure 7: Periods of arrival of EEA citizens resident in the UK



Source: ONS

In the absence of reliable data, we have not made an estimate for this group. The effect is to treat the EEA non-permanent residents as being Ordinarily Resident, which indeed many may be. The consequence is that there is an underestimate of EEA figures but the scale does not distort the overall conclusions.

5.2.1 Non-EEA migrants in England for more than a year

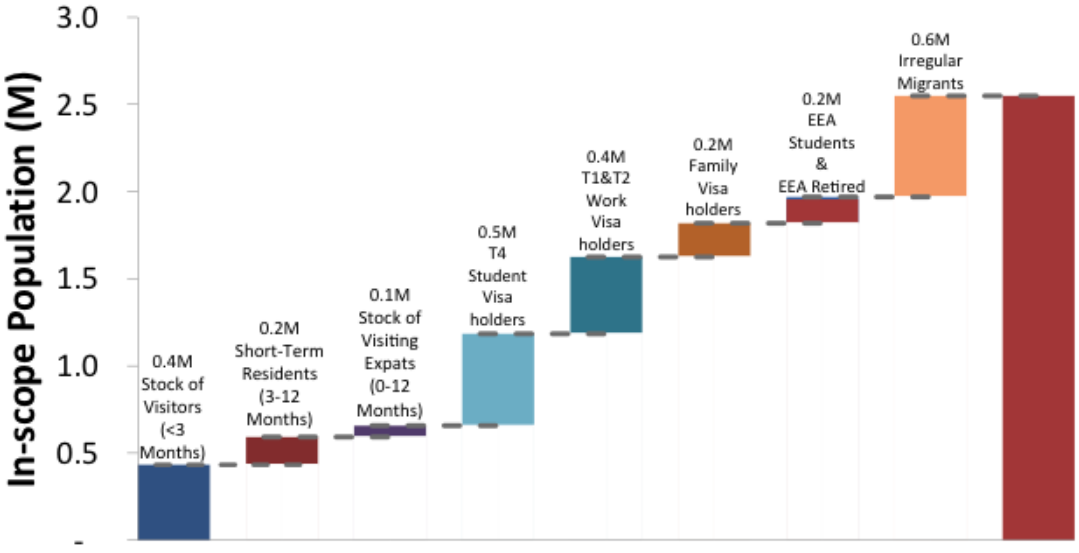
We need to add to the short-term visitors the people who are resident in England for more than 12 months but who are not permanent residents. This group are mainly visa holders, in England to work or study. We estimate that there are the equivalent of about 0.5m students from non-EEA countries; about 0.4m people who are here for work under Tier 1 or Tier 2 visas; and a further 0.2m people here on family visas. We have based these estimates on numbers of visas issued by the Home Office and the Home Office estimates of average visa duration. They have been reconciled with the Census data that we have used elsewhere; this enables us to associate these visitors with other characteristics linked to country of birth.

5.3 Other groups

To the groups of EEA and non-EEA non-permanent residents we need to add visiting expats, ie British citizens who are usually resident overseas. Expats visiting for up to 12 months are estimated to have a daily equivalent population of 0.2m. They have been identified from the IPS. They are discussed more fully in chapter 6 below.

Finally, we need to add the 'irregular migrants'. This group consists of Failed Asylum Seekers, overstayers, and illegal migrants. This is a very uncertain estimate, compromised by the lack of data from the Home Office. Based on the latest generally accepted figures we have estimated there are 580,000 irregular migrants in England. This is discussed more fully in chapter 7 below. This brings the number of people in scope to around 2.5m as shown in the diagram below.

Figure 8: Summary of visitors, migrants and non-permanent residents – daily equivalent population



Source: Prederi model

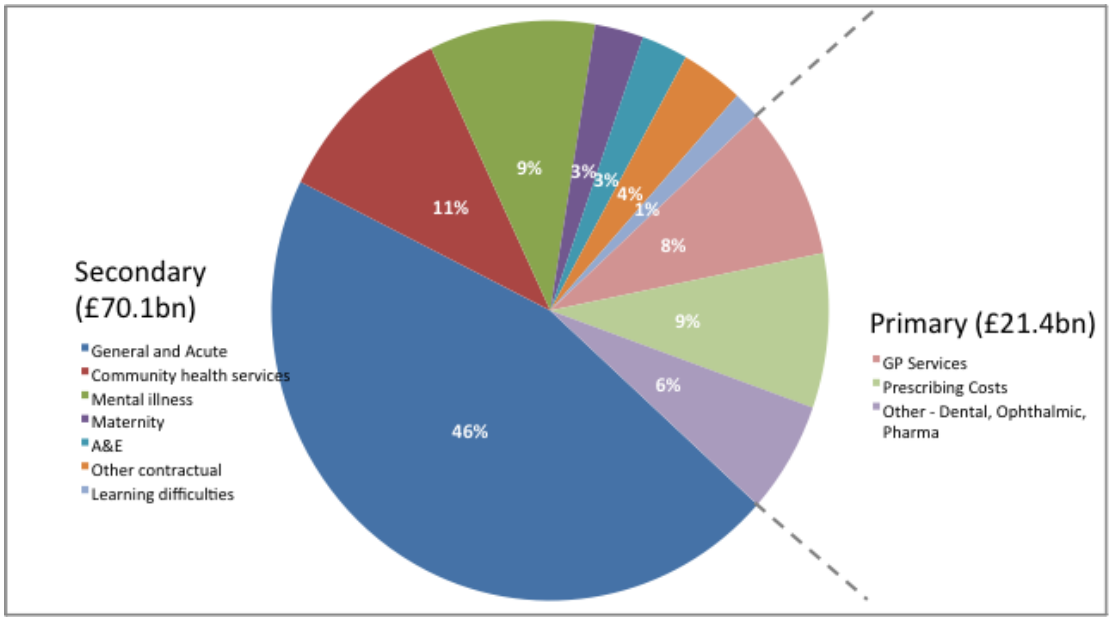
As noted above at 5.2, the EEA non-permanent residents should include some people here to work, study and here reliant on their own means, for whom we have not found reliable data and so for whom we have not made an estimate. The effect is to treat the EEA non-permanent residents (other than students) as being

Ordinarily Resident, which indeed many may be. The consequence is that there is an underestimate of EEA figures but the scale of this underestimate does not distort the overall conclusions.

5.4 NHS costs

The NHS costs in scope of the analysis are the health services that are provided by NHS England excluding capital costs. In 2012-13 these amounted to £91.5Bn and the composition of the expenditure was as shown in the chart below:

Figure 9: Analysis of NHS England expenditure



Source Department of Health

By using the costs we have, we believe we are incorporating the relevant overheads associated with healthcare. The overall figures we use for health services contain a share for the management of hospitals and other providers. They also include the costs of commissioning.

We have used Department of Health information to calculate the average cost per head for each of all health services for the age groups for which we have data in the Census and IPS. We have also calculated the average cost for men and women for each age group. **The overall average cost per head for health services for residents in England is £1,726.**

5.5 Adjusting for migrant birth rate

The Maternity costs have been adjusted for different levels of fecundity in different migrant groups. We have based this on the ONS report, which shows that the Total Fertility Rate for non-UK born women was 2.29 in 2011; for UK-born women it was 1.90. We have assumed that the non-UK born women in scope are similar to the non-UK born women who are settled in England. This is a subtle effect at an overall level, adding £10 per head, **resulting in the overall average cost per head for health services for visitors/migrants in England of £1,736.**

5.6 Adjusting for age and gender

Our estimates calculate the cost of using the NHS by multiplying the daily equivalent population by the average health cost per head. We begin with the average health cost per head for the NHS in England, which means that we have a 2.5m daily equivalent population multiplied by £1,736, which is just over £4.4bn.

We know, however, from the Census and the International Passenger Survey that visitors and migrants have a younger age profile than the resident population in England. In the UK-born population, about 41% are aged between 15 and 44, but about 76% of non-UK born population is in this age range. The contrast is clear in the histograms[35] below.

Figure 10: Age Profile for residents of England

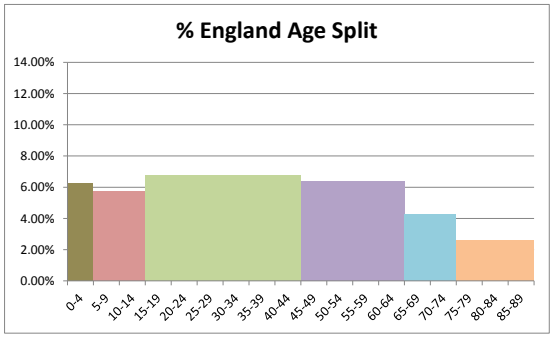
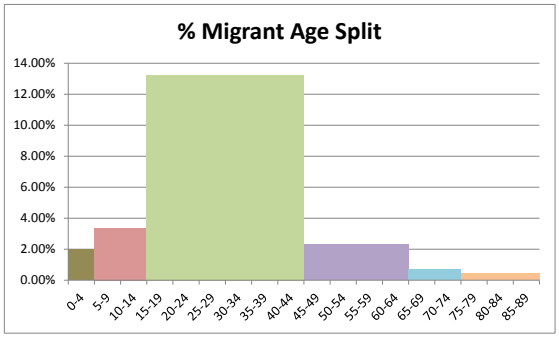


Figure 11: Age Profile for Visitors and Migrants

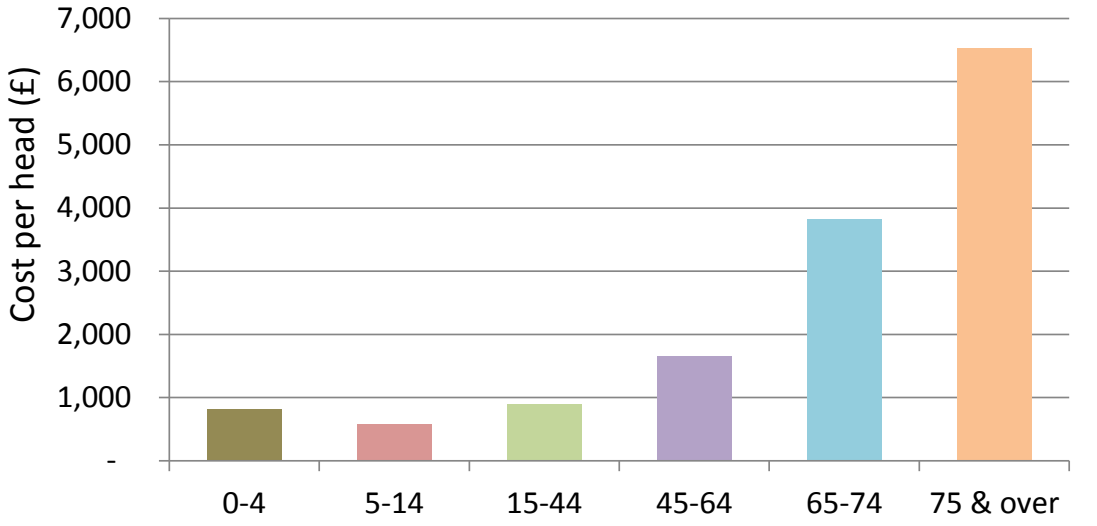


Source: Derived from ONS and IPS

We also know from DH information that average health costs per head for the population in England change markedly over an individual's lifetime as Figure 12 below shows. These figures cover all the health services (Primary and Secondary) in the NHS in England. As the chart shows, the average health care cost per head for people over 75 is almost nine times as much as the 15-44 age range – the age range to which most migrants belong.

[35] The diagrams are histograms. Each histogram shows frequencies, shown as adjacent rectangles for each group e.g. 0-5. The height of the rectangle for each age group shows the percentage of the population in that age group. The area of the rectangles for the age ranges e.g. 15-44 is equal to the proportion of that age range in the total population. The total area of the histogram is equal to the population in that category (ie UK born or non-UK born).

Figure 12: Average cost per head of health services in England by age group



Source Department of Health

The high average cost per head for older people means that most health costs are associated with the older age groups, especially the over 65s. In contrast, in the migrant population there are few people in these older age groups, so most of the cost for visitors and migrants is associated with much lower cost per head age groups. The contrast between the UK born population and the migrants is shown in the diagrams below.

Figure 13: Health Spending by Age Group – England Visitors and Migrants

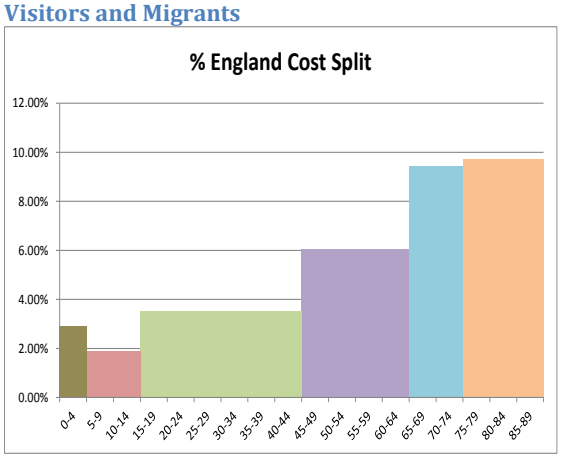
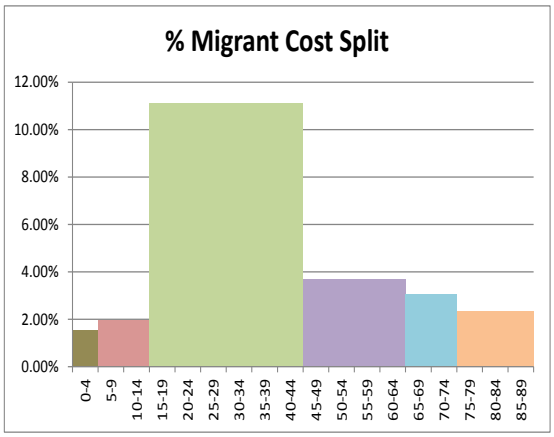


Figure 14: Health Spending by Age Group – Visitors and Migrants



Source: Prederi model

As with the profile of the populations, the diagrams above are histograms. The height of the rectangle for each age group shows the percentage of the total cost of healthcare for that age group as a percentage of the total. The area of the rectangles for the age ranges e.g. 15-44 is equal to the proportion of that age range in the total healthcare cost. The total area of the histogram is equal to the total cost of health care for that population

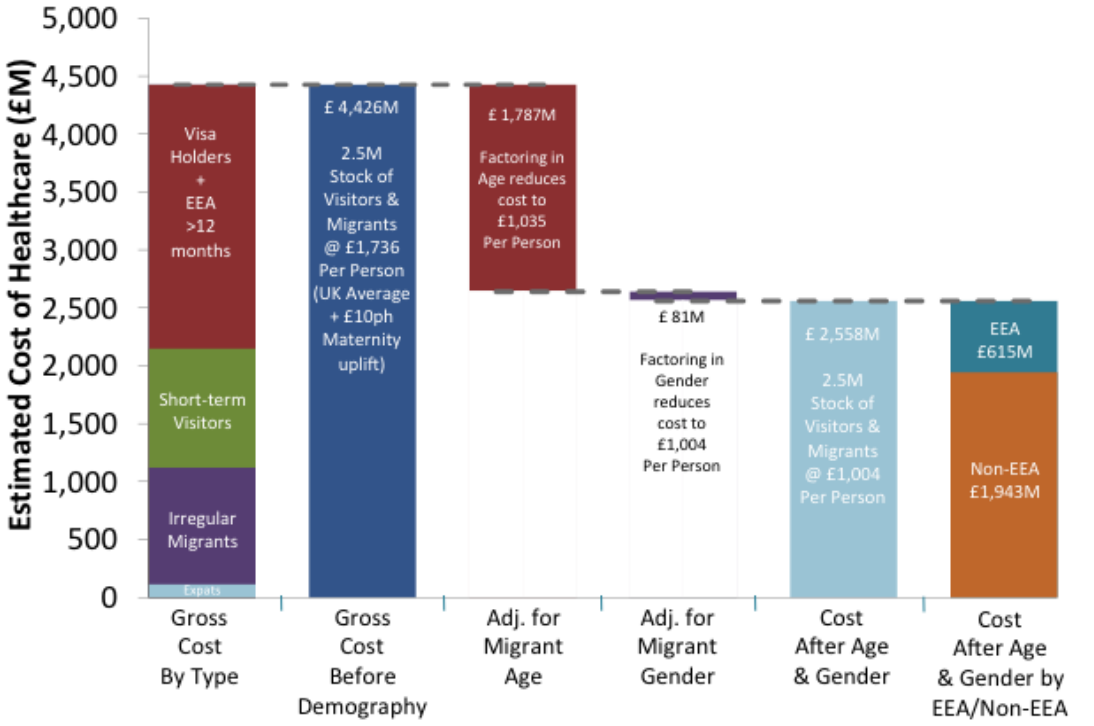
5.7 Adjusted cost per head

We started with the unadjusted cost of the use of the NHS by non-permanent residents, calculated as a 2.5m daily equivalent population multiplied by £1,736,

which is just over £4.4bn. Allowing for the age of migrants reduces the cost-per-head to around £1,035, thereby reducing the total by around £1.8bn. We go on to adjust for gender, since there are proportionately more men in the visitor and migrant populations. Women in this age group have higher cost per head, which is largely associated with maternity. Adjusting for gender reduces the overall cost by a further £80m to an average of £1,004 per head. This reduces the overall total from £4.4Bn cost to around £2.5Bn per year. This is shown in Figure 15 below.

Most of the people in the non-permanent resident population are from outside the EEA, so the majority of the costs relate to non-EEA migrants and visitors, some £1.9Bn compared to £0.6Bn.

Figure 15: Adjusting for age and gender for average visitor and migrant health costs



Source: Prederi model

5.8 Adjusting for propensity to use the NHS

While age and gender are a good guide to the average cost per head of health care, they do not take account of the relative propensity to use the NHS.

We have reviewed the medical literature to try to find evidence of how visitors and migrants use healthcare compared to the host population (see chapter 3). The findings suggest overall that recent migrants are less likely to use UK primary and secondary care services than UK born residents. However, the literature is mostly qualitative and the findings do not provide the basis for a numerical estimation of the differences in the use of services relative to the host population. At this time, as a starting point, we have therefore assumed in the model that migrant propensity to use NHS services is equivalent to the non-migrant population of the same age and sex.

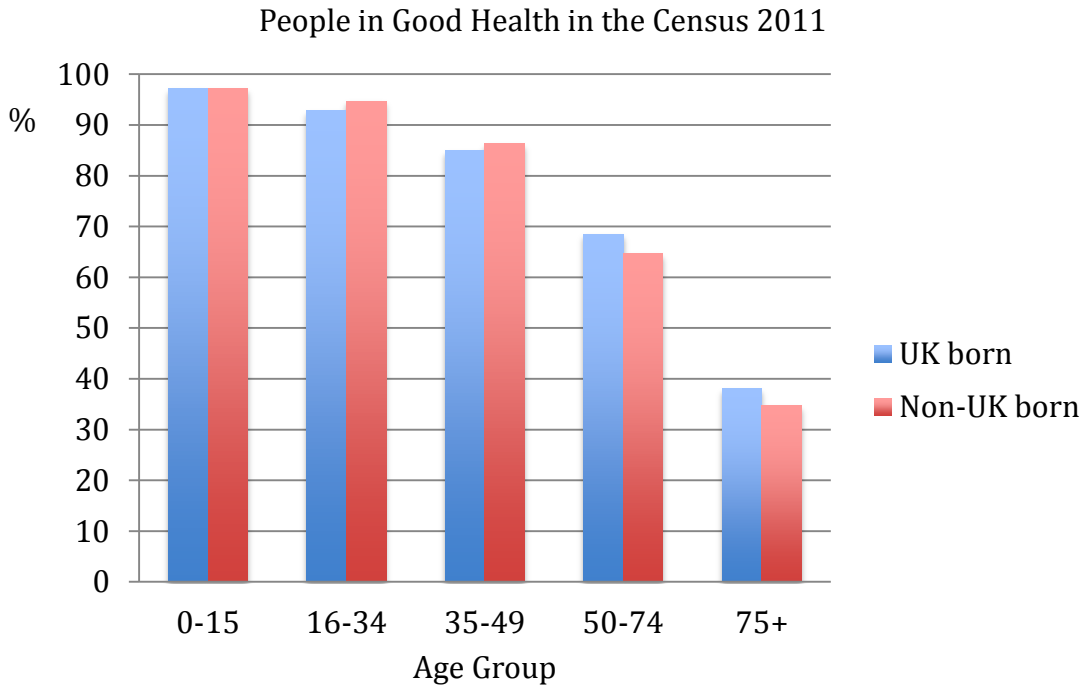
To explore the issue further we have broken down the propensity to use the NHS into three elements: levels of health of different populations, the ability to access health care during the visit, and the readiness to turn to the NHS for health care. We next look at each of these three aspects in turn.

5.8.1 Health Needs

In the literature review and other searches, we have not come across a robust and comprehensive set of results about how healthy different visitor or migrant populations are. In lieu of this we have turned to the 2011 Census, which asked respondents to describe their health as: 'very good, good, fair, bad, or very bad'. This is not an objective measure of health, but we reason that people are more likely to need - or want – to use the NHS if they see themselves in bad or very bad health than if they see themselves in good or very good health.

In general terms non-UK born people report better levels of health, particularly for the age group that most migrants belong to.

Figure 16: Comparison of self-reported health between UK born and non-UK born people



Source: ONS

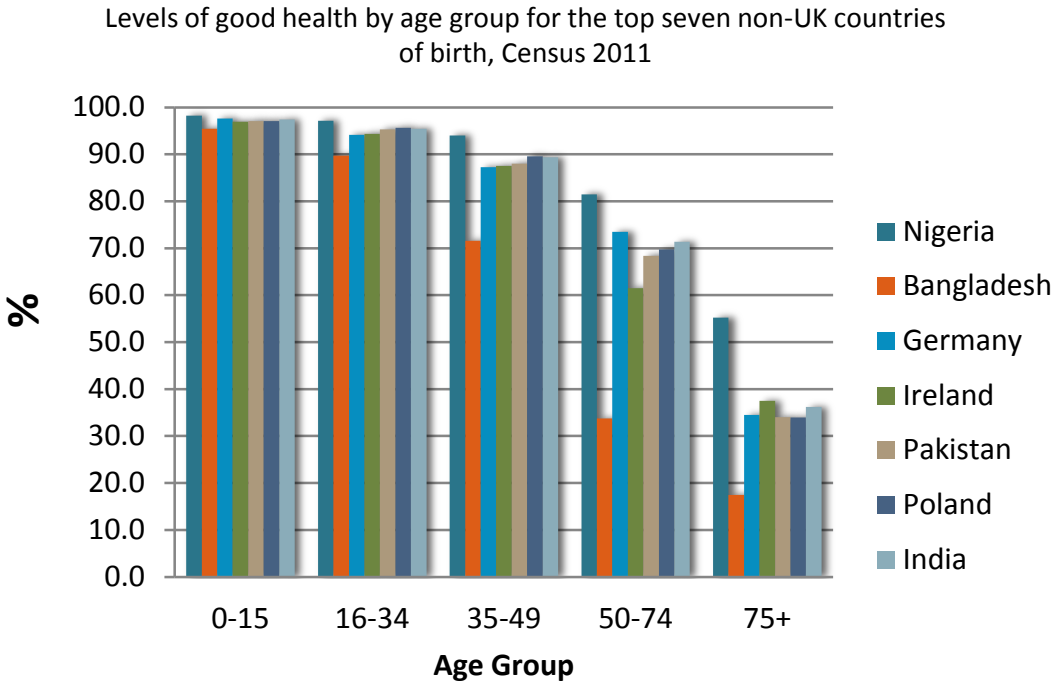
As the ONS reports[36]:

> "[Figure 16 above] presents the proportion of the population in good health for UK-born and non-UK born by age. For both UK-born and non-UK born there is a general decline in reported good health status with age. Levels of good health reported for those under 16 are very similar for the UK-born and non-UK born population (both 97 per cent). For residents aged 16-49 the proportion reporting good health was slightly higher for the non-UK born population. In the older age categories this situation was reversed, with the UK-born population having a higher proportion reporting good health (68 per cent for age 50-74 and 38 per cent for age 75 and over) compared with the non-UK born population (65 per cent for age 50-74 and 35 per cent for age 75 and over). This may be partly explained by historical waves of migration from different countries over time"

The reported perceived health varies from country to country of birth and we have assumed that visitors and migrants from that country have similar characteristics to the population of non-UK born people in the UK. We have used the Census data for the age group by country. The following diagram from the Census contrasts the reported health of the seven countries with the largest number of non-UK born people.

[36] Office for National Statistics, Economic and Social Characteristics of the Resident Population of England and Wales by Nationality and Country of Birth in 2011, 13 July 2013

Figure 17: Levels of reported good health by country



Source: ONS

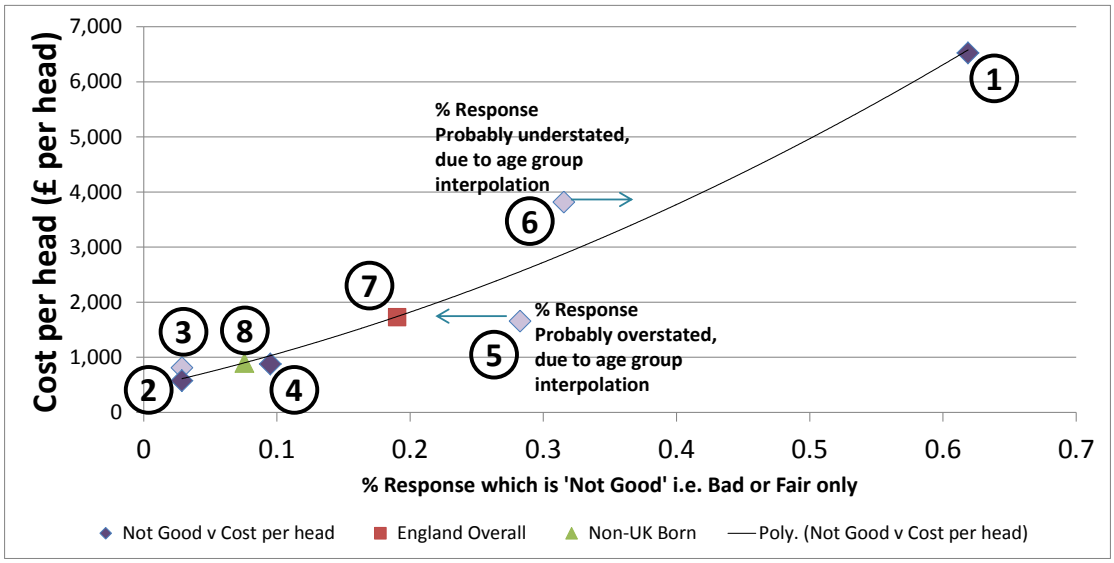
5.8.2 Quantification of Relative Health Need

The visitors and migrant population within our model have their relative health need assessed in three distinct groups

- **British Expats** – here the assumed health need is assumed to be the same as the UK born population
- **Irregular Migrants** – without country information and uncertainty about how this groups health would compare with those people in the census, the assumed health need is assumed to be the same as the UK born population
- **Other Visitors and Migrants** – identified through the IPS, Census or Visa information – We have assumed the census perceived health is relevant to these people, so we have attempted to quantify the relative health for this group, which is the majority of the in-scope population of the model.

To quantify the impact of Non-UK born people, of any given age, being potentially being healthier than their UK born counterparts, we performed a regression analysis on the percentage perceived 'not good' health of age groups against the expected cost of health care for these groups. The chart below shows the outcome of this analysis.

Figure 18: Regression analysis: cost per head and reported good health



Source Prederi model

The chart shows 8 data points, 6 points based on source data and 2 data points showing UK, and Non-UK born averages. What follows is an explanation of each data point 1-8

Point 1 – This is the data point for the Over 75 age group. The data supporting both the costs and the % perceived 'not good' health is well founded and importantly, all information is supplied precisely for this Over 75 age group, no interpolation required.

Point 2 – This is the data point for the 5-14 age group. The data supporting both the costs and the % perceived 'not good' health is well founded so we can fairly confident this data point is accurate. However perceived health for this age group is based upon results for age group 0-15.

Point 3 – This is the data point for the 0-4 age group. The data supporting the costs is well founded, however perceived health for this age group is based upon results for age group 0-15 and this leads to some uncertainty.

Point 4 – This is the data point for the 15-44 age group. The data supporting the costs is well founded. The % perceived 'not good' health for this age group is based upon combining results for age groups 16-34 & 35-49 but this is a strong proxy.

Point 5 – This is the data point for the 45-64 age group. The data supporting the costs is well founded. The % perceived 'not good' health for this age group is based upon combining results for age groups 35-49 & 50-74 and this leads to some uncertainty. The % perceived 'not good' health is probably overstated as our proxy contains data from people aged 65-74 likely to be unhealthier than 45-64s.

Point 6 – This is the data point for the 65-74 age group. The data supporting the costs is well founded. The % perceived 'not good' health for this age group is based upon age group 50-74 and this leads to some uncertainty. The % perceived 'not good' health is probably understated as our proxy contains data from people aged 50-65, likely to healthier than over 75s.

The regression line has been constructed using these 6 points. There are 4 key observations from the regression line

- The regression has an r-squared value of 0.94, which demonstrates that the % perceived 'not good' health is a strong indicator of average cost of healthcare.
- The regression line passes through points 1, 2 & 4 which are the most accurate data points with little or no age group proxy based inaccuracy on the % perceived 'not good' health.
- Correcting for the errors caused by age proxy for points 5 & 6 would most likely move these points closer to the regression line
- Point 7, which is the UK born average % perceived 'not good' health score and the average UK healthcare cost per head (£1,726) lies almost exactly on the regression line. This was not guaranteed to be the case, as points 1-6 are not weighted for their respective populations, but point 7 is weighted.

Based on these observations we have concluded that the relationship described by this regression, that the % perceived 'not good' health predicts cost per head, is observable and quantifiable via the regression line formula.

This formula is:

where y = cost of healthcare per head, x = % Perceived 'not good' health

$y = 7{,}298.6\ x^2 + 5{,}385{,}5\ x + 450.8.$

This statistical link may include some socio-economic or geographic factors as well as age, gender & nationality, but the general sense is consistent with what we have found in the literature review.

When we feed the Non-UK born overall % perceived 'not good' health score, 7.6%, into this equation it predicts the health-adjusted cost of healthcare for migrants to be £893 per head.

This represents a 49% drop in cost per head overall. However this figure is effectively a reduction that combines the effects of age, gender and actual health relative to the same UK born population. We have already calculated the reductions attributable specifically to age and gender for this population, which excludes expats and irregular migrants. For this group, age drops the average cost per head from £1,736 to £1,080, a 38% reduction effect. Gender drops this from £1,080 to £1,077, a further 0.2% reduction effect. Therefore, what the regression indicates is that relative good health of migrants should drop the cost

per head from £1,077 to £893, a further 17% reduction effect. We are therefore reducing the costs per head for migrants by 17% for a better-perceived state of health, which cannot be explained by age or gender.

To achieve this reduction, the model uses a scoring system to assess the relative health of each source country against the UK. The weightings in the scoring system have been adjusted until this 17% reduction is achieved. This has a significant advantage over simply forcing the costs to the desired level, in that it preserves the relative health differences between individual countries and costs migrants from different countries accordingly – so migrants from a country where perceived health is very poor relative to UK will cost significantly more than those from a country with better perceived health, but the overall average of £893 per head is achieved.

5.8.3 Access to the NHS and duration of visit

We need to adjust for opportunity to use NHS services. For all visitors, unless they have come deliberately to use the NHS, the use will normally be restricted by length of stay. Leaving aside GP consultations and A&E services, access to care normally depends on registering with a GP, being referred and then being processed through investigative procedures and so on. Since most of the 30m visitors coming to the UK are here on average only for a week or so, the access to health care will be very limited.

For longer term migrants, as noted above, there are barriers to using the NHS caused by language difficulties, unfamiliarity with the UK healthcare system, legal entitlement issues and lack of trust in UK healthcare system. Two regional surveys with approximately 700 participants each in Leeds and the South East identified that 50% of migrants were unregistered; another study found registration rates of 30% in newly arrived immigrants (less than 1 year). As noted above, typically these barriers are reduced with the passage of time.

We have therefore looked at each NHS service type and thought about how likely it is that a visitor could access the NHS for a given duration. Our assessment generally suggests that access other than for GPs and A&E is practically zero for stays of 1-3 nights and this increases so that for stays of six months or more access is close to the resident population; and after a year it is the same. An example for General & Acute care, extracted from the model is shown below.

Table 8: Assumed access to General & Acute Services

Length of Stay	Relative Access to NHS Services - Profile	Relative Access to NHS Services - %
1-3 nights	Near Zero	0%
4-13 nights	Very Low	10%
14-27 nights	Low	25%
28-90 nights	Medium	50%
91-182 nights	High but below 1	75%
183-365 nights	Very High but below 1	90%
Arrived 2001-2011	UK Population	100%
Arrived 1991-2000	UK Population	100%
Arrived 1981-1990	UK Population	100%
Arrived before 1981	UK Population	100%

In the case of services such as GPs and A&E, these are available to those who need them and we have assumed that in most cases the accessibility will be close to the England average rates irrespective of length of stay and at the England average after three months. This is an extract from the model.

Table 9: Assumed access to GP and A&E Services

Length of Stay	Relative Access to NHS Services - Profile	Relative Access to NHS Services - %
1-3 nights	Very High but below 1	90%
4-13 nights	Very High but below 1	90%
14-27 nights	Very High but below 1	90%
28-90 nights	Very High but below 1	90%
91-182 nights	UK Population	100%
183-365 nights	UK Population	100%
Arrived 2001-2011	UK Population	100%
Arrived 1991-2000	UK Population	100%
Arrived 1981-1990	UK Population	100%
Arrived before 1981	UK Population	100%

We are not claiming that this is accurate, but it is intended to give a plausible set of values that is consistent with the logic of visits and with the qualitative evidence that we have found.

We have therefore reasoned that, on average, access for visitors, short-term migrants and irregular migrants is less than the average for the resident population. This reduces the per capita cost from £866 to about £691, which reduces the estimated overall costs by a further £540m to £1.76Bn. British expats are assumed to have the same access as the resident population.

5.8.4 Cultural preference to use the NHS

Chapter 3 describes overall migrant use of healthcare services within the UK and how this impacts the model. Additionally we searched for information on nationality specific propensity to use the NHS, reasoning that some nationalities would be less ready to use public services than others.

We found that within the UK there is much qualitative and anecdotal evidence at a local level that tells us that certain migrant groups report barriers to accessing healthcare services. For example locally produced surveys highlight barriers to care amongst Eastern European migrant workers[37]. Other sources document barriers to access amongst Roma[38], Chinese[39], Somali[40] and Turkish groups. Low use of healthcare services relative to need is well recognised in refugee/asylum seekers.

As noted in Chapter 3, there is limited empirical research into migrant propensity to use healthcare services. This led us to conclude that it would be inadvisable to model migrant propensity to use healthcare services as being greater or less than propensity amongst the non-migrant population. Furthermore it is impossible to give a numerical propensity score country by country because definitive evidence does not exist at that level of granularity and research findings can be contradictory.

We recognise that there is plenty of anecdotal evidence and also evidence from the Phase 1 research that there are different attitudes among different nationalities. For instance, some Eastern European patients are perceived by NHS staff to be more demanding. There is though a sampling bias here and we have noted reports[41] that the same population groups may also use private medicine – perhaps because they do indeed have different attitudes towards the NHS.

In the absence of enough robust data for the majority of the nationalities, we have not pursued this further. It may be worth returning to this in the future to see whether data on different migrant types e.g. domestic workers or levels of educational attainment could be used to weight the national populations.

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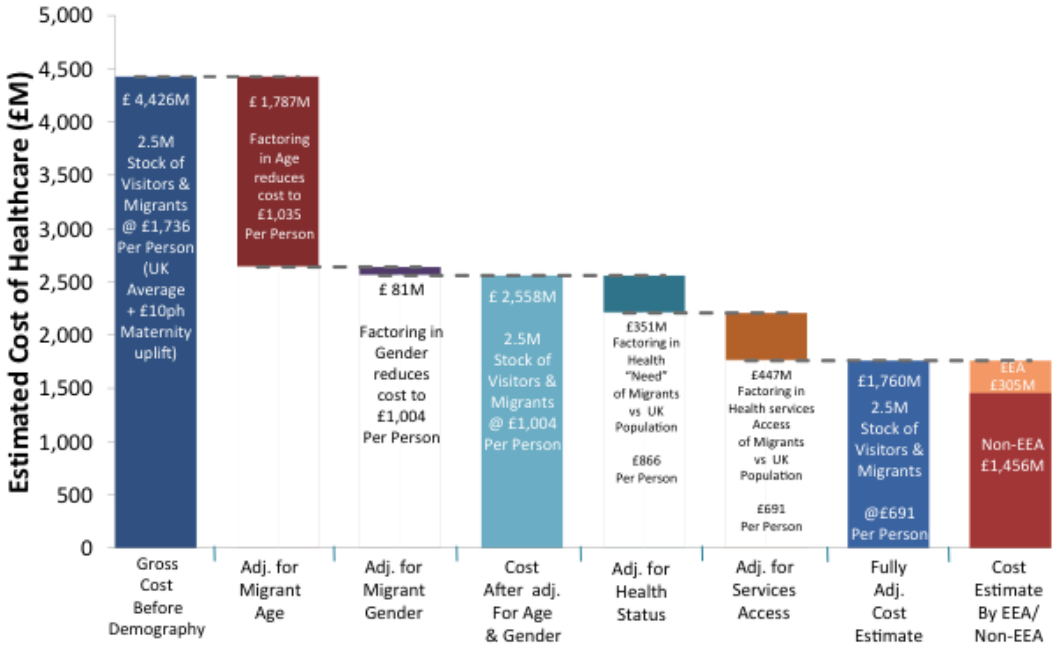
[37] Schneider, C. and Holman, D. (2009) Longitudinal study of non-permanent resident workers in the East of England, Interim Report to East of England Development Agency.
[38] Parry G, Van Cleemput P, Peters J, Moore J, Walters S, Thomas K, Cooper C Health Status of Gypsies and Travellers In England: A report of Department of Health Inequalities in Health Research Initiative Project 121/7500. 2004.
[39] Sproston K, Pitson I. Walker E. The use of primary care services by the Chinese population living in England: examining inequalities. Ethnic Health 2001;8:189-96.
[40] http://www.icar.org.uk/ICAR_briefing_on_Somali_Community.pdf [Accessed September 2013]
[41] The Economist, Another kind of health tourism: Health clinics for immigrant Poles reveal the NHS's shortcomings, 8 June 2013

We would expect the cultural preference to use the NHS to vary considerably from country to country and between different types of migrant and non-permanent resident. Overall our expectation is that this factor would reduce the estimate of the cost of the use of the NHS by perhaps 5-10%. This is though a judgment based on the high relative propensity of the non-migrant population to use the NHS (ie most UK-born people use the NHS, especially for the services under review, and do not make much use private sector providers). We have not used this judgment in the calculation.

5.9 Summary of adjustments for propensity to use the NHS

The effect of these adjustments for health 'need' and for access to the NHS is summarised in the chart below.

Figure 19: Visitor and Migrant health costs adjusted for age, gender, health and access



Source: Prederi model

We now have a cost for the use of the NHS by visitors and temporary migrants of about £1.8bn, of which almost £1.5bn is attributable to people from non-EEA countries and about £305m to people from the EEA (recognising that this under-represents some non-permanent residents from the EEA.)

6 UK Expatriates

UK expatriates who have returned to the UK are entitled like any other UK resident citizen to access healthcare. We have therefore aimed to identify visiting expats, not form the Census, but from the IPS. Incorporating the expats in the model in this way means that characteristics – like age profile, perceived health - can be related to the overseas residence of the expats.

The Institute of Public Policy Research (IPPR) have studied British emigration and reported:[42] "Our research suggests that around 5.5 million British nationals live overseas permanently (equivalent to 9.2 per cent of the UK's population). In addition, an estimated 500,000 British people live abroad for part of the year, mainly through second-home ownership. This means that nearly one in ten British nationals lives part or all of the year abroad."

The IPS shows where most expat visits are from and what proportion of the visitor population is represented by expats.

Table 10: British expats visiting the UK

UK nationals visiting the UK from overseas in 2012		
From	*000s*	*% of all visitors from that country*
France	538	14%
Spain	409	24%
Irish Republic	268	11%
Germany	266	9%
USA	225	8%
Australia	166	17%
Switzerland	159	19%
United Arab Emirates	128	50%
Netherlands	127	7%
Belgium	106	10%
Italy	75	5%
Canada	64	9%
Hong Kong (China)	52	38%
Portugal	47	16%
Cyprus	46	42%
Norway	45	6%
New Zealand	44	25%
Sweden	44	6%
South Africa	35	17%
Denmark	29	5%

[42] IPPR, Brits Abroad, Mapping the Scale and Nature of British Emigration, 2006

The simplification we have used in the model, treating the expats as if they were share the demographic characteristics, may be wrong but the IPS data is not reliable for the countries where there are smaller visitor numbers and adjustments for expats in the population of visitors form a country may be adjusting one uncertain estimate with another.

The assumptions we have used probably lead to an underestimation of the costs of healthcare by expats since on average they tend to be older than the non-UK born visitors and they tend to stay in the country longer. The costs of healthcare use by non-UK born visitors is therefore probably overstated by the same amount. The overall cost for overseas visitors and migrants is not changed.

Figure 20: Visitors by age group

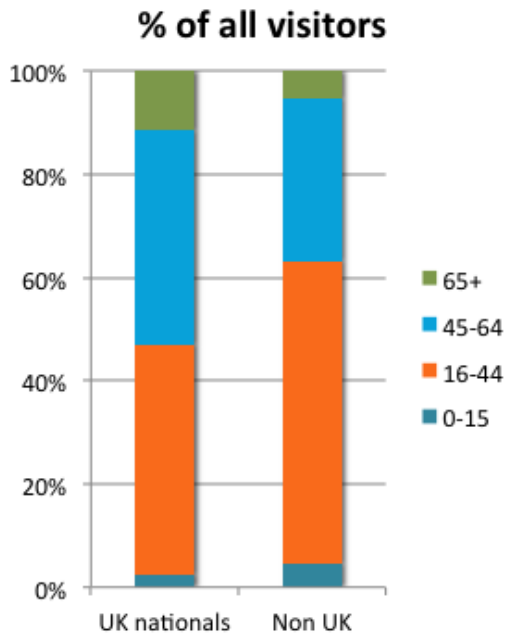
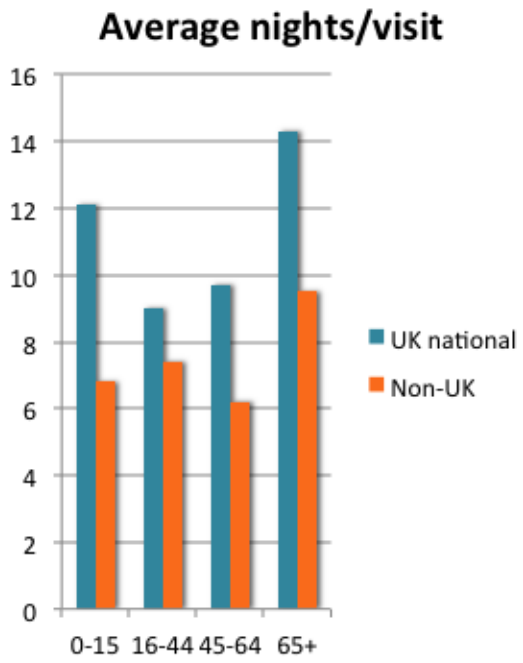


Figure 21: Average nights per visit by age group



Source: ONS

To offset the underestimation of costs we have removed the constraints on access that we have applied to foreign nationals. This implies that expats are able to access NHS services in full however long the visit. Our modelled costs for the use of healthcare by expats are set out in the table below.

Table 11: Estimated costs of use of the NHS In England by British expats

Expats (up to 12 months)	In-scope Population (Daily Equivalent, 000s)	Gross Cost (£M)	Average Cost Per Head (£)
Living in the EEA	*32*	*44*	***1,387***
Living in Non-EEA	*33*	*50*	***1,509***
Total Expats	**65**	**94**	**1,449**

Source: Prederi model

It will normally be difficult for NHS trusts to identify expats when they access services. Even if expats are identified it may be hard to demonstrate that someone is not returning to the UK and expats returning to stay are not identifiable in the IPS data.

7 Irregular migrants

7.1 Introduction

Estimating the number of irregular visitors and migrants in England is a notoriously tricky task. The definitions are unclear and people who are in the country illegally or in breach of their visa regulations will be hiding that status as far as possible. For these reasons, rather than using the Census or the IPS as we have for regular visitors and migrants, we have used studies recognised by the Home Office and published Immigration statistics to estimate the numbers of irregular migrants.

We have used the term 'irregular migrant'. We believe that this is a fairer description of the types of people in this group than 'illegal migrant'. The Clandestino report[43] observed in 2009 that "overstaying and/or breaking conditions of work restrictions make up the largest proportion of people who could count as irregular migrants. The majority of [irregular migrants] enter legally and subsequently move into an irregular status. Although it is unknown how many people clandestinely cross the borders, it can be safely assumed that this is the smallest group. In this light the term 'illegal entrant' misleadingly suggests that irregular migrants are mostly 'illegal intruders'. Instead, the reality is that the majority of [irregular] migrants overtly enter the UK but slip into irregularity at a later stage of their stay."

7.2 Approach

We started by distinguishing three types of irregular migrants

- Failed Asylum Seekers (FASs)
- Overstayers
- Illegal migrants

This approach is consistent with organisations that are concerned with migration (see for example The Migration Observatory[44]) and also provides a helpful distinction between the ways different groups of irregular migrants might use the NHS.

7.2.1 Failed Asylum Seekers

It is important at the outset to distinguish those persons who have registered and are still pursuing a claim for asylum or refugee status. During this process they are subject to immigration control but their presence is not 'irregular'. Under current NHS regulations they, and any dependent children or spouse, are able to access all NHS services without charge. They only become 'irregular' at the point where their application has been refused at all stages of potential appeal. At that point also they revert to being charged for non-emergency care,

[43] CLANDESTINO, Undocumented Migration: Counting the Uncountable. Data and Trends Across Europe

[44] The Migration Observatory, Briefing, Irregular Migration in the UK: Definitions, Pathways and Scale, July 2011

with the exception of a small cohort that qualify for continued Home Office support.[45]

Failed asylum seekers face particular health issues, on the one hand, arising from their ambiguous status, and, on the other hand, may face obstacles when trying to access health services (see the Faculty of Public Health Briefing Statement[46] for an overview and see the literature review at 15.1 for other references).

7.2.2 Overstayers

As noted above, the consensus among researchers in this area is that overstayers are the majority of irregular migrants[47]. Overstayers are people who have entered the UK legally with a valid visa or under a visa waiver scheme, but have then broken the terms of their permission to enter and stay on the UK. This may be simply overstaying the visa period, but could be working when not entitled to do so.

Calculations of overstayers appear to use different definitions, but for the purposes of estimating the cost of the use of health services we would define overstaying in relation to the visa period rather than to breaches of the conditions alone. While there is blurring of the boundaries, we would tend to assume that visa overstayers will be more likely to have some more settled arrangements in the UK (where they may already have lived for up to five years) and will often, for instance, have acquired registration at a GP. Their ability to use the NHS will be more akin to regular migrants and Ordinarily Resident overseas visitors.

7.2.3 Illegal migrants

For the purposes of this review, we have defined illegal migrants as people who have knowingly entered the UK illegally. They could include people who have pretended to be coming to study in the UK when they planned all along to work, and once here fail to take up or maintain that study. Illegal migrants also include people who have been smuggled in and people who have been subjected to human trafficking.

Within the illegal migrant numbers are some cases involving criminality as well as breaches of immigration rules. Although these criminal cases understandably attract considerable attention, counting the numbers of illegal migrants who may

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[45] All asylum seekers in England who have not had their claim refused (including those who have an appeal outstanding) are entitled to free secondary health care. Those who have had their claim refused but are receiving section 4 or section 95 support from the UK Border Agency are also entitled to free secondary health care.
Undocumented non-permanent residents i.e. those who do not have legal rights to live in the UK are not entitled to any free healthcare with the exception of asylum seekers receiving section 4 support

[46] Faculty of Public Health, The Health Needs of Asylum Seekers, Briefing Statement, 2009

[47] The Migration Observatory, Briefing, Irregular Migration in the UK: Definitions, Pathways and Scale, July 2011

be subject of human trafficking is very uncertain. Human trafficking cases appear to be few in relation to the other illegal cases[48]

Evidence for the health needs of this group are not well known, but illegal migrants are believed typically to be in "3-d" jobs[49]: dirty, difficult and dangerous and so would face the health problems that would go along with such socio-economic status. We have assumed that these people will wish to avoid contact with officialdom and are more likely to use health services only in extremis.

The three categories are not wholly discrete. In particular some of those who initially may be an illegal or an over-stayer may subsequently apply for asylum, particularly if and when their illegal status is detected.

7.3 Previous estimates

Our start point for the number of irregular migrants is the research undertaken by Jo Woodbridge for the Home Office in 2005 [50]. Various projects have updated this, notably Gordon et al of the London School of Economics (LSE) for the Greater London Authority[51] and Sigona and Hughes for the Migration Observatory at the University of Oxford[52].

Recent reports continue to rely on these estimates (e.g. the EU's Clandestino project[53], the DH consultation[54] and Migration Observatory[55]) or use them as a basis for projection (e.g. Migration Watch[56]). In the time available we did not find more robust estimates than Woodbridge's[57] updated by Gordon et al[58] and the Migration Observatory's report No Way In, No Way Out [59].

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[48] Serious Organised Crime Agency, United Kingdom Human Trafficking Centre: A baseline assessment of the nature and scale of human trafficking in 2011, August 2012
[49] CLANDESTINO, Undocumented Migration: Counting the Uncountable. Data and Trends Across Europe
[50] Woodbridge, J. "Sizing the Unauthorised (Illegal) Non-permanent resident Population in the United Kingdom in 2001." Online Report 29/05, Home Office, London, 2005.
[51] Gordon I., K. Scanlon, T. Travers, and C. Whitehead. "Economic Impact on London and the UK of an Earned Regularisation of Irregular Non-permanent residents in the UK." GLA Economics, Greater London Authority, London, 2009.
[52] Nando Sigona and Vanessa Hughes, No Way Out, No Way In: Irregular non-permanent resident children and families in the UK, Migration Observatory, May 2012
[53] Undocumented Migration: Counting the Uncountable. Data and Trends across Europe, Bastian Vollmer, Research fellow (COMPAS, University of Oxford), December 2008 (revised July 2009)
[54] Sustaining services, ensuring fairness: A consultation on non-permanent resident access and their financial contribution to NHS provision in England, Department of Health, 3 July 2013
[55] Migration Observatory Briefing Note: Irregular Migration in the UK: Definitions, Pathways and Scale, July 2011
[56] Migration Watch, The Illegal Non-permanent resident Population in the UK, April 2010
[57] Woodbridge, J. 2005
[58] Gordon et al Greater London Authority, London, 2009.
[59] Sigona and Hughes, Migration Observatory, May 2012

The Home Office do not have any information available beyond the Woodbridge study, updated by Gordon et al and Sigona and Hughes. In the absence of more recent, robust estimates we have used these, adding a few assumptions (e.g. age and gender) to be able to use the estimates in the model. It is important to note that these estimates are considerably older than the other data we have used in the model from the Census 2011 and the IPS 2012. Much has changed in this field over the past six years.

In the Woodbridge study the central estimate of irregular migrants in the UK was 430,000 (or 0.7% of the population) with a lower estimate of 310,000 and an upper estimate of 570,000. Gordon et al updated the Woodbridge study from the 2001 Census figures, taking account of the net growth of numbers of Failed Asylum Seekers (FASs), the regularisation programme and the children born to asylum seekers. For end-2007 their central estimate was 533,000 plus 85,000 children; their lower estimate was 373,000 plus 44,000 children and their upper estimate was 719,000 with 144,000 children. The central estimate for irregular migrants and their children 618,000 is a widely used figure. The Sigona and Hughes report estimates the number of children of irregular migrants as 120,000.

The figures we start with are therefore:

Table 12: Estimates of irregular migrants in the UK

	Central	Lower	Higher	Source
Irregular migrants	618,000	373,000	719,000	Gordon et al
Of whom children	120,000			Sigona & Hughes
In receipt of Support	20,000			Immigration Statistics[60]
Of whom children	10,000			

We adjust the populations for the proportion of the population in England. In the case of the overall irregular population, because they will be non-EEA born, we will use England's share of the UK total of non-EEA born people in the 2011 Census. This suggests that there would be an irregular migrant population of around 580,000.

The Immigration Statistics[61] show that the proportion of supported asylum seekers in England is 84%, reducing the supported number to fewer than 17,000.

7.4 Summary

The absence of up to date and robust estimates of the irregular population constrains the usefulness of the estimates for this review. What is needed is an estimate based on the residual population method used by Woodbridge but applied to the 2011 Census. This needs to contain some specific estimates for FASs, overstayers and illegal migrants. In part this is because there are different rules for supported asylum seekers, but also because there are estimated to be

[60] Immigration Statistics, April to June 2013, 29 August 2013
[61] Immigration Statistics, April to June 2013, 29 August 2013

over 100,000 children assumed to be in the total. It would also be reasonable to assume that asylum-related 'irregular' migrants and illegal migrants have differing health needs and different problems accessing health care (as shown in 15.1 the literature review).

In the absence of robust estimates in the detail needed for this review, the estimates for the daily equivalent population that we have used for the health service costing are based on the 2001 Census, updated to 2007, and factored to the England's share of the relevant population:

Table 13: Estimates of irregular migrants in England

	Central
Irregular migrants	580,000
Of whom children	110,000
In receipt of Support	16,000
Of whom children	8,000

Without robust information about FASs, overstayers and illegal migrants, we have treated the irregular migrants as a single population, only separating out the supported asylum seekers for the chargeability calculations. We have assumed that:

- the 'irregular' migrants are in the 15-44 age group, based on the latest Immigration Statistics[62]
- the children are in the 5-14 age group, which forms the majority of the children's age groups.
- there is a higher proportion of men among non-supported adults in the irregular migrants than the general visitor and migrant population; we have used 70% based on asylum applications described in the latest Immigration Statistics[63]
- 'irregular' migrants, particularly FASs, have higher health needs, but FASs and illegal migrants can face difficulties accessing health care, (see Annex 15 the literature review). We have applied a judgment and given this a weighting of 0.8.

Table 14 below shows the estimated gross costs of the use of the NHS by **irregular migrants**, based on these assumptions. These numbers are **very uncertain,** based as they are on historical population estimates, constrained by the lack of detailed up to date statistics from the Home Office. This calculation takes account of assumed higher individual health needs and assumed reduced access to services. The FASs in receipt of support, who are exempt from charges for secondary care, are a small proportion of the total

[62] Immigration Statistics, April to June 2013, 29 August 2013
[63] Immigration Statistics, April to June 2013, 29 August 2013

Table 14: Irregular Migrant Use of the NHS

Migrant Group	In-scope Population (Daily Equivalent, 000s)	Gross Cost (£M)	Average Cost Per Head £)
Irregular Migrants			
Irregular migrants excluding supported FASs	*564*	*322*	*571*
Failed Asylum Seekers – in receipt of support	*16*	*8*	*531*
Total - Irregular Migrants	***580***	***330***	***570***

Source: Prederi model

8 Health tourism and misuse of the NHS

8.1 Introduction

Part of our brief is to provide an estimated cost of the current use of the NHS in England by visitors, including 'health tourists'. There are various forms of health tourism, which are discussed later, but for the purposes of this study, the focus is on health tourists who are people who have travelled to England with the deliberate intent to obtain healthcare to which they are not entitled. In the Phase 1 study these people are called "visitors who fly in and fly out".

The media, politicians and commentators have categorised much of the provision of NHS treatment to foreign nationals without full payment as 'health tourism' or at least as 'misuse of the NHS'. While the appropriate definition is open to debate, we have sought to distinguish different scenarios in a way that enables us to provide an estimate of costs that are additional costs to those already built into the model.

Our model already calculates the costs of regular use of the NHS in line with key determinants of age, gender and time spent in the country. This means that it does not include the additional costs for people who have travelled to England with the deliberate intention to use the NHS, potentially for extensive or expensive treatment. Nor will the regular use include people who are visiting for some other purpose, but are taking advantage while in the UK and using services more intensively than they would otherwise. Our analysis of 'health tourism' therefore seeks to estimate these forms of additional use, which represent costs over and above what we have already estimated.

We have also assumed that routine use of the NHS by those who are currently entitled to do so is not misuse. The exception could be some patients from countries with poorer healthcare provision who may be attracted to reside here legitimately but may then use the NHS to a greater extent than their age cohort. The Phase 1 study provides limited anecdotal evidence of this for some Eastern European EEA countries but we do not have sufficient data to calculate this. It may be possible to extend the analysis of Eastern European EEA countries at a later point.

8.2 Abuse and misuse of the system

The DH have identified in the Invitation to Tender[64] five main categories of abuse and misuse of the current arrangements. These categories are set out below along with a comment on what how they are considered in this study.

[64] Department of Health, Invitation To Tender For The Provision Of Quantitative Assessment Of Migrant Access To The NHS, June 2013

Table 15: Categories of abuse and misuse of the NHS

Category of abuse or misuse	Consideration in this study
Deliberate Intent: Visitors who conceal the fact that they have come to the UK specifically to use NHS services that they are not entitled to access for free. They intend to avoid detection or, if charged, payment.	This category is the main focus of this chapter since the rest of the estimates in the model are based on regular use of the NHS by visitors and non-permanent residents.
Taking Advantage Expatriate British citizens seeking NHS treatment may also return to the UK specifically to use the NHS, because either it is familiar or the care in the country in which they now reside has expensive or poorer health services. Foreign nationals who are regular visitors or who have family or friends based in England may have a NHS numbers and may be able to maintain GP registration, making it relatively easy to access NHS services. These groups may not visit explicitly to use NHS services, but can readily take advantage when in England. They may not even see this as an abuse of the system.	This group is considered as part of the health tourists in this chapter. The general ability for expats to access the NHS more readily when in the UK is reflected in the assumptions for normal use of the NHS by visitors and non-permanent residents.
Visitors who, when receiving unexpected treatment whilst in the UK, **seek to evade identification or payment.**	This is not included in this chapter as the extent and cost of their use is assumed to be 'normal'. Their costs are considered in the estimates of chargeability and recovery
Those who are residing here unlawfully and who receive emergency treatment but have **no resources** to pay for this.	This group have been considered separately under the heading 'irregular migrants' in chapter 7
Others, who may be perceived as health tourists, are only **taking advantage of current (lawful) exemption categories** under the Charging Regulations to access extensive and/or expensive treatment for pre-existing needs.	This group has not been separated out. We recognise that some of this group may be included in the heath tourists considered in this chapter and discuss the implications later.

For 'normal' visitors, we have already estimated the cost of their use if the NHS. There is no evidence that the extent of their treatment is above the norm for their age groups, indeed their use is likely to be below that average compared to the age group resident in England. The costs of visitors failing to pay, which might be defined as 'misuse', would be included in the gap between the potential revenue from chargeable patients and the revenue actually received.

The following analysis therefore focuses on the first category – people visiting the country with an explicit prior intention of accessing the NHS and avoiding

charges that are due for any treatment provided. We later consider briefly the impact of people taking advantage while visiting for another purpose.

8.3 Existing information on medical tourism and health tourism

We have briefly reviewed medical literature and some business publications for information about health tourism. Much of the discussion of health tourism in the academic literature is about 'medical tourism'. This is often defined as: "when consumers elect to travel across international borders with the intention of receiving some form of medical treatment"[65] or "patients leaving their country of residence outside of established cross-border care arrangements with the intent of accessing medical care, often surgery, abroad" [66]. These medical treatments are typically dentistry, cosmetic, orthopaedic and cardiovascular surgery. Much of the literature has a business perspective and looks at people travelling from richer developed nations to developing nations, paying for their healthcare and saving on the very high costs of treatment; Deloitte's report is a widely quoted example.[67]

The practice of what is generally understood as 'medical tourism' is distinct from the principles that govern the existing reciprocal social security and cross-border healthcare arrangements as set out in European law – within Regulation (EC) 883/2004 and Directive 2011/24/EU. These legal frameworks allow EEA citizens, in certain circumstances to access healthcare in other EEA countries, normally at the citizen's home country's expense. Such arrangements are "paid for" and should not be considered as "misuse of the NHS".

Medical tourism is a substantial business. Visit Britain estimated that in 2009 around "50,000 overseas visitors came to Britain for medical treatment according to the International Passenger Survey. These visits generated an estimated £60m of spending…[…]…Visitors from the Middle East account for more than 50% of spending by visitors who come to Britain for medical treatment." [68]

Medical tourism (as defined above) is a growing market and is beginning to be studied more thoroughly; see for example the work of the University of York and the London School of Hygiene and Tropical Medicine for the OECD.[69] The first detailed empirical examination of medical tourism for the UK on medical tourism has been completed for the National Institute for Health Research and the report will be published in September 2013.[70]

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[65] OECD, Medical Tourism: Treatments, Markets and Health System Implications: A scoping review, March 2012

[66] What is known about the effects of medical tourism in destination and departure countries? A scoping review. International Journal for Equity in Health 2010

[67] Deloitte, Medical Tourism: Consumers in Search of Value, 2008

[68] Visit Britain, Overseas Visitors to Britain: understanding trends attitudes and characteristics, September 2010

[69] OECD, Medical Tourism: Treatments, Markets and Health System Implications: A scoping review, March 2012

[70] See University of York website: http://www.medicaltourismresearch.co.uk

Medical tourism, to the extent that the NHS provides it as an explicit revenue generating service for visitors to England is not within the scope of this study. A minor exception is where such a visitor may seek to supplement or replace such private treatment arrangements with routine or emergency NHS treatment at reduced cost or without paying; but this has not been examined explicitly.

8.4 Evidence for health tourism and misuse of the NHS

The scope of this study is to consider the health tourists who are taking advantage of the NHS. There is limited medical literature around this topic although there is anecdotal evidence (see annex 15.3 the literature review). The Phase 1 research, however, has identified two categories of such visitors, although there may be some overlap between them:

- those coming for acute expensive surgery (including maternity and possibly oncology & renal) that will typically go straight to A&E. Many may only do this on one occasion but a few may repeat. This could also include anybody seeking to continue previously planned private treatment through the cheaper 'chargeable NHS' route or emergency treatment that they are unable to pay for
- those accessing more regular and extensive treatments having been able to register with a GP and subsequently visiting on a regular basis. Such treatments may include prescriptions and other treatment for chronic conditions and other elective needs. Logically this includes British ex-pats who may be chargeable but have an active GP registration

As with any illegal or irregular activity, health tourism is not easy to detect. There are no ready categories in which health tourists fall and they could be EEA, non-EEA or expats. There will also some marginal cases where it may contribute to a decision to visit but may not be the overt reason; for instance someone may believe that their background or lifestyle means that they might receive more sympathetic maternity care than another EEA state, but the stated reason for travel is to work in the UK and the person does indeed work in the UK. These cases are not detectable in the travel surveys.

Nonetheless, Phase 1 has provided evidence of health tourism, although there are no statistically valid samples to generate estimates. Based on the Phase 1 report we have focused on two categories, namely:

- Deliberate intent: people who have travelled with a deliberate intention to obtain free healthcare to which they are not entitled, and therefore use the NHS to a greater extent than they would routinely need during their limited stay. This is typically for urgent or emergency hospital treatment sought on arrival, usually but not always as a one-off, and may include maternity care.
- Taking advantage: frequent visitors registered with GPs and able to obtain routine treatment including prescriptions and some elective (non-emergency) hospital referral

8.5 Approach

We have therefore first developed an approach to estimate what the plausible range of values might be for these categories of health tourism. There are five main steps to our approach:

- First, we have looked at what would motivate people to try to access the NHS, focusing on people who are deliberately travelling to access the NHS
- Second, we have considered what would make it easier to access the NHS
- Third we have thought about the visitor types who are more likely to include health tourists
- Fourth, we have used some evidence from the scale of debts outstanding from overseas visitors who have had health treatment to estimate likely costs of treatment.
- Finally, we have then tested some rates per population groups to see what values would be broadly consistent with the qualitative evidence.

8.6 Potential drivers for irregular health tourism

We think that the factors that could motivate someone to consider travelling to England to access NHS services would include:

- Poor healthcare in the home country
- Expensive healthcare as evidenced by low public funding of health services
- Exclusion from some or all health services in the home country

Looking at the factors which would make it easier to access NHS care, these seem to us to include:

- Proximity to the UK, giving lower travel costs and increased opportunity to travel
- Being an English speaker
- Having family or friends in England to provide accommodation and advice on how the NHS works
- Having family or friends working in the NHS to act as guides to the system
- Sharing similar cultural characteristics to the UK

These factors that make health tourism easier are particularly relevant to those seeking frequent 'routine' treatment, but are also relevant for acute or emergency access.

These assumptions are consistent with drivers of legitimate health and medical tourism. Drivers of demand for medical tourism include tightened eligibility criteria, waiting lists, and shifting priorities for health care; and the choice of country is influenced by familiarity, availability, cost, quality and bioethical legislation.[71]

[71] OECD, Medical Tourism: Treatments, Markets and Health System Implications: A scoping review, March 2012

8.7 Visitor types

Given that most visas for work and travel require sponsors under Tier 2 or Tier 4 of the Points Based System, it seems unlikely (though not impossible) that health tourists would use these routes. The NIESR review[72] of the use of public services reached a similar conclusion. We also think that visitors staying for14 days or fewer are unlikely to be health tourists using Secondary care, given the need to register with a GP and then access care. We do, however, recognise that there is evidence from Phase 1 of people turning up within a few days of arrival[73]. This constraint will also be less relevant where people have family or friends to facilitate the visit.

It is hard to interpret the Phase 1 evidence. On the one hand, there are clearly circumstances that make health services staff suspicious. On the other hand, if visitors are in the UK for just a few months and they need healthcare, it will inevitably be needed within a few weeks of arrival since they are not here long enough for it be many months since arrival. Also, by definition, people who have deferred care until they return home will not be visible to NHS staff.

This is a difficult area in which to form assumptions. However, we think it is plausible to exclude PBS work and study routes; and to limit the high-risk population to people staying for 14 days or more. If these assumptions were accepted, health tourists would therefore be included in the numbers of short-term visitors, Family visas, visa-waiver visitors, expat visitors and EEA visitors.

8.8 Risk assessment

Combining the factors for motivation and ease of access, we have sifted a list of a dozen countries where combinations of these factors could apply and there are significant numbers of visitors in the 'deliberate intent' and 'taking advantage' categories of visitor, as we have defined in Table 15 above.

The results of the risk assessment are set out in Figure 22: Health Tourism Risks - Motivation and Facility, below. This shows poor publicly funded care on the horizontal axis as a proxy for motivation and shows an index on the vertical access for ease of travel to the UK, English language, local support and familiarity with British life.

The results are simply indicative and based on simplifications, but the highest risk countries on this analysis are: Zimbabwe, Pakistan, Nigeria and India; Bangladesh; other south and eastern Africa, and the Philippines; other central and western Africa, and Egypt; South Africa; Ghana; and Kenya.

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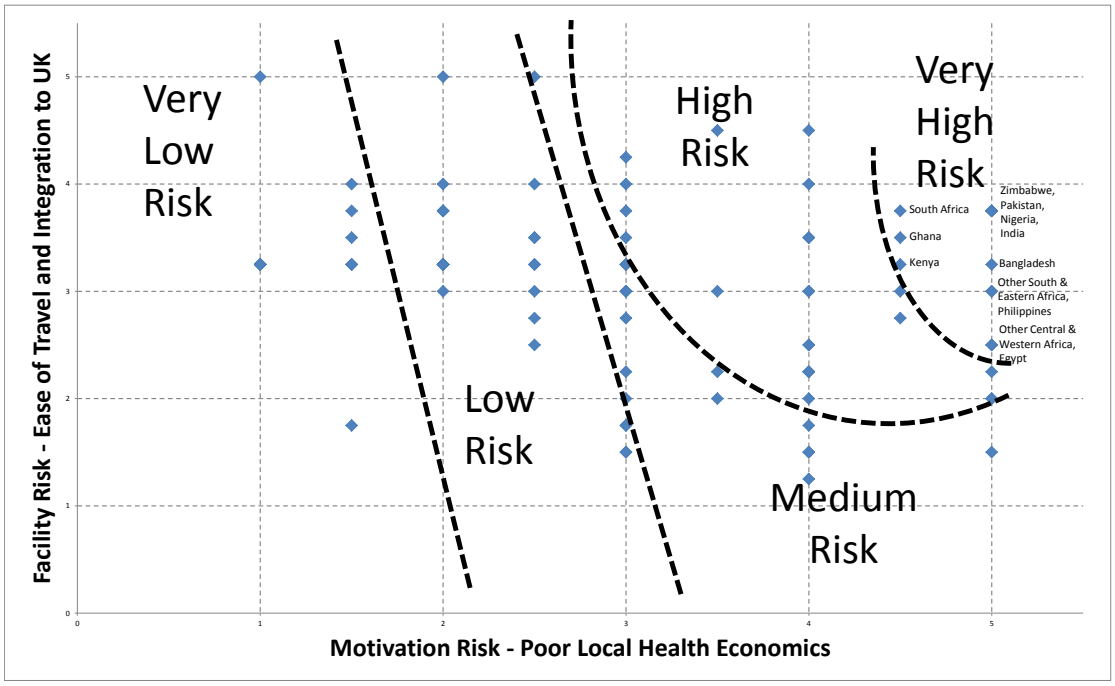
[72] George A, Meadows P, Metcalfe H, Rolfe H. Impact of migration on the consumption of education and children's services and the consumption of health services, social care and social services. December 2011. National Institute of Social and Economic Research

[73] Creative Research, Qualitative Assessment of Visitor and Migrant use of the NHS in England, DH, October 2013

Figure 22: Health Tourism Risks - Motivation and Facility



Source Prederi model

8.9 Estimating rates of abuse

The potential rates of health tourists in the visitor categories we tested were 1 in a 1,000 for medium risk countries and 1 in 100 for higher risk countries. These are guesses based on rates of abuse of other access to the UK. For instance, the Department of Work and Pensions estimated that 1% of National Insurance Numbers issued to people born abroad were not regular[74]; and Home Office estimates of non-compliance with Tier 4 (student visas) show that 2% of students at universities " have no record of leaving the UK and do not have a valid reason to remain"; the equivalent figure for all other sponsoring institutions under Tier 4 is 14%, ranging from 8% for publicly funded institutions, 14% for English Language Schools and 26% for privately funded Higher Education/Further Education institutions.[75]We have used low values, but we would note that the National Audit Office estimated that "between 40,000 and 50,000 individuals might have entered through Tier 4 in its first year of operation to work rather than study"[76], a rate of abuse that represents around 15%.

These rates of abuse are not directly related but they do illustrate that there can be thousands of people who can exploit a loophole when it becomes apparent, even if it is personally risky to do so.

In our risk assessment, expats fall into a high-risk category for health tourism and the Phase 1 Study and anecdotal evidence support this. Often expats

[74] Nationality at point of National Insurance number registration of DWP benefit claimants: February 2011
[75] Impact assessment: Reform of the Points Based Student (PBS) Immigration System
[76] NAO, "Immigration: The Points Based System – Student Route", 26 March 2012

returning to England to use the NHS may not even see this as abuse of the system. To put the numbers into perspective, there are about 175,000 expat visitors from EEA countries and a similar number, 176,000 from non-EEA countries excluding Australia and New Zealand (where the risk would be minimal). Expats are on average older than other visitors and all things being equal would be expected to have higher health needs.

8.10 Estimating the cost per case

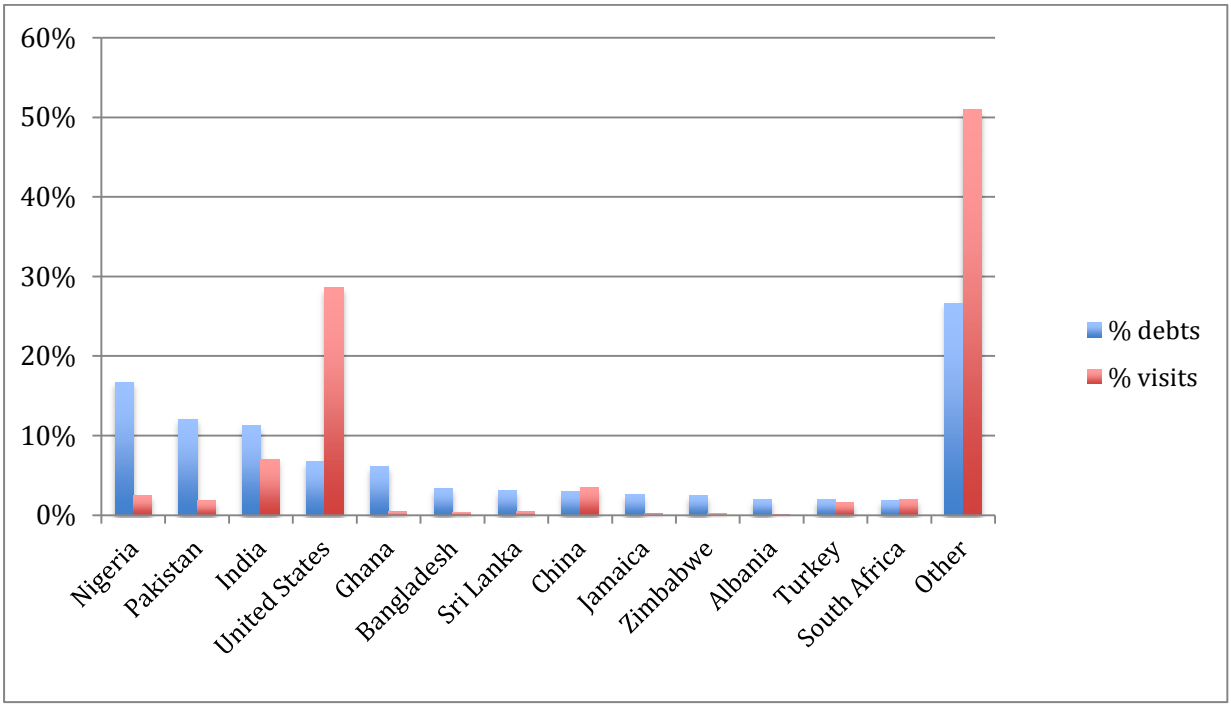
The NHS reports debts to DH from overseas visitors for NHS hospital treatment of over £1,000 when the debt is older than three months. These are then forwarded to the Home Office. Since November 2011, the Home Office has had the power to refuse applications to enter or remain the UK from anyone with unpaid NHS debts above £1.000. So the information from DH can be accessed by immigration officials to try to recover those debts from people when they cross the border. The information held by DH is restricted for data protection and patient confidentiality reasons, and we have only reviewed a version that was stripped down to include only the amount of debt and nationality of debtor during the period March to June 2013.

In March – June 2013, details of 899 foreign nationals with debts for NHS treatment over £1,000 were referred to the Home Office. In the anonymised list we had, 604 cases had the nationality details, relating to 76 countries in all. The total value of the debts was £4.52m

The average debt was about £5,000 per case. This does not include debts under £1,000 by definition, but we would reason that most health tourists will not be motivated to travel to the UK solely for minor procedures, so the cut off is probably acceptable for the 'deliberate intent' group, given the rough nature of the estimate. We also note that this debt will relate to secondary care and frequently there will have been primary care costs that will not have been included – something that was highlighted in the Phase 1 study.

Of the countries that had more than 1% of the total number of debts, there were a number that stood out especially when compared to the total numbers of visitors.

Figure 23: Debts of over £1,000 and three months old by country of debtor



Source: DH, IPS, and Prederi

The sample is useful in that it can be assumed that if there are debts from health tourists, they will be included in these records. There are however problems. There are returns from fewer than half the NHS Trusts/foundation trusts (and it is not possible to be sure whether this is because there is nothing to report or they are not reporting debts for overseas visitors). The Phase 1 study and other DH work with Overseas Visitor Managers from NHS Trusts suggests that rates of identification of overseas visitors are low and it may be easier to identify some people than others. The sample is also for four months (March to June 2013) and the low numbers each month for some countries may hide some other potentially significant countries.

This is, therefore, not a robust statistical sample, but the countries that stand out most prominently (Nigeria, Pakistan, Ghana, Bangladesh, Sri Lanka, Zimbabwe and Jamaica) also fit the risk model.

We also point out that the debtor figures are based on addresses, so may include nationals from other countries. The debtor countries do not include EEA countries.

8.11 Other evidence of cost per case

The Phase 1 study has little data that can provide a statistical basis for an estimate of costs of health tourism. It is worth noting that the median cost of use of secondary care was estimated to be around £2,200. This is for all chargeable patients, so would include regular and irregular migrants as well as health tourists. This is a lower figure than the debts noted above, but the debts are for sums over £1,000; and it would seem reasonable to assume that for sums less than £1,000, more people are likely to pay and will not be classed as health tourists in this analysis.

DH do not have statistics for cost per patient that we could use for the study to try to estimate the costs in Primary settings. Visits to GPs and other Primary care is usually free so there are no debts that readily lend themselves to an estimate of the costs of prescriptions and primary care. Primary care and services in settings outside hospitals that will not be identified by Overseas Visitor Managers in NHS Trusts.

A further difficulty in this area is that while some common health tourism is likely to be obtaining prescriptions, which may not be very high value, there could easily be cases where people in extreme circumstances are driven to health tourism. We note that among the 899 debts in the March – June 2013 period, there were 10 over £40,000, and three over £100,000. A handful of very high cost cases could change the picture dramatically.

8.12 Estimating the overall cost

At the start of this section, two main types of health tourism were identified:

- the first group is made up of people deliberately travelling to England, keen to access e.g. maternity or other General & Acute care which is poor or expensive in their home country; this group would generate a relatively small number of high cost cases
- the second group is made of people who are primarily visiting and while in England take advantage of access mainly to primary care e.g. to free or cheap prescriptions.

We do not have enough data to break these categories down more precisely, so the estimate of the costs has to be based on judgment.

The cost of health tourism is the estimated number visitors who are health tourists multiplied by the estimated average cost per case of health tourism. In this calculation we are not using the daily equivalent population as in the rest of the model

8.12.1 Deliberate health tourism

Looking at the first group, we think that a plausible range for health tourism is 5,000 to 20,000 visitors. The reasons are that the numbers of people with strong motivation and relative ease of access are so large, that very low rates of health tourism under (1%) in high risk countries or categories would readily generate more than 5,000 health tourists. We have used an estimate of 10,000, based on 1% in high-risk countries and categories and 0.1% in medium risk countries.

We estimate the cost per case to be about £5,000 for General & Acute (G&A) services and maternity plus perhaps a further £2,700 for the associated Primary care, less the £700 average cost per head that has already been counted in the model for the people already in the regular migrants section.

Multiplying the two estimates (10,000 people and £7,000 per case) gives us around £70m. This is a very uncertain figure, so we need to explore the possible ranges. The numbers of total visitors from high-risk categories is so large that it would be plausible to have a much higher number. If a much higher number

were used, however, it would be difficult to justify unless most of the abuse is in non-hospital settings such as prescriptions or community services. Otherwise, the numbers are not consistent with the Phase 1 Research findings, even allowing for under-identification.

On the costs, it seems unlikely to us that the costs are much higher on average than the figure used. It may be that some people are driven through desperation to have high cost treatment, but if this were happening on a much larger scale it would be likely to be much more apparent in the Trusts than has been reported in Phase 1 and to DH.

Putting this together, we think it is plausible that there are as many as 20,000 people at an average cost of say £5,000; or 5,000 people at an average cost of as much as £10,000. There could be even higher plausible numbers of health tourists. If this were the case, the misuse would tend to be in accessing primary care services, which have a lower average cost.

It does not seem plausible that there are 20,000 at an average rate of £10,000. The debtors list appears to have 2,500 to 3,000 cases a year and even allowing for half the Trusts not reporting, this would only amount for say 5,000 cases a year with debts over £1,000. Larger numbers of health tourists would therefore need to be drawn from Primary or lower cost Secondary settings.

8.12.2 Taking advantage

Turning to the second group, people who are who are primary purpose is a legitimate visit but while in England they take advantage of the current rules on access to the NHS, leads us into very uncertain areas.

The model provides an estimate of normal use of the health service, so what is required is an estimate of the incidence of taking advantage among the different population groups and some indication of unit costs, from which should be deducted the normal use that has already been built into the model for these people. This information is not available without further research, but by way of indicating the scale we note that:

- There are about 300,000 expat visitors who could be keen to make full use if the NHS while they are in the UK and may not see this as unfair
- There are 3.4m visitors a year who stay for between 14 days and a year. Even very low rates of people taking advantage generate large numbers e.g. 1% of the total is 34,000.

Without more evidence about the costs per case of the people 'taking advantage' adjusted for the costs that are already in the model, we feel it would be potentially misleading to come up with an estimate. Plausible combinations of numbers involved and costs per case could range from £50m to £200m in addition to the costs already in the model.

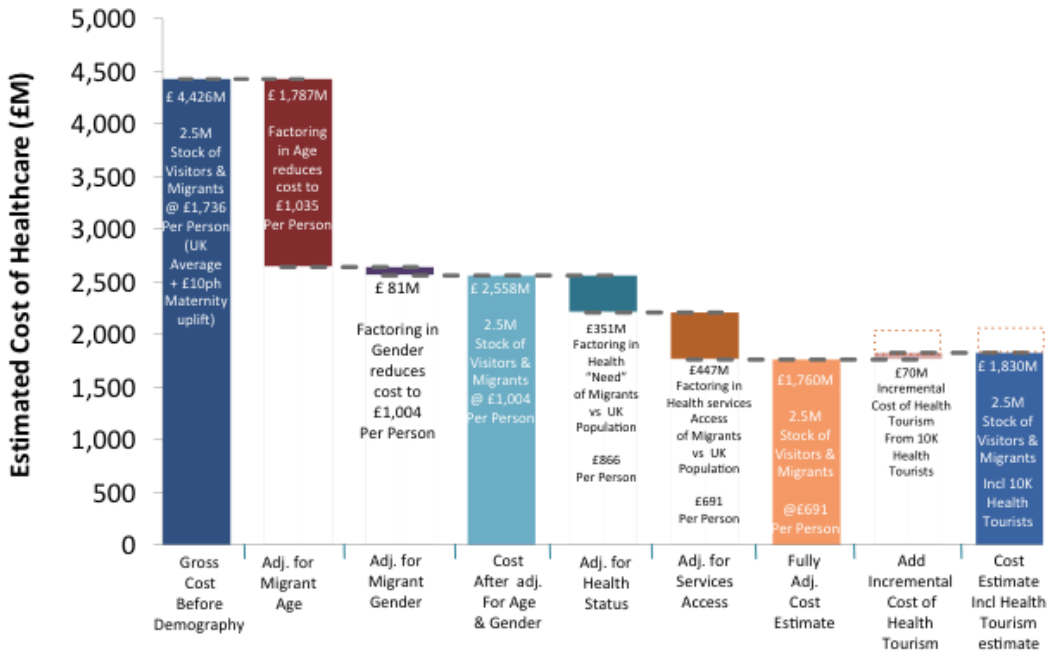
8.13 Conclusions

The conclusions we draw on health tourism are:

- The different types of health tourism need to be recognised and it is important not to confuse legitimate medical tourism or wellness tourism with health tourism aimed at misusing access to NHS services
- Health tourism (as defined here) is hard to identify, let alone count in any of the statistics
- The Phase 1 research provides clear evidence that abuse of the system is taking place but it is not possible to quantify this in any robust way
- there are potentially large numbers of people who could be motivated to access free health care in England, and for whom it would be relatively easy.
- the potential to access the care is, however, not the same as actually accessing the care so the estimates are nothing more than plausible bounds
- we suggest that the plausible bounds for the number of health tourists who deliberately travel to England to use the NHS is 5,000 to 20,000 cases; we have used 10,000 as it seems consistent with the scale of the average debt we have used (ie larger numbers would have a lower average debt)
- we estimate the cost per case for the deliberate health tourists to be about £5,000 per case for G&A and maternity to which should be added perhaps a further £2,700 for associated Primary care, less the £700 we have counted in the model for the people already
- so the adjustment is say 10,000 x £7k = c£70m or between £20m and £100m using plausible combinations of numbers or people and the average cost per case.
- this is a structured judgment rather than an empirically based estimate.
- It is possible to speculate on the costs of people who take advantage while here on legitimate purposes. There are very large numbers of people who could take advantage in this way and even with low rates of abuse and modest average extra costs, the calculation quickly runs to tens of £ million. Our judgment is that this could add £50m to £200m to the costs already in the model.

The following diagram puts the cost of 'deliberate intent' health tourism in context. While the number appears small in relation to the overall cost of visitors and non-permanent residents, it is still £20m to £100m that could be spent on others who are entitled to receive health services. . The estimated range for the 'taking advantage' category is indicated by the areas inside the dotted lines.

Figure 24: Adjusted Visitor and Migrant health costs plus 'deliberate intent' health tourism costs



Source: Prederi model

The findings have been summarised alongside the DH categories of abuse or misuse in the table below.

Table 16: Categories of abuse and misuse of the NHS

Category of abuse or misuse	Findings from this study
Deliberate Intent: Visitors who conceal the fact that they have come to the UK specifically to use NHS services that they are not entitled to access for free. They intend to avoid detection or, if charged, payment.	Very uncertain, but estimated at about £70m with a range of £20m to £100m. These are people who 'fly in and fly out' for treatment.
Taking Advantage Expatriate British citizens seeking NHS treatment may also return to the UK specifically to use the NHS, because either it is familiar or the care in the country in which they now reside has expensive or poorer health services. Foreign nationals who are regular visitors or who have family or friends based in England may have a NHS numbers and may be able to maintain GP registration, making it relatively easy to access NHS services. These groups may not visit explicitly to use NHS services, but can readily take advantage when in England. They may not even see this as an abuse of the system.	These extra costs are partly reflected in higher propensity to access services assumed for expats in the 'normal' model. Expat health tourism implicitly included here through the risk model. We note that there are around 350,000 expat visits a year where people could be motivated to make the most of access to the NHS which could create an additional burden of £millions even if this simply consisted of extra visits to GPs or setting up repeat prescriptions. As to other visitors, given the scale of the gross costs, over £1Bn, then even small percentages of people taking advantage of current lawful access would result in tens of £millions. We have suggested a plausible range of between £50m to £200m additional costs not already included in the 'normal' usage in the model.
Visitors who, when receiving unexpected treatment whilst in the UK, seek to **evade identification or payment**.	Included in the under-recovery form chargeable patients. This is part of the 'normal' model in terms of usage and incidence.
Those who are residing here unlawfully and who receive emergency treatment but have **no resources** to pay for this.	The gross cost of services provided to Irregular Migrants is very uncertain but is estimated to be over £300m; see chapter 7 on Irregular Migrants
Others, who may be perceived as health tourists, are only taking advantage of current (lawful) exemption categories under the Charging Regulations to access extensive and/or expensive treatment for pre-existing needs.	This group is not readily discernible and we have not ventured an estimate.

9 Shortcomings and limitations of the approach

9.1 Introduction

Given the data and information limitations it is inevitable there will be factors that affect the robustness of our estimates. In terms of the data:

- The data needed for the calculation is not readily or fully available - or in some cases not available at all
- Almost all the data used has some inherent uncertainty because of the way it is gathered e.g. IPS
- Definitions used are often fuzzy and rarely map across from one data-set to another (e.g. the age groupings do not even share the same boundaries)
- The health costs used for the main model are averages for populations rather than averages for patients and particular bundles of treatment
- There are different territories and dates for different data-sets.

We have explained the limitations of the data more fully in Annex E: Data Sources.

Looking at the data we have used, we would point out that:

- The literature is hard to tie back to the groups under consideration; and is usually not statistically relevant
- We are often using very small proportions of very large figures, so small changes in the proportion make a large difference to the results
- Average health cost per person is relatively low, but the cost of treatment per patient can be very large, so some small populations can have large costs associated with them
- Averages can mask marked differences in the populations
- We have had to try to relate data about flows with different data about stocks; there is not enough detail to know how most of the stocks and flows work

This means that:

- all the answers are estimates with ranges
- any single point estimate is likely to be 'precisely wrong', but should be 'roughly right' based on the assumptions and the data.

9.2 Issues

There are a number of specific issues with the approach that struck us and no doubt more will occur to readers. Among the issues are the following:

- Are there "black swans"? This refers to the possibility that there may be patients or populations that we have assumed implausible in the model but which exist in realty. We think this is entirely possible and note that e.g. there are some health debtors who owe the NHS over £100,000, so a just a few of these would change the conclusions.

- Has too much data been interpolated? We were faced by inconsistent and incomplete data sets, so we have chosen to fill the gaps to carry out the

calculation. Where data has been interpolated it has been from data of which the population is a part.

- Has the IPS data been stretched too far? The IPS has been used as far as possible, but we do not consider that this affects the aggregate results. Sub-national breakdowns of results may be affected by the interpolations. Where the IPS data is most stretched is in countries that do not make a lot of difference top the overall result because they are countries that are relatively immaterial or they are misclassifications between age groups or gender balance for countries that are relatively small.)

- Does it match with other statistics? We have tried where we can to cross check with other sources like the Home Office data and HESA statistics. We do not in all cases have matching sets of information e.g. geographical coverage, year, etc. Home Office data tends to be more about flows than stock e.g. numbers of UK visas issued in a specific year, rather than number of visa holders in the England in a particular year.

- Isn't there a lot of guess work in there? There is some guesswork. Some of the guesswork is logic e.g. maternity services are used by women, mostly between the ages of 15 and 44. Some of the guesswork is judgment e.g. how likely are you to have elective surgery on a short visit? (our answer, very unlikely if there is a one-month lead-time for scans etc and you have not set out deliberately to make use of the NHS.) We have however shown the results with these adjustments reset to the UK-born host population values.

- The distribution in England is not uniform, so doesn't that skew the results? We note in section 12 that visitors and migrants are focused on London but that almost all parts of England will have material populations. Unfortunately the IPS and Census data is not in the detail to support the analysis and the information form Trusts is very patchy.

- Does focusing on the larger countries that cover over 70% of the population, mean almost 30% of the population is potentially wrong? We have extrapolated from the top 9 EEA to the remaining EEA; and from the top 24 non-EEA to the similar world regions. The remaining 30% is made up of over 150 other nationalities and we have assumed that there is some balancing out among these. We recognise that this assumption is vulnerable to an unpredictable change, but the testing we have done leads us to conclude that the overall sense of the results is not affected by this limitation.

- Does the focus on nationality overlook some groups e.g. Roma with particular characteristics?[77] In principle, Roma people and any similar groups will have been included in whichever resident or visitor category and nationality they have declared in the Census or IPS. If however Roma or other such groups systematically do not provide information about themselves, then they will

[77] Migration Watch UK, Briefing Note 4.23, EU and the Roma

be under-represented in the figures. Without some further research we cannot account for such groups.

9.3 Addressing shortcomings and limitations

The model specification and assumptions set out the detail of the approach. We have tried to address the shortcomings through:

- Working with the full population of England, of visitors and all NHS England costs to try to minimise the risk of double counting or leaving gaps
- Disaggregation: the disaggregation of the data should mean we have reduced the size of the populations in which "black swans" can hide.
- Using a logical calculation, then using the best available data
- Making it clear where there problems with data quality
- Breaking down the model to simple, mostly linear, relationships so if readers wish to consider different absolute values in some areas, the relative values in other parts of the model should be easy to work out.

10 Quantitative Findings

This section provides summary tables of the results: a snapshot of current use based on the various data and analysis set out in the previous chapters.

Population numbers are rounded to the nearest 1,000. Costs are rounded to the nearest £1m. The costs are based on NHS England 2012/13, but the population data are the latest available e.g. Census 2011, IPS 2012 etc.

All of the single point estimates are subject to varying degrees of uncertainty , relating to the numbers of people and their behaviour. The treatment of uncertainty is explained further in section 11.2.

The estimates for the irregular migrants are very uncertain and based on out of date population estimates. The estimates for health tourism, as for any unlawful activity, are impossible to estimate with confidence and are a structured judgment. The estimates for chargeability are also uncertain because of the complexity of the rules. The detailed lines and sub-totals have more uncertainty than the totals.

10.1 Overseas visitor cost by NHS service

Table 17 below sets out our estimate of the costs of overseas visitors and migrants as defined for the main service categories of NHS England.

Table 17: Summary of costs of use by type of service

Service	Gross Cost (£M)	Modelled Overseas Visitor Cost (£M)	Overseas Visitor Cost as % of total gross cost England	Comments
General and Acute	41,778	546	1.31%	Assumed that age and access limit use
Community health services	9,749	117	1.20%	Assumed that age and access limit use
Mental illness	8,796	291	3.31%	Overseas Visitors are mostly aged 15-44
Maternity	2,583	177	6.84%	Overseas Visitors are mostly aged 15-44 and tend to have a higher birth rate
A&E	2,462	59	2.38%	Access similar to resident population
Other contractual	3,311	65	1.95%	-
Learning difficulties	1,406	27	1.95%	-
GP Services	7,841	202	2.58%	Access similar to resident population
Prescribing Costs	7,895	166	2.03%	-
Other - Dental, Ophthalmic, Pharma	5,694	116	2.04%	-
Total	91,515	1,760	1.92%	

Maternity costs stand out. This is because maternity costs have been adjusted for different levels of fecundity in different migrant groups. We have based this on the ONS report, which shows that the Total Fertility Rate for non-UK born women was 2.29 in 2011; for UK-born women it was 1.90. We have assumed that the non-UK born women in scope are similar to the non-UK born women who are settled in England.

The access limitations assumed in the model bring down the costs in General and Acute and in Community Services. In contrast, GP services and A&E are higher than the average costs because access is not constrained and is assumed to be more like the main resident population. In the case of Mental Health and

Maternity services, the model is reflecting the way that most migrants are in the 15-44 age group, which has a higher proportionate use of these services.

10.2 EEA visitors and non-permanent residents

The next table sets out our estimates of the costs of the use of the NHS services from the EEA, including expats, who are visitors or non-permanent residents to England. Although the results are presented as single figures, they are points within likely ranges and subject to various estimating errors. The breakdown of the modelled figures should only be taken as indicative and there is a considerable margin of uncertainty.

Table 18: Summary of costs of use by type of service - EEA

Service	Gross Cost (£M)	Modelled EEA Visitor Cost (£M)	EEA Visitor Cost as % service total	Comments
General and Acute	41,778	103	0.25%	Assumed that age and access limit use
Community health services	9,749	20	0.20%	Assumed that age and access limit use
Mental illness	8,796	34	0.39%	-
Maternity	2,583	21	0.80%	Overseas Visitors are mostly aged 15-44 and tend to have a higher birth rate
A&E	2,462	13	0.54%	Access similar to resident population
Other contractual	3,311	10	0.29%	-
Learning difficulties	1,406	4	0.29%	-
GP Services	7,841	44	0.56%	Access similar to resident population
Prescribing Costs	7,895	39	0.50%	Access similar to resident population
Other - Dental, Ophthalmic, Pharma	5,694	17	0.30%	-
Total	91,515	305	0.33%	

As noted above, this does not include non-permanent residents from the EEA where we have not found a satisfactory way of identifying them in the time available. However, the overwhelming majority of this group are entitled to free access to the NHS on the same ordinary residence basis as any other permanent resident.

10.3 Non-EEA Visitors and Migrants

The following table sets out our estimates of the costs of the use of the NHS services from the number of visitors and migrants from non-EEA countries, including expats and but excluding 'irregular' migrants. Although the results are presented as single figures, they are points within likely ranges and subject to various estimating errors.

Table 19: Summary of costs of use by type of service – non-EEA

Service	Gross Cost (£M)	Modelled Non-EEA Visitor Cost (£M)	Non-EEA Visitor Cost as % service total	Comments
General and Acute	41,778	443	1.06%	Assumed that age and access limit use
Community health services	9,749	98	1.00%	Assumed that age and access limit use
Mental illness	8,796	257	2.92%	Overseas Visitors are mostly aged 15-44
Maternity	2,583	156	6.04%	Overseas Visitors are mostly aged 15-44 and tend to have a higher birth rate
A&E	2,462	45	1.84%	Access similar to resident population
Other contractual	3,311	55	1.66%	-
Learning difficulties	1,406	23	1.66%	-
GP Services	7,841	158	2.02%	Access similar to resident population
Prescribing Costs	7,895	121	1.53%	-
Other - Dental, Ophthalmic, Pharma	5,694	99	1.74%	-
Total	91,515	1,456	1.59%	

The breakdown of the modelled figures should only be taken as indicative and there is a considerable margin of uncertainty

10.5 Overseas visitor cost by type of visitor and migrant

The next table shows visitors and non-permanent residents from the EEA and non-EEA. This shows our estimates of the annual gross cost to the NHS of the regular use of services in the normal course of events.

Table 20: Summary of Visitor and Migrant Use of the NHS

Visitor/Migrant Group	In-scope Population (Daily Equivalent, 000s)	Gross Cost (£M)	Weighted average Cost Per Head (£)
EEA			
Sub Total - Visitors (<3 Months)	*239*	*83*	*346*
Students (any time period)	*188*	*120*	*636*
Retired (any time period)	*16*	*58*	*3,651*
Total EEA	**443**	**261**	**588**
Non-EEA			
Business (<3 Months)	*26*	*7*	*266*
Tourists (<3 Months)	*63*	*22*	*352*
Visiting Friends or Relatives (<3 Months)	*75*	*44*	*696*
Other/Not stated reasons (<3 Months)	*6*	*3*	*421*
Sub Total - Visitors (<3 Months)	**170**	**76**	**449**
Business (>3 months, <12 months)	*33*	*24*	*717*
Other/Not stated reasons (>3 months, <12 months)	*21*	*25*	*1,144*
Sub Total - Temporary Migrants (>3 months, <12 months)	**55**	**49**	**884**
Business/Employment (>12 months)	*441*	*356*	*807*
Family (>12 months)	*193*	*165*	*856*
Sub Total - Temporary Migrants (>12 months)	**634**	**521**	**822**
Students (any time period)	**603**	**430**	**713**
Total Non-EEA	**1,461**	**1,075**	**736**

10.6 British Expats

Expats are shown in the tables above. Their costs are estimated to be £44m for EEA countries and £50m from non-EEA countries. We stress that it is hard to calculate a reliable estimate for expats largely because it is impossible to tell visiting expats from expats returning to stay. Furthermore it is hard to identify expats when they use the NHS.

To offset the underestimation of costs we have removed the constraints on access that we have applied to foreign nationals. This implies that expats are able to access NHS services in full however long the visit. Our modelled costs for the use of healthcare by expats are set out in the table below.

Table 21: Summary of British Expat Use of the NHS

Expats (up to 12 months)	In-scope Population (Daily Equivalent, 000s)	Gross Cost (£M)	Weighted average Cost Per Head (£)
Living in the EEA	*32*	*44*	***1,387***
Living in Non-EEA	*33*	*50*	***1,509***
Total Expats	**65**	**94**	**1,449**

10.7 Irregular migrants

The next table shows the estimated gross costs of the use of the NHS by irregular migrants, a group that includes Failed Asylum Seekers (FASs), over-stayers and illegal migrants. These numbers are very uncertain and based on historical population estimates, constrained by the lack of detailed up to date statistics from the Home Office. This calculation takes account of assumed higher individual health needs and assumed reduced access to services. The FASs in receipt of support, who are exempt from charges for secondary care, are a small proportion of the total.

Table 22: Irregular Migrant Use of the NHS

Migrant Group	In-scope Population (Daily Equivalent, 000s)	Gross Cost (£M)	Weighted average Cost Per Head (£)
Irregular Migrants			
Irregular migrants excluding supported FASs	*564*	*322*	*571*
Failed Asylum Seekers – in receipt of support	*16*	*8*	*531*
Total - Irregular Migrants	***580***	***330***	***570***

10.8 Health Tourism

The definition of **health tourists** can vary widely. Based on the findings of the Creative Research work, we have focused on two groups, namely:

- **Deliberate intent**: people who have travelled with a deliberate intention to obtain free healthcare to which they are not entitled, and therefore use the NHS to a greater extent than they would routinely need during their limited stay. This is typically for urgent or emergency hospital treatment sought on arrival, usually but not always as a one-off, and may include maternity care.
- **Taking advantage**: frequent visitors registered with GPs and able to obtain routine treatment including prescriptions and some elective (non-emergency) hospital referral

As with any irregular activity the numbers are very uncertain and are plausible ranges rather than distinct estimates. These numbers should be used with caution. The table below sets out our estimates, which are plausible ranges of the additional costs, generated by these two groups, over and above the normal use of the NHS by visitors and other migrants.

Table 23: Health Tourism

Health Tourism	Plausible additional cost (£M)	
	Central Estimate	Range
Incremental cost of **deliberate health tourism** for urgent treatment	**60-80**	**20-100**
Incremental cost of regular visitors **taking advantage**	§[78]	**50-200**

10.9 Summary

We now have estimates for three different groups – the regular visitors and migrants, making normal use of the NHS during their stay; the irregular migrants, about whom there is considerable uncertainty; and people who are deliberately misusing the NHS or taking advantage of the relatively easy access – for this group as with all irregular activity the estimates are very uncertain. The groups are summarised in the table below

The table shows that the **daily equivalent population of visitors and temporary migrants is around 2.5 million and the costs are about £1.8 billion for the normal use of the NHS**. We think that this probably in the range £1.5 billion to £1.9 billion. On top of this, there is a plausible range of around £100m to £300m attributable to health tourism.

[78] § - Unable to estimate

Table 24: Summary of Visitor and Migrant Use of the NHS

Visitor/Migrant Group	In-scope Population (Daily Equivalent, 000s)	Gross Cost (£M)	Weighted average Cost Per Head (£)
Total EEA	443	261	588
Total Non-EEA	1,461	1,075	736
Total Expats	65	94	1,449
Total Regular Visitors and Migrants	**1,969**	**1,430**	***726***
Total Irregular Migrants	*580*	*330*	*570*
Total "normal" use of NHS	**2,549**	**1,760**	**690**
Deliberate health tourism for urgent treatment	§[79]	60-80	§
Incremental cost of regular visitors taking advantage	§	50-200	§
Total – 'normal' use plus abuse and misuse	§	**1,870-2,040**	§

Source: Prederi model

10.10 Revenue Model

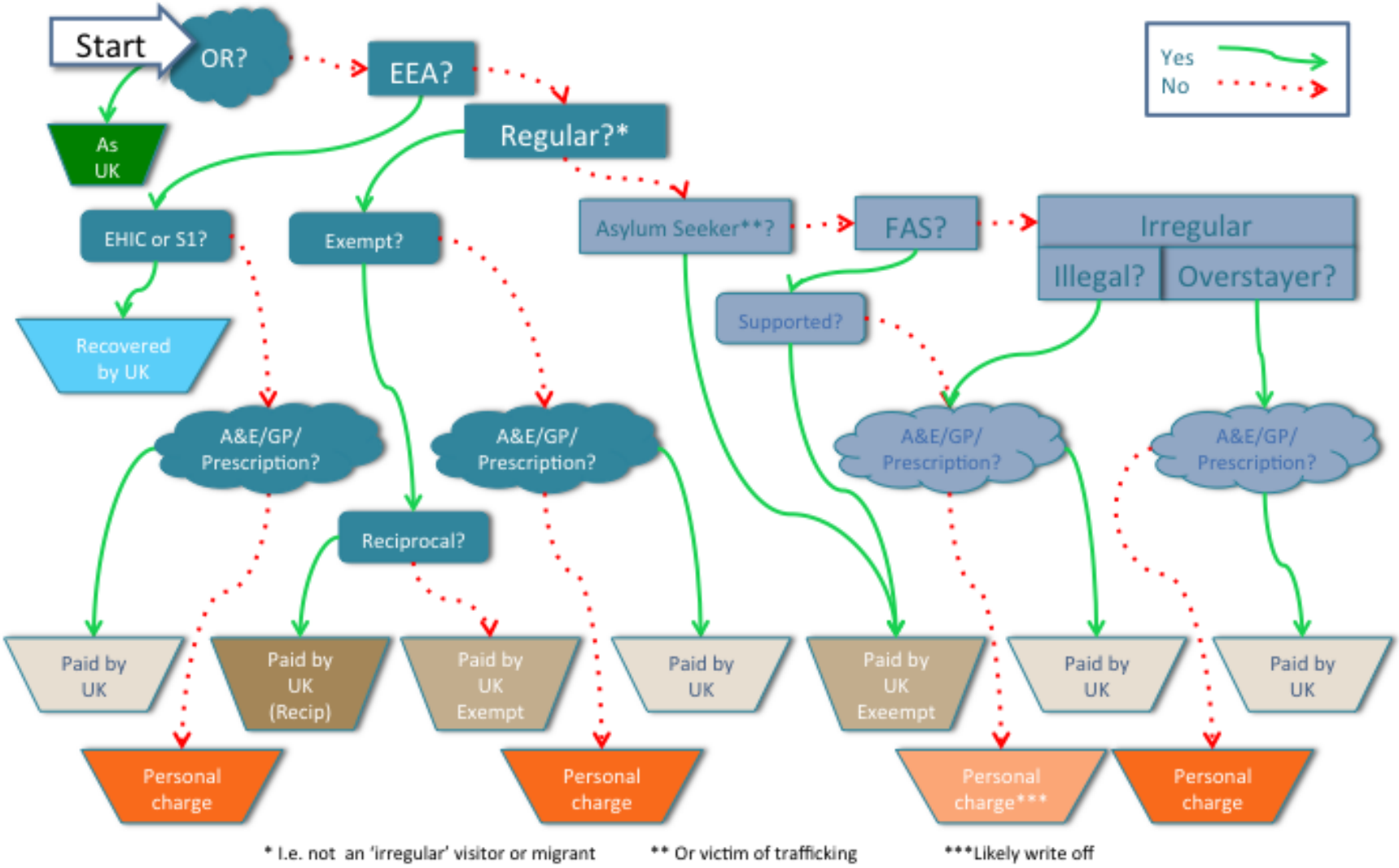
Under current domestic and EEA charging rules, not all of these costs are chargeable to patients. GP care, A&E and some public health services are available to all free of charge at the point of delivery. Most visitors from the EEA are covered under the EHIC[80] scheme for most services and there are reciprocal arrangements with some countries (notably Australia and New Zealand) to provide urgent care.

We have used a simplification of the current rules in the model. Our simplified representation of the rules and who is responsible for the costs of the treatment, is shown in Figure 25 below. The "clouds" show where there is a judgment exercised by NHS staff on a case-by-case basis, rather than a simple "yes/no" decision. Even with the definite categories there may well be challenges in identification.

The Exempt category is explained more fully in Annex C Rules for accessing the NHS in England, along with the other categories.

[79] § - Unable to estimate
[80] European Health Insurance Card

Figure 25: Summary of current charging arrangements



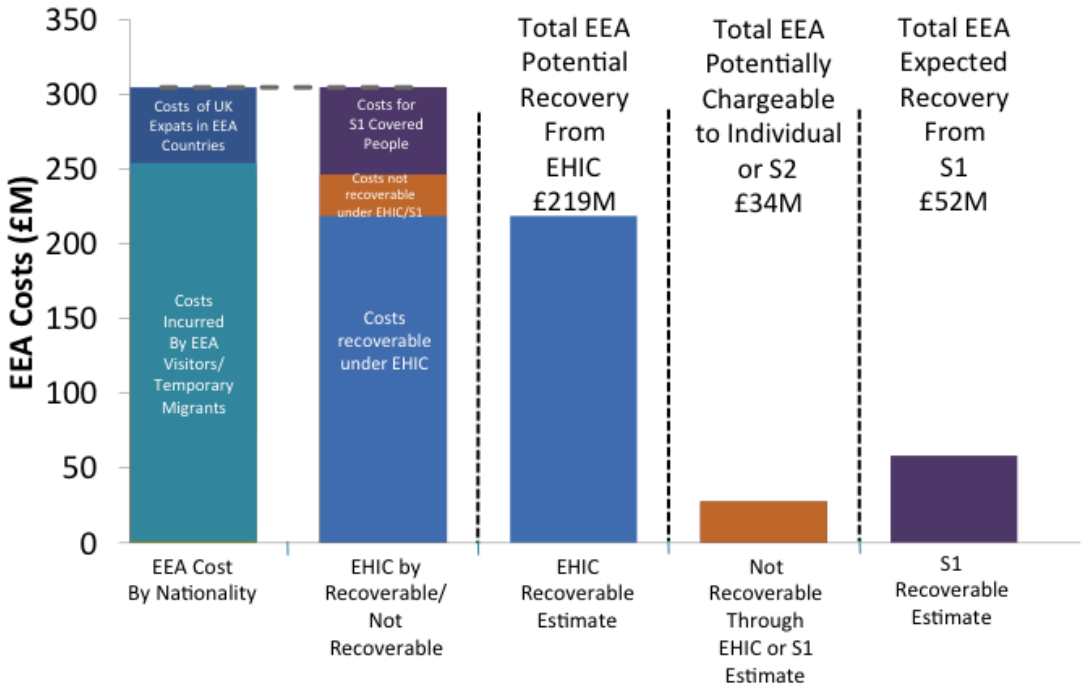
When we look at the services where charges should be made, it appears that around £190m of the £1.8bn should be charged to patients and a further £220m recovered under the EHIC scheme. These are preliminary estimates.

When the complexity of the charging is combined with the uncertainty inherent in the visitor and migrant numbers, the estimates for what is chargeable become very uncertain when broken down in detail. As with the other results, although the results are presented as single figures, they are points within likely ranges and subject to various estimating errors.

10.10.1 EEA non-permanent residents – charges and recoveries

In the case of EEA visitors and non-permanent residents, the gross cost to the NHS is estimated to be about £305m. This figure includes £44m for British expats living in EEA countries. Applying the charging rules suggests that up to £220m is recoverable under the EHIC scheme. Some £52m is recoverable from other member states under the S1 scheme that provides healthcare for state pensioners. Further sums are recoverable under S2 where people travel to the UK to receive pre-arranged medical treatment. Some of the expected charges to individuals relate to chargeable treatment for expats. The summary is shown in Figure 26 below.

Figure 26: Cost recovery – EEA



Source: Prederi model

The DH accounts for 2012-13 show that about £50m is recovered from EEA countries. It is noticeable that this is less than is paid out for British visitors to EEA countries, namely £173m. It also seems out of line with the balance of visits with the EEA. There are some differences in patterns of visits and the demographic characteristics of the visitors that appear to explain some of the

difference in the 'balance of payments'. The arrangements also vary between countries. This is an area that needs further investigation that we have not had time to undertake.

The model allows this analysis to be presented for the larger countries where the data is available in enough detail. These estimates, which include visiting British expats living in those countries, should be treated with caution and are simply plausible figures within a range.

Table 25: Cost recovery in EEA

Country	Gross Cost (£M)	Covered by EHIC or S1 (£M)
Poland	41	36
Germany	27	24
France	24	22
Ireland	23	21
Spain	18	16
Italy	16	15
Other EEA (25 other Countries & Territories)	156	137
Total EEA	**305**	**270**

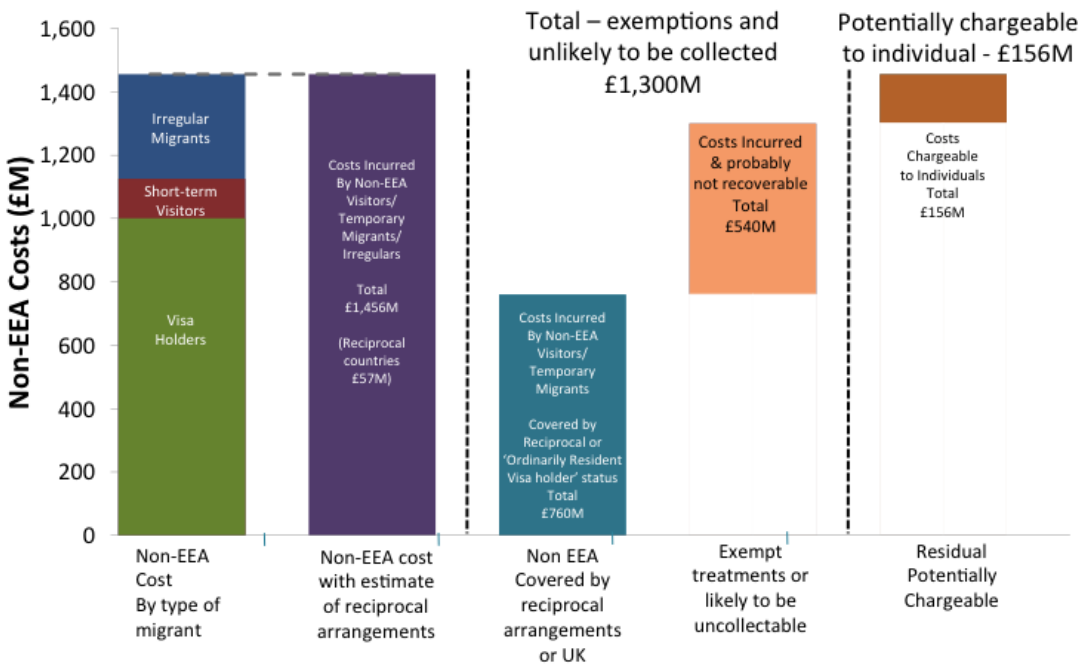
Source: Prederi model

The DH accounts for 2012-13 show that about £50m is recovered from EEA countries. It is noticeable that this is far less than is paid out for British visitors to EEA countries ie £173m. It also seems out of line with the balance of visits with the EEA. There are some differences in patterns of visits and the demographic characteristics of the visitors that appear to explain some of the difference in the 'balance of payments' but this is an area that needs further investigation that we have not had time to undertake.

10.10.2 Non-EEA visitors and migrants – charges

In the case of non-EEA visitors and migrants there appear to be costs of £1.4Bn for providing healthcare under the NHS in England. The £1,4Bn includes £50m for British expats living in non-EEA countries. Of the £1.4BN total, some £1.3Bn is borne by the UK Government under the current charging rules because people, though here temporarily, are deemed "Ordinarily Resident' or they are receiving care such as GP or A&E services for which no charge is made. This £1.3Bn includes costs that are unlikely to be recoverable from individuals because a significant (but unknown) proportion of the irregular migrants have no means. This leaves around £150m to be invoiced to individuals among the regular visitors and migrants who will need the NHS in the normal course of events. This is illustrated in Figure 27 below.

Figure 27: Cost recovery – non-EEA



Source: Prederi model

As with the EEA, the model allows some breakdown by country where the detail is available, as shown in the next table. The figures include British expats resident in non-EEA countries who are visiting England. As the totals are broken down, so the estimates become more unreliable, so there is increased uncertainty in the detailed figures.

Table 26: Cost recovery in non- EEA countries

Country	Gross Cost (£M)	Covered by Visa Holder O.R. Status or Reciprocal (£M)	Recoverable From Individual (£M)	Not Recoverable (e.g. exempt treatments) (£M)
India	119	82	16	21
Pakistan	91	51	18	23
China	72	52	9	11
USA	55	27	10	18
Nigeria	37	32	2	3
Bangladesh	36	23	6	8
Philippines	33	27	3	4
Australia	31	15	4	12
Sri Lanka	30	23	3	4
South Africa	30	25	2	3
Other Non-EEA	590	395	83	112
Total Non-EEA (excl Irregulars)	**1,125**	**752**	**156**	**218**

Source: Prederi model

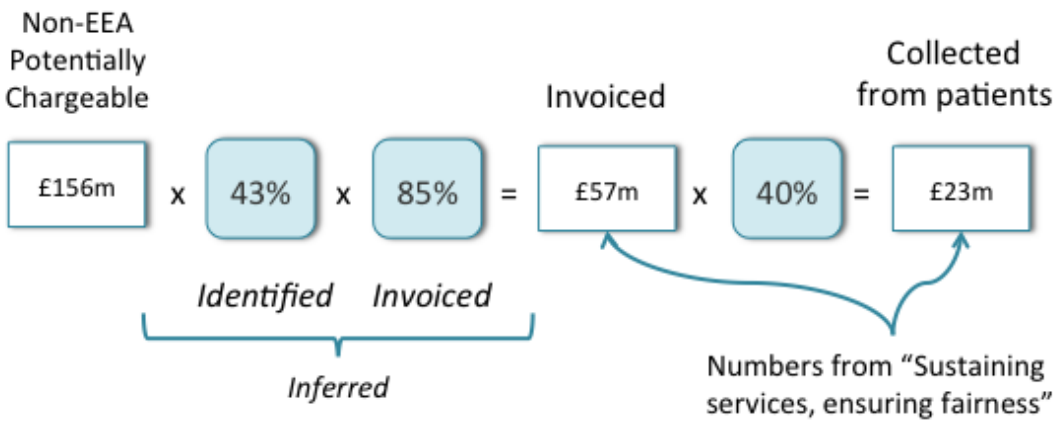
10.10.3 Collecting the revenue

Having derived some estimates of the sums that could potentially be chargeable to individuals, set out in the tables above, we have also looked at how these relate to the amounts that are actually billed to individuals by Trusts. It is apparent from the Phase 1 research and information from Trusts[81] that there are very low rates of identifying patients who should be paying, tracking and invoicing them, and collecting the payment.

A previous Department study figure has shown that only about £23m is collected of the £57m that is invoiced, a realisation rate of 40%. The £57m represents income from non-EEA patients, so this represents about 37% of the chargeable sums from non-EEA. Based on evidence from Phase 1, this suggests to us that about 43% of the chargeable patients are identified as being chargeable and perhaps 85% of the identified cases are subsequently invoiced. Overall, the indications are, therefore, that Trusts realise about 15% of the sums that are potentially chargeable to non-EEA patients (excluding irregular migrants).

These numbers must be treated with caution. The estimated rates are simply indicative since the scope and dates are not exactly the same. Furthermore the model does not reflect the full complexity of the charging rules. This relationship between the non-EEA potentially chargeable sum and what is realised from patients is summarised in Figure 28 below.

Figure 28: Revenue Collection - non-EEA



[81] Sustaining services, ensuring fairness: A consultation on non-permanent resident access and their financial contribution to NHS provision in England, Department of Health, 3 July 2013

10.10.5 Summary of cost recovery

Not all costs of use if the NHS in England by visitors and migrants are chargeable to patients. GP care, A&E and some public health services are available to all free of charge. Visitors from the EEA are covered under the EHIC scheme for some services and there are reciprocal arrangements with some countries (notably Australia and New Zealand) to provide urgent care. When we look at the services that where charges should be made, it appears as if around £156m of the £1.8bn should be charged to non-EEA patients and a further £220m recovered under the EHIC scheme.

The summary does not include charges that might be made to irregular migrants. There are two reasons. First the number is very uncertain and second, we have assumed that most irregular migrants will have no means to pay and it is misleading to show this as potentially collectible revenue.

Table 27: Summary of potential charges to individuals from non-EEA countries (current rules)

Visitor/Migrant Group	In-scope Population (Daily Equivalent, 000s)	Gross Cost (£M)	Costs potentially chargeable to individuals (£M)	
Visitors (<3 Months)	*170*	*76*	*21*	
Temporary Migrants (>3 months, <12 months)	*55*	*49*	*22*	
Non-EEA - Temporary Migrants (>12 months)	*634*	*521*	*75*	Under consultation[82]
Non-EEA Students (any time period)	*603*	*430*	*19*	
Non-EEA nationals	***1462***	***1076***	***137***	
British Expats from Non-EEA countries	*34*	*50*	*19*	
Total from Non-EEA countries	**1,496**	**1,126**	**156**	

Source: Prederi model

[82] These are groups where the proposals would change the exemption from 'ordinarily resident' to 'permanently settled' in the UK, which would bring them into the scope of charging.

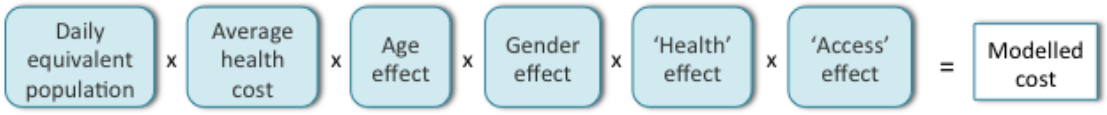
11 Sensitivity and Uncertainty

This chapter looks at the results in terms of their sensitivity to assumptions that we have made in the analysis and the uncertainty that surrounds the results because of limitations of the data and the analysis.

11.1 Sensitivity

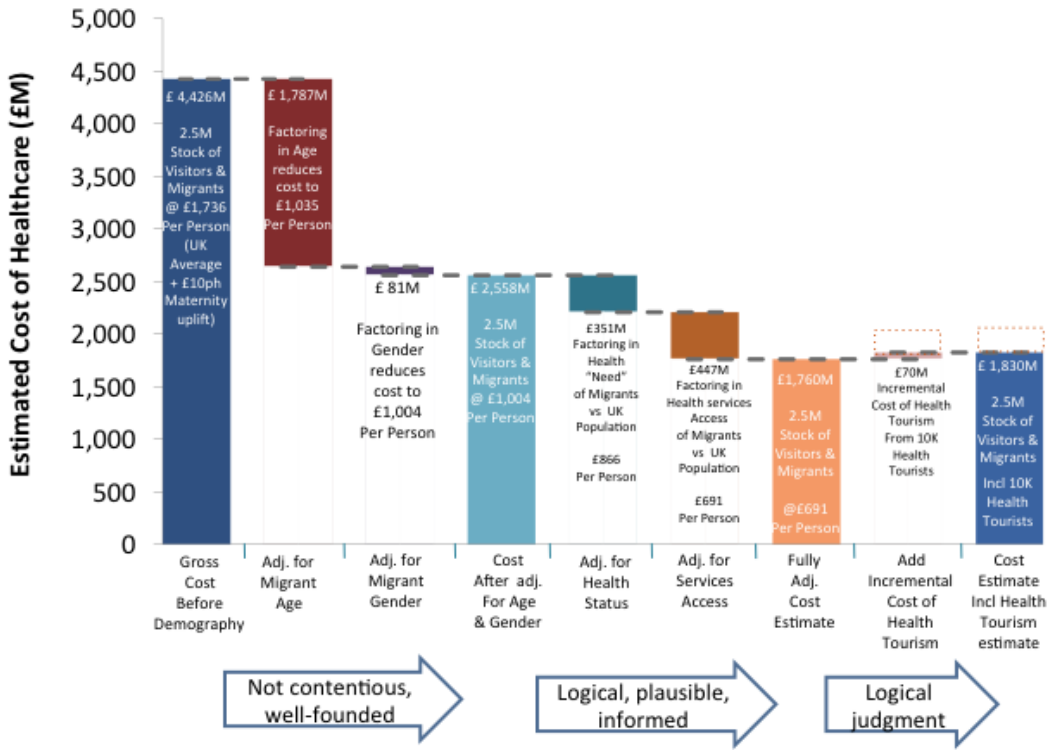
The sensitivity of the model can be seen from the basic calculation in the model, which is shown below.

Figure 29: Basic Structure of the Model



Some elements have better data than others. Some have more soundly based assumptions. We have tried to show the how the steps influence the results in the diagram below along with a guide as to how reliable the adjustment might be.

Figure 30: Summary of the adjustments made in the model



Source: Prederi model

We believe that the adjustments for age and gender are based on sound information from the Census, IPS, Immigration Statistics and Department of Health data. The logic for the adjustments is well founded. Together, these adjustments account for the £1.9Bn of the £2.7bn adjustment.

The adjustment for health need is statistically based and is logical, but is open to debate. The adjustment for access is logical but is not empirically based.

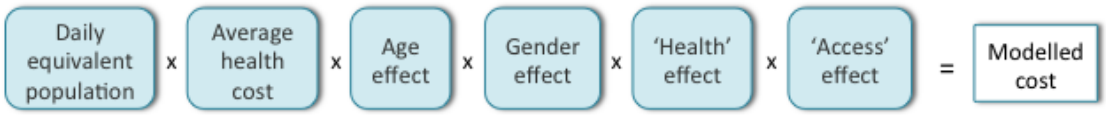
The calculation for the health tourism costs is a logical assessment of risk but is based on judgments and little direct data.

Overall our view is that the adjustments for age and gender are not contentious and while there are probably equally valid other ways of making the adjustments the effect will be the same, given the level of uncertainty in the data. These account for the largest part of the adjustments we have made.

11.2 Uncertainty

As we have noted in chapter 9, there are various shortcomings in the data for the purposes we require, even the most reliable such as the Census. We have therefore considered the overall levels of uncertainty in the model. We have done this on the same lines as the Sensitivity and the basic calculation below.

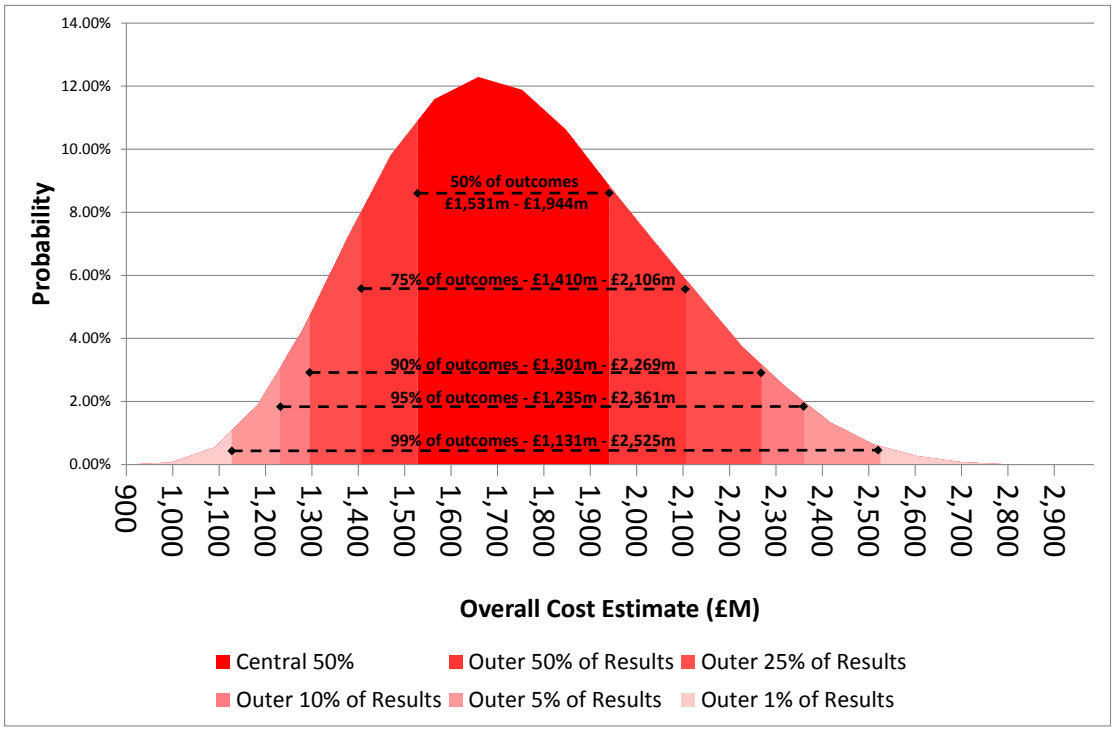
Figure 31: Basic calculation in the Model



The nature of the calculation means that uncertainty in anyone element is multiplied through the whole analysis. Potentially, this creates a huge range. We considered applying some form of simulation techniques such as Monte Carlo modelling to all the results, but have not presented the results this way through the report, as this would be likely to provide a spurious air of confidence to figures that do not have known statistical distributions.

We have however shown below a Monte Carlo simulation based on 40,000 iterations, for the overall result. Our central estimate for the cost of 'regular' use of the NHS in England by visitors and migrants is £1.76 billion. The simulation suggests that it is 50% likely that the result is in the range £1.53 billion to £1.94 billion; and that there is a 90% chance that the result is in the range £1.30 billion to £2.27 billion.

Figure 32: Summary of uncertainty around the overall result



Source: Prederi model

Rather than roll up all the uncertainty into one view, it may be helpful to break out the uncertainty surrounding the components of the calculation. Most of the relationships in the model are linear and many variables are constrained (e.g. if the expat value age profile is wrong, the correction is in the non-UK born visitor values). We have therefore tried to highlight the uncertainty associated with each of the main parts of the calculation. This is set out below.

There is more uncertainty in the irregular migrants where neither the overall number nor the use of the health service is founded on good evidence. We have therefore considered the 'regular' and 'irregular' populations separately.

For each of these populations, regular/irregular, we have identified the ranges and what the effect would be of using the extreme that would result in the lowest overall cost or the highest overall cost.

It is important to note that fundamentally each component of the linear calculation is an estimate and in each case the minimum and maximum values cannot be empirically verified. Similarly, the underlying probability distribution cannot be determined, and is arguably best considered a uniform distribution, with any value within the bounds as likely as any other.

With better information we could determine an overall probability distribution for the outcome, probably approximately a normal curve (as shown in the simulation above).

As it is, with a lack of confidence over the true values and their variability, any attempt to be more scientific with the assessment of upper/lower bounds for the

detailed results would arguably be spurious. The upper/lower bounds we have established are based upon reasonable logic such as natural bounds and/or quality of underlying assumptions. We suggest it is impossible at the moment to empirically assess whether any particular outcome within these bounds is more or less likely than any other outcome.

11.2.1 Regular Population

In these next paragraphs we have shown the effect of using the 'worst' case (from the perspective of cost-to-the-NHS) and the 'best' case for the regular visitors. In the first instance, we do not constrain the variation. We then contrast this result with a second version where the 'best' and 'worst' outcomes are mixed. This is simply to demonstrate the difference between the theoretical upper and lower bounds and some more plausible upper and lower bounds.

Table 28: Unconstrained variation – regular population

	Linear Calculation
Population	1,989,277
Average Cost (England)	£ 1,736.29
Age Effect	-37%
Gender Effect	-0.3%
Health Status effect	-16%
Access Effect	-20%
	1,430,083,340

Worst Case Shift	Worst Case Value
+10%	2,166,205
+5%	£ 1,823.11
+0%	-37%
+0%	-0.3%
-100%	0%
-100%	0%
	2,478,137,516

Best Case Shift	Best Case Value
-10%	1,772,349
-5%	£ 1,649.48
+0%	-37%
+0%	-0.3%
+100%	-33%
+100%	-41%
	732,874,846

Source: Prederi model

In contrast to the table above, which shows the unconstrained application of the best and worst cases for regular migrants, we show below a constrained version, which is an attempt to give a more plausible range.

Table 29: Constrained variation – regular population

0.5	Bad/Worst
'Bad' Case Shift	'Bad' Case Value
+5%	2,067,741
+3%	£ 1,779.70
+0%	-37%
+0%	-0.3%
-50%	-8%
-50%	-10%
	1,904,970,208

0.5	Good/Best
Good Case Shift	Good Case Value
-5%	1,870,813
-3%	£ 1,692.89
+0%	-37%
+0%	-0.3%
+50%	-25%
+50%	-30%
	1,042,774,233

Source: Prederi model

11.2.3 Irregular Population

In these next paragraphs we have shown the effect of using the 'worst' case (from the perspective of cost-to-the-NHS) and the 'best' case for the irregular migrants. As before, in the first instance, we do not constrain the variation. We then contrast this result with a second version where the 'best' and 'worst' outcomes are mixed.

Table 30: Unconstrained variation – irregular population

	Linear Calculation	Worst Case Shift	Worst Case Value	Best Case Shift	Best Case Value
Population	580,000	+16%	674,790	-40%	350,065
Average Cost (England)	£ 1,736.29	+5%	£ 1,823.11	-5%	£ 1,649.48
Age Effect	-52%	+0%	-52%	+0%	-52%
Gender Effect	-15%	+0%	-15%	+0%	-15%
Health Status effect	0%	+100%	0%	-100%	0%
Access Effect	-20%	-100%	0%	+33%	-27%
	330,332,192		504,418,060		173,622,618

Source: Prederi model

In contrast to the table above, which shows the unconstrained application of the best and worst cases for regular migrants, we show below a constrained version, which is an attempt to give a more plausible range.

Table 31: Constrained variation – irregular population

0.5	Bad/Worst
'Bad' Case Shift	'Bad' Case Value
+8%	627,395
+3%	£ 1,779.70
+0%	-52%
+0%	-15%
+50%	0%
-50%	-10%
	412,040,802

0.5	Good/Best
Good Case Shift	Good Case Value
-20%	465,032
-3%	£ 1,692.89
+0%	-52%
+0%	-15%
-50%	0%
+17%	-23%
	247,472,698

Source: Prederi model

This is simply to demonstrate the difference between the theoretical upper and lower bounds and some more plausible upper and lower bounds.

12 Geographic variations

The terms of reference for the study are costs to the NHS in England. Most of the data we have used is for the UK so we have had to adjust the Census, IPS and Home Office data to suit. This is explained in the specification for the model and summarised in Annex D: Scope.

A regional analysis was not part of the remit but we have looked at the geographical distribution to see whether any specific adjustments would be needed in the model. We have noted that in using the level of detail that we have, most of the data, even the most complete such as the Census, does not have enough granularity to take all the detail to a regional or lower level. Some aggregation to world regions or removing the age groups would be required in order to prepare an analysis for English regions. There would though be merit in exploring the English data at a more regional or local level.

What is clear is that while visitors to the UK are broadly in line with the national shares of population, there is a disproportionate concentration in London.

Table 32: Where do visitors go in the UK?

Number of overnight visits to the regions of the UK by area of residence			
	All Regions	Total England	London
Visitors from:	*(000s)*	*as % UK*	*as % UK*
North America	3,544	90%	71%
Europe	22,796	84%	53%
- of which EU27	20,553	84%	51%
- of which EU25	20,147	83%	52%
- of which EU15	17,714	82%	53%
Other Countries	4,744	95%	70%
Total World	31,084	86%	58%

Source ONS

Using the population of non-UK born people as a proxy for the location of the non-resident populations, shows that England has a higher share compared to the rest of the UK and London has by far the highest proportion of non-UK born people (recognising that non-UK born people include people with British citizenship and others with settlement rights).

Table 33: Where do non-UK born people live in the UK?

	UK Born (000s)	Non-UK Born (000s)	Total (000s)	Non-UK Born as % Total
United Kingdom	**54,233**	**7,509**	61,742	12.2%
Regions of England				
North East	2,460	123	2,583	4.8%
North West	6,312	549	6,861	8.0%
Yorkshire & The Humber	4,822	442	5,264	8.4%
East Midlands	4,008	432	4,440	9.7%
West Midlands	4,810	595	5,405	11.0%
East	5,179	624	5,803	10.8%
London	4,986	2,812	7,798	36.1%
South East	7,495	952	8,447	11.3%
South West	4,826	379	5,205	7.3%
England	**44,898**	**6,908**	51,806	13.3%
Wales	**2,833**	**155**	2,988	5.2%
Scotland	**4,820**	**340**	5,160	6.6%
Northern Ireland	**1,683**	**106**	1,789	5.9%

Source ONS

The distribution of visitors and migrants across the UK suggest two conclusions: first the focus is on London and second that all parts of England have material numbers of overseas visitors and migrants.

There would be merit in comparing the income from overseas visitors as presented in the NHS Trusts' accounts to see whether the amounts are broadly in line with the relative numbers of visitors and migrants in that region. We have reviewed about 10 published accounts of Trusts from London and some other regions, and there are some large values as would be expected in some London Trusts. There are however some accounts, where overseas visitors might be expected, that appear to show no income from overseas visitors. There are various plausible reasons for this (e.g. the amount may not be material) and we have not had the time to pursue this systematically.

13 Forecasts

13.1 Approach

In the limited time we have had for this study, we have not been able to undertake a thorough forecasting exercise. Ideally we would generate some scenarios[83] and look at the main 25-40 countries that are the main sources for visitors and migrants and consider the drivers of visits and migration. We have not been able to do that and instead we have considered three types of driver of the numbers of visitors and migrants:

- Predictable - using long term trends e.g. tourism, GDP growth etc
- Unpredictable interruptions e.g. EU membership, "9/11", oil price shock
- Planned changes e.g. border controls in 2015

For a useful discussion of the areas of uncertainty that can be considered in forecasting see Dimensions of Uncertainty, from the Government Office for Science.[84] This identified 11 dimensions of uncertainty that could have a bearing on public policy.

The key influences that we have identified and considered are:

- Political
  - EU enlargement and the UK relationship to the rest of the EU
  - Control of immigration to UK
  - Political will to regularise the 'irregular migrant" population e.g. 'earned citizenship'.
- Economic
  - Performance of EU and relative performance of the UK
  - Global trends in economic growth and trade
- Social
  - Attitudes in the UK towards immigration
  - Increased readiness in UK and EEA to move for work
- Technological
  - Minimal impact on these forecasts but e.g. innovations in medicine and remote working
- Environmental
  - Minimal impact on these forecasts but e.g. limits to growth of air travel
- Legal
  - Stronger controls at the UK border
  - Convergence of EU rules on eligibility for benefits
  - Immigration law
- Organisational
  - NHS reforms e.g. GP/A&E balance; use of non-hospital settings for treatment

[83] See e.g. Government Office for Science, Foresight, Guidance on the use of strategic futures analysis for policy development in government, 2009

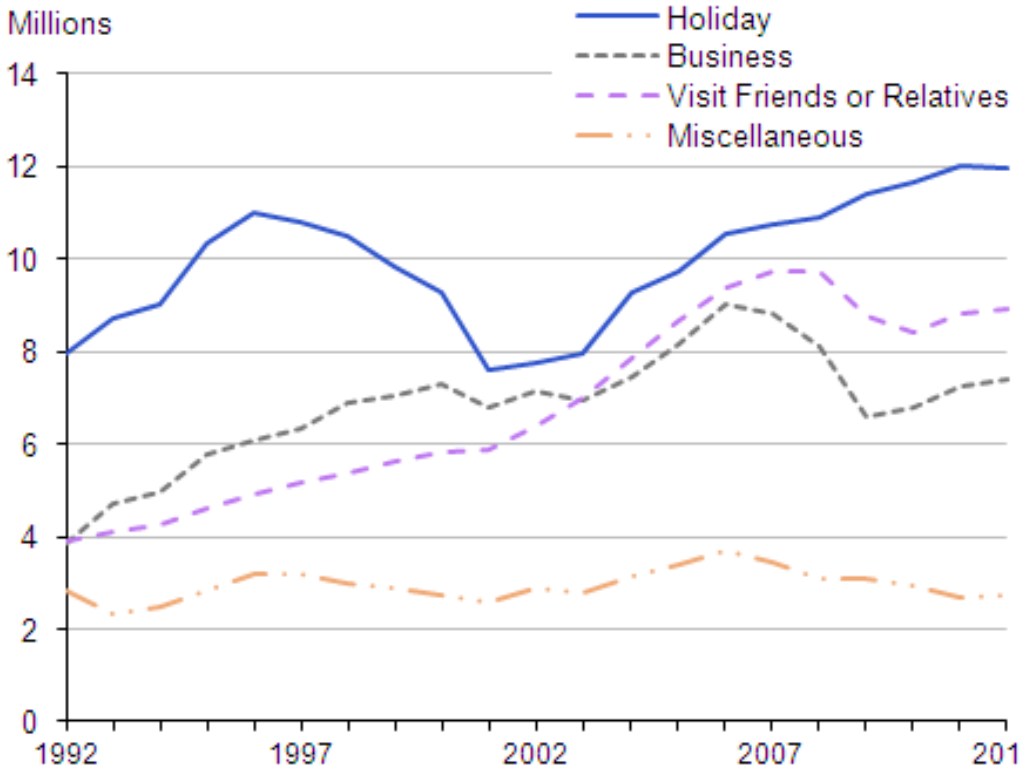
[84] Government Office for Science, Foresight, Dimensions of Uncertainty, 2010.

With the well-worn quotations about the dangers and difficulties of forecasting ringing in ours ears, we have taken account of the long-term trends and the planned changes, and tentatively suggest the following ideas:

13.2 Visitors

The IPS has been used since 1961 to record the trends in travel and tourism in the UK. The ONS publication, Travel Trends[85], shows that international travel and tourism is influenced by various factors, such including currency exchange rates, weather, government policy, economic and political conditions in the UK and abroad, and special events (e.g. the Olympics). The ONS point out that it is not possible to identify the exact impact of each aspect on travel and tourism. The general trend has been growth as shown in the chart below.

Figure 33: Overseas residents' visits by purpose 1992-2012

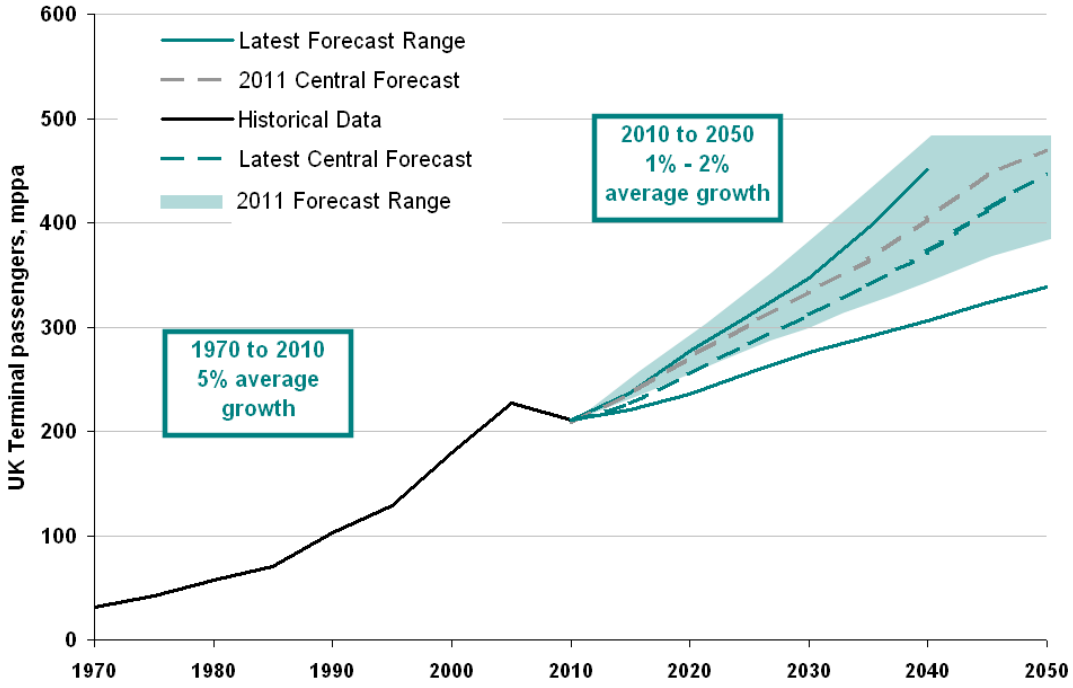


Source: ONS

We think that **visitor numbers** will continue to grow and that the Department for Transport forecasts[86] would be the most appropriate to use, implying growth of around 1%-2% a year. The forecasts relate to aviation, but most international visitors arrive by air.

[85] ONS, Travel Trends 2012, April 2013
[86] Department for Transport, UK Aviation Forecasts, January 2013

Figure 34: Forecast of air passengers in the UK – constrained forecast of million passengers per annum (mppa)



Source: Department for Transport

For a more detailed forecast of the **visitors in the near future**, we find Visit Britain's analysis[87]helpful:

- Travel from Western Europe is forecast to show the strongest growth in absolute terms, with approximately 3.5million additional visits (18%) in 2014.
- North America is also expected to provide a significant increase in visitor numbers (900,000) by 2014 (an increase of 24%).
- Other regions are also forecast to grow in the long-term. Southeast Asia (+62%) and Northeast Asia (+39%) are expected to show the strongest growth by 2014 in percentage terms, representing an additional 150,000 and 240,000 visits respectively.
- Africa and Emerging Europe are expected to grow at the slowest rate, with just 7.4% growth each by 2014

13.3 Migrants

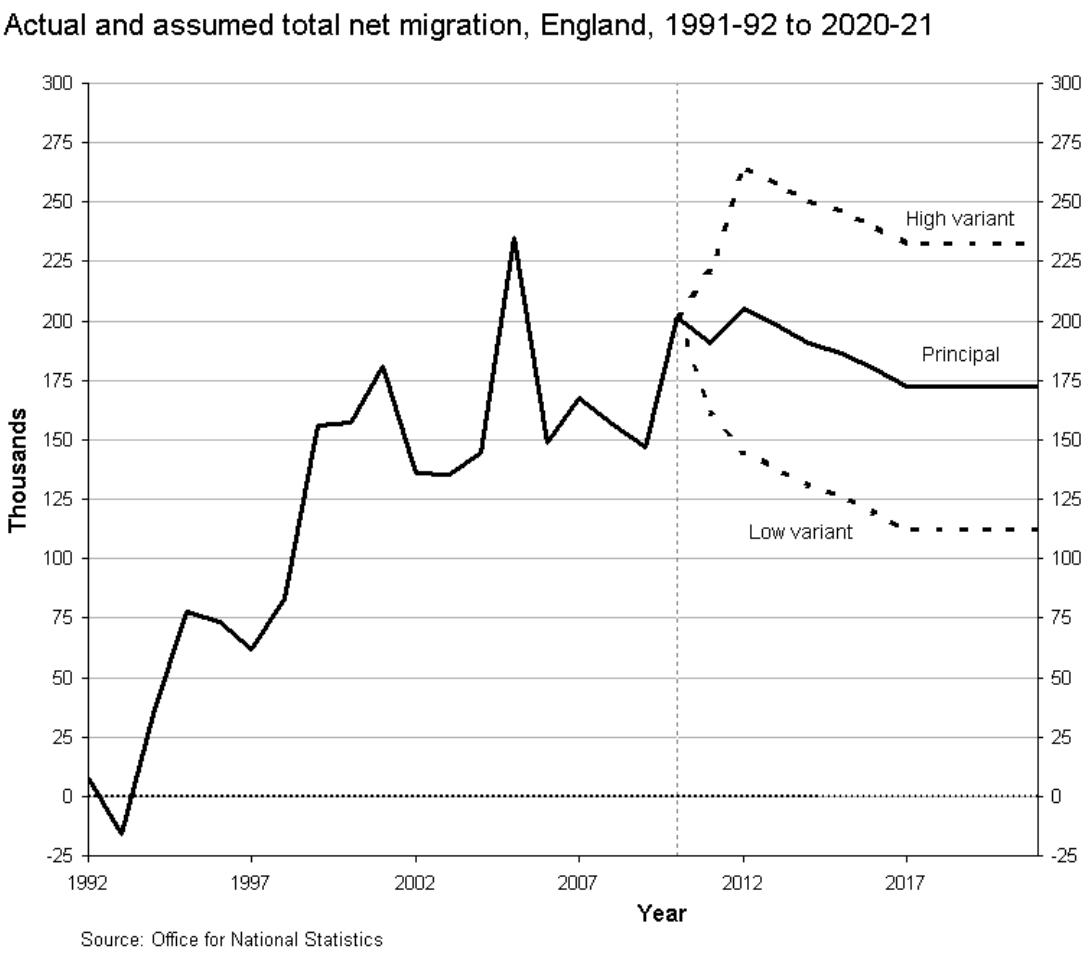
Looking at **migration**, we note that the ONS population projections for England[88] suggest a growth of 3.4% between 2011 and 2021 that is attributable to

[87] Visit Britain Foresight 109: All Visit Britain's data is taken from Tourism Economics, an Oxford Economics company. The Tourism Decision Metrics (TDM) model forecasts future international tourism flows, based on historic economic/tourism data and future economic forecasts. It assumes that there are no barriers to tourism growth (eg no limit to route/airport capacity, no new visa regulations) and, as a forecast, it is clearly subject to external shocks which may be natural or man-made, so should be taken as a guide only.

[88] ONS, Statistical Bulletin, Interim 2011-based subnational population projections for England, 28 September 2012

international migration. A forecast of net migration was provided in an ONS paper in October 2011[89] and this is shown below.

Figure 35: ONS projection of net migration



The analysis of the costs of visitor and migrant use of the NHS are sensitive to the country of origin and the purpose of the visit. We now therefore look at the drivers of migration and how these might influence migration from the EEA and non-EEA countries.

There are complex drivers of international migration. Around the world, international migration is expected to transform in scale, reach and complexity, as a result of growing demographic disparities, the effects of environmental change, new global political and economic dynamics, technological revolutions and social networks. We do not think that over the next 10 years that some of these factors will be significant for the visitor and migrant use of the NHS in England, based on current trends – though they could become relevant if there are large, unpredictable changes e.g. regional wars or climate-driven catastrophes.

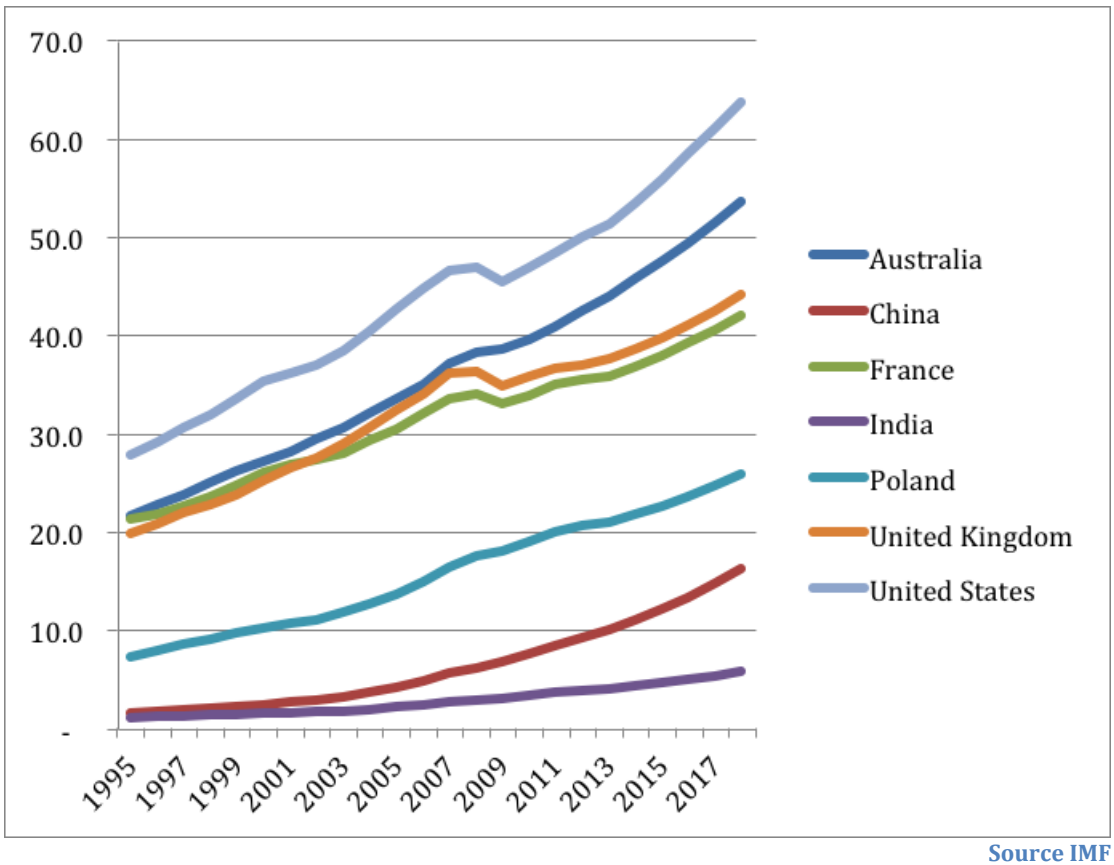
[89] ONS, Migration Assumptions 2010-based National Population Projections, 26 October 2011

Given that much of the migration to the UK is driven by economics, directly or indirectly, we think that there are three major factors that will drive the trends, though their effect will be different for the unconstrained EEA migration and the regulated non-EEA migration. The main trends are:

- The relative performance of the UK economy compared to other parts of the EEA and regions of the world, especially those with links to the UK.
- The already settled communities in the UK who have come from different parts of the EEA and other regions of the world
- Increased wealth and education among people in developing economies who wish to make the most of their skills in an advanced economy like the UK.

Some crude, but indicative sense of the way those trends might develop can be gained from growth in GDP per capita of various countries that are significant in the analysis in our model. These trends are derived from the International Monetary Fund (IMF) outlook[90] for some of the major countries we have considered in the analysis.

Figure 36: IMF forecasts of per capita GDP ($000s)



Source IMF

The graph shows that the UK's relative economic position remains, very broadly, the same. So competitor economies (like the USA and Australia for e.g. students, or like France for EU labour migration) are growing in a similar way; and countries from which there are large numbers of people coming to the UK (e.g.

[90] Data from International Monetary Fund World Economic Outlook Database, April 2013

India and Poland) are closing the gap, but large differences remain. The chart also shows that fast growing economies like China (especially) and India are forecast to see large percentage changes of average GDP per capita, which suggests that more people are likely to have the resources for travel and migration from those countries.

Looking at **EEA nationals**, we think that this is especially hard to forecast because of the freedom of movement around the EEA. On the one hand there may be a slowing of people moving from the A8 countries as economic opportunities increase relatively in the home countries - although the differentials are likely to remain significant. On the other hand, there is likely to be an increase of people from the A2 countries. The A2 forecasts are very varied.

As Keith Vaz MP has said: "the estimates we currently have vary wildly. During our inquiry into the lifting of restrictions, the Romanian and Bulgarian Ambassadors told the Home Affairs Committee 35,000 could come, while Migration Watch estimated as many as 80,000…. Discussion of the issue has caused panic in some quarters for one simple reason: we don't have the facts."[91]

Migration Watch have pointed out the strong incentives for people from Bulgaria and Romania to move to the UK, suggesting that 50,000 people a year might come to the UK each year from 2014.[92]

Overall, given the logic of EU membership, the numbers overall could be expected to rise as people move to take advantage of economic growth wherever they can find it across the EU; this would apply particularly if high rates of unemployment persist in Europe's south.

Turning to the **non-EEA** and to visa holders, given the Coalition Government's commitment to limit migration, which appears to be roughly where the political consensus is settling, we think that the numbers will be roughly in line with present levels for the foreseeable future. Public concerns about immigration are at historically unprecedented levels, regularly topping polls of the most pressing problems facing the country [93] and this would seem likely to drive political will to limit the only controllable migrant numbers.

- Work visas seem unlikely to be reduced much further. We note in the MAC's review of the "skilled, shortage, sensible" approach that while the number of employees has fallen there remain over 100 shortage occupations of which 25 have been on the list over four years.[94] While there is pressure to hold down net migration, we would expect that there will still be a significant need for Tier 2 migrants to meet long-standing skills shortages.

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[91] Keith Vaz MP, Chairman Home Affairs Select Committee, Daily Telegraph, 15 August 2013

[92] Migration Watch: Briefing Paper 4.20, Incentives for Romanian and Bulgarian Migration to the UK

[93] Ben Page, Ipsos MORI, British Attitudes to Immigration in the 21st century, 2009

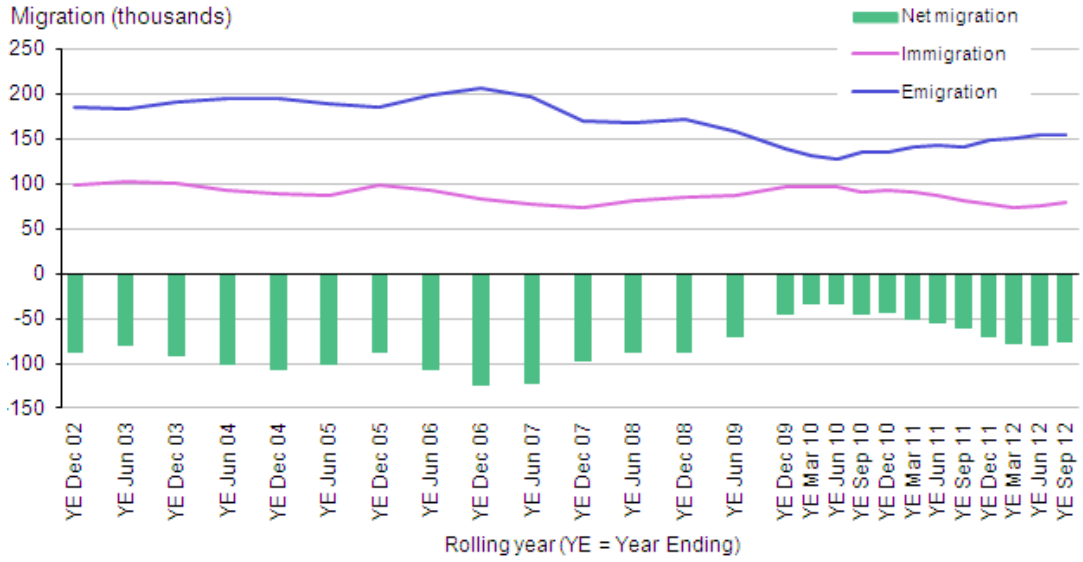
[94] Migration Advisory Committee, Skilled Shortage Sensible: Full review of the recommended shortage occupation lists for the UK and Scotland, a sunset clause and the creative occupations, February 2013

- Student numbers at universities are an important element of the economy and it does not seem to be in the UK's interests to reduce these numbers. [95] While FE student numbers will be constrained by tougher rules, we would expect HE student numbers to remain steady or to grow.
- Given that there are already large settled non-UK populations and growing travel, it is hard to see why the demand for the number of Family visas would fall, but we note that with tightening rules numbers of people using Family visas to come to the UK have fallen.[96]

13.4 Expats

As to British expats, over the past 10 years emigration has fallen from roughly 200,000 a year to around 150,000.

Figure 37: Long Term international migration estimates of British citizens, UK, 2002-2012



Source ONS

We would expect that Britons moving (temporarily or longer term) to work would grow in line with world GDP, globalisation, and EU integration. In recent years they have remained steady[97]. There are some forecasts that suggest an increase in British people living abroad, especially in the EU.[98] With expats who moved when they reached or approached retirement, often to the EU, as they grow older and typically need more care, they may wish to return or access care in England especially if they are in countries in the 'EU south' facing economic challenges.

13.5 Irregular migrants

Looking at the 'irregular migrants', since there are some planned changes to improve control of the UK border, we would expect to see a slowing of the flow of new irregular migrants. Assuming that the effort to reduce casework backlogs is stepped up, (not least because so many people with unresolved status will

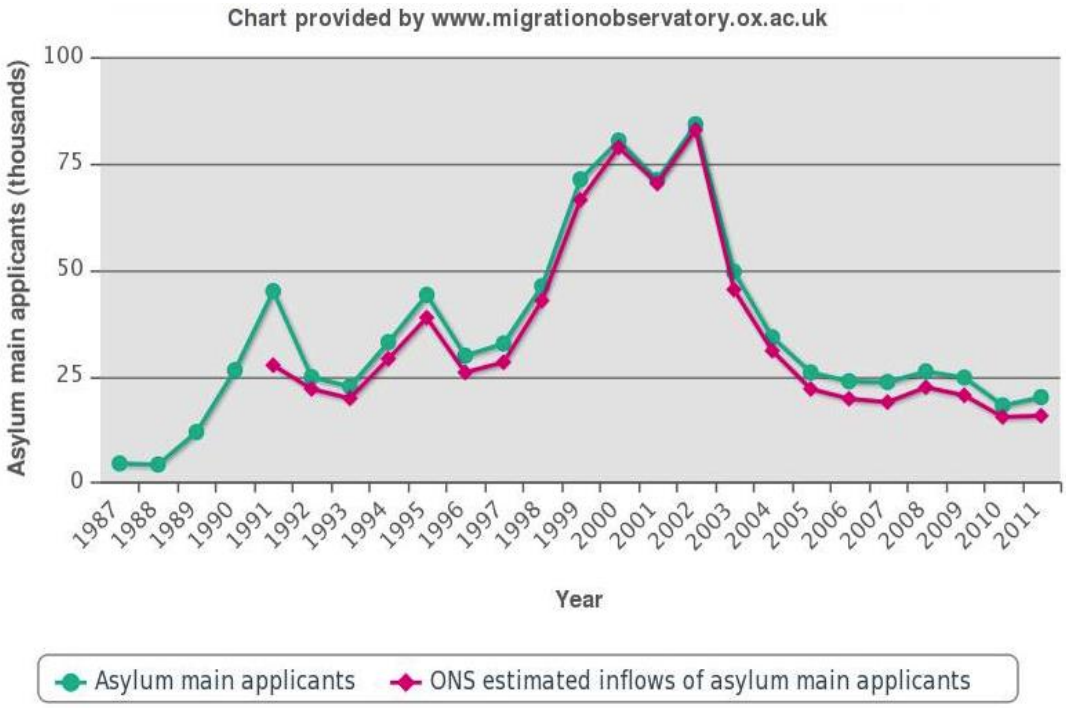
[95] Universities UK, Parliamentary Briefing, 6 June 2013
[96] Home Office, Statistical News Release: Immigration Statistics, 23 May 2013
[97] ONS, Migration Statistics Quarterly Report, May 2013
[98] IPPR, Brits Abroad, Mapping the Scale and Nature of British Emigration, 2006

have been in the UK for so long) we would expect the stock of **Failed Asylum Seekers** and visa **overstayers** to fall. Given the uncertainty surrounding the estimate it is hard to say otherwise than that the stock of **illegal migrants** will remain roughly as they are, although there could be some reduction arising from regularisation with the passage of time and a more challenging environment for people in the UK illegally.

13.6 Health tourists

As we have discussed in chapter 8, the number of health tourists (people travelling with deliberate intent to use the NHS and people taking advantage while here) the numbers and behaviours of health tourists are not well defined or understood. Having said that, unless there are changes in the application of the rules in the NHS, we would expect 'irregular' health tourism to increase as more people understand how to take advantage of the loopholes and the travel costs fall relative to medical costs. We think it is instructive to look at the way asylum was exploited between 1998 and 2004.

Figure 38: Asylum applications and estimated inflows 1987 to 2011



Source : Office of National Statistics, Long-Term International Migration (LTIM)

13.7 Summary

Given that the baseline numbers are so uncertain, we think there is little value in simply applying growth rates based on the brief analysis. We have instead summarised the findings above in the table below.

Visitor or migrant category	Currently estimated daily equivalent population (000s)	Forecast	Basis
Non EEA -Visitors/short-term visitors (<12 months)	230	Growth of 1%-2% a year over the period	DfT forecast for air travel is 1%-2% growth a year over the period
Non-EEA – work >12 months	440	Steady	PBS controls but persistent skills shortages in the UK
Non-EEA – study >12 months	600	Steady/some growth	PBS controls, but growth in demand for UK HE
Non-EEA – family >12 months	190	Steady/some reduction	Existing scale of migration and relationship with other routes
EEA - Visitors/short-term visitors (<12 months)	240	Growth of 1%-2% a year over the period	DfT travel
EEA workers	Not baselined	Growth/strong growth	Slow down for A8; surge from A2; increased integration.
EEA Students	190	Some growth	Increased integration
EEA retired	20	Some growth	Increased integration; settled A8 are joined by older relatives
Irregulars	580	Asylum - steady/reducing Overstayers – steady/reducing Illegals – steady/reducing	Government migration policy; improved controls from e-Borders etc
Expats	70	Steady/ some growth; increased share of older people	Continued levels of emigration to EEA and non-EEA countries.

Annexes

14 Annex A: Glossary

Term	Explanation
A&E	Accident & Emergency – Secondary healthcare
A2	Accession 2 ie Bulgaria and Romania
A8	Accession 8 ie the eastern European countries that joined the EU in 2004 ie Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia
Daily equivalent population	This is the number of visitors or short-term migrants in a particular category that has been adjusted to allow for the length of stay (e.g. three months would be ¼ of a unit of the daily equivalent population). This gives a figure for the population who would be resident on an average day.
DfT	Department for Transport
DH	Department of Health
EEA	Austria, Belgium, Bulgaria, Croatia, Cyprus (Southern), Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Republic of Ireland, Romania, Slovakia, Slovenia, Spain, Sweden, UK, plus Iceland, Liechtenstein and Norway. Switzerland by special arrangement
EHIC	European Health Insurance Card – a scheme to help EEA citizens to access health when visiting other EEA states on the same basis as the host citizens, subject to some constraints
EU15	The EU member states prior to expansion in 2004 ie Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Luxembourg, Netherlands, Portugal, Republic of Ireland, Spain, Sweden and the UK
Failed Asylum Seeker (FAS)	Someone whose application to remain in the UK has been refused and who has exhausted the appeal process. FASs who have had their claim refused but are receiving section 4 or section 95 support from the UK Border Agency are entitled to free secondary health care.
Family Visa	A visa that enables someone to come to the UK to join his or her family.
G&A	General & Acute - Secondary healthcare
GP	General Practitioner – Primary healthcare
Health Tourist	Someone who has travelled to England with the deliberate intent to obtain healthcare to which they are not entitled
Illegal Migrant	An undocumented migrant who has entered the country illegally
ILR	Indefinite Leave to Remain – a permission to settle in the UK granted after an application to the Home Office
IPS	International Passenger Survey – a sample survey of passengers arriving at, and departing from, United Kingdom air and sea ports and the Channel Tunnel.
Irregular Migrant	An undocumented migrant – includes Failed Asylum Seekers, Visa Overstayers and Illegal Migrants (people who have entered the country clandestinely)
Migrant	People who come to the country to live, work or study, sometimes with a view to settlement in the longer term
Non-EEA	Countries other than the EEA

Term	Explanation
Non-permanent resident	A citizen from an EEA country who is resident in the UK but has not yet acquired permanent residence in the UK. (An EEA national has an initial right to reside in the UK for three months. Beyond that there is an extended right if the EEA national is exercising 'EU treaty rights' as a worker, a self-employed person, a job-seeker, a student, or a self-sufficient person.)
ONS	Office of National Statistics
Ordinarily Resident	An individual is Ordinarily Resident if they can prove that they are lawfully and properly settled in the UK for the time being. In reality this is assessed using factors such as whether an individual is employed, is a settled resident and the length of time they have been in the country. The individual must be legally entitled to live in the UK.
Overstayers	People who have stayed in the UK beyond the validity of their visa
PH	Public Health
PBS	Points Based System – the scheme that regulates visas issued to non-EEA citizens who wish to come to the UK to work or study and for some other miscellaneous purposes. See Tier 1,2,4 and below.
Reciprocal health arrangements	Arrangements between the UK and other countries that enable visitors to obtain urgent healthcare in each other's country. The main countries are Australia and New Zealand plus the states of the former Soviet Union and the former Yugoslavia (that have not yet joined the EU).
S1	The EEA scheme to provide healthcare services for state pensioners when they are resident in another EEA state
S2	The EEA scheme to allow people to travel for pre-arranged and approved treatment of medical conditions
Tier 1, 2 4 and 5 migrant visas	These are categories in the PBS, namely: Tier 1 - for highly skilled workers, such as scientists and entrepreneurs. Tier 2 - Points based visa system for skilled workers with a job offer, such as teachers and nurses. Tier 3 – not used. Tier 4 - Points based visa system for students. Tier 5 - Points based visa system for temporary workers, such as musicians coming to play in a concert, and participants in the youth mobility scheme.
Temporary Migrant	A citizen from outside the EEA who has been granted a right of residence for a limited period (usually between six months and five years). They may or may not go on to acquire ILR.
Usually resident	People resident in the UK for more than 12 months at the time of the Census
Visa Waiver Countries	Countries with which the UK has put in place arrangements that allow some categories of visitor to come to the UK without a visa for up to six months other than to work.
Visitors	People who come to the country for up to 6 months for holidays, business, study, visits to family and friends and various other purposes.

15 Annex B: Migrant use of Healthcare Services: Findings from the literature

15.1 Introduction

Within industrialised nations much has been written about migrant health and use of healthcare services. Within the UK there is considerable anecdotal evidence but very limited systematic data collection and analysis about migrants' use of health services. Qualitative research has documented migrant perceptions of health services and examined both facilitators and barriers to access, but little additional empirical research exists that has attempted to quantify service utilization across both primary and secondary care.

The purpose of this review was to identify research within the medical literature which quantified migrant use of healthcare services within the UK in order to assess whether migrants were more, as likely or less likely to use healthcare services than the UK born population and whether numerical limits could be placed on migrant healthcare use.

15.2 Methods

A search was conducted in Medline using the following search terms:

> (transients and migrants) OR (emigrants and immigrants) OR refugee$ OR immigrant$ OR asylum seeker OR overseas visitor$ OR health touris$
> AND
> Health Services Accessibility OR Hospitalization OR hospital care OR (accident and emergency) Or AE.tw OR secondary care OR healthcare utilization or Primary Care
> AND
> Great Britain

The search was limited to a publication date of 2000 onwards and English language articles. Primary research was identified if it was specific to the UK and attempted to quantify healthcare use amongst migrant groups.

The references of relevant articles were also hand searched and a Google search was carried out to identify other relevant research.

15.3 Results

The initial search generated many references although a review of the abstracts revealed that most studies were either non-UK based and/or did not attempt to quantify health service use. Two systematic reviews were identified (1, 2) that synthesized the research literature on migrant use of healthcare services. One attempted to statistically quantify that use (1) and the other was a narrative review (2). Both of these included primary research from within and outside of the UK (European and North American countries only). The UK based primary research contained within these reviews was looked at independently in order to identify any patterns of migrant healthcare use specific to the UK. Three further

UK empirical studies that used health service or research data to quantify migrant healthcare use were also identified and reviewed.

One additional recent (2011) scoping review was identified that had been carried out within a wider piece of work to estimate the impact of migration on UK public services (3). This review contains information from a variety of sources including primary research, locally commissioned studies and parliamentary reports. The key findings from this review are presented here, including source data. Although this review does not attempt to quantify migrant healthcare use its findings are presented to add narrative detail to the empirical findings. This adds to the picture of migrant health service use, but some information is from pragmatic surveys not academic research.

15.3.1 The findings from the systematic reviews:

Utiers et al. (1) found that being a migrant is positively associated with use of primary care services, although this is partially mitigated by the nature of the primary care system within the host country. Those countries with strong primary care systems had, in general, higher migrant primary care use. Rates of primary care use amongst migrants decrease when underlying health status is taken into account, although the differential between the host population still exists. However, these findings must be interpreted with caution as the definition of primary care varied between the countries in which the primary research took place and activity within more specialist care may have been included. Studies addressing healthcare use by children, adolescent, refugee and undocumented migrants were excluded and only those studies that defined immigrants as originating from non-industrialised countries were included. This limits the generalizability of the findings along with the fact that much of the primary research took place within the United States, which has a very different healthcare system and migrant profile to the UK.

Norredam et al. (2) reviewed the European literature on utilization of somatic healthcare services related to screening, general practitioner, specialist, emergency room and hospital by adult first-generation migrants. They found that migrants had lower attendance and referral rates to screening programmes; more contact per patients to GP and same level of use of specialist care (including outpatients) as compared to non-migrants. Emergency room use showed higher, equal and lower levels of use, whereas hospitalization rates were higher than or equal to non-migrants. Methodological quality differed between studies with the majority not adjusting for confounding factors. When confounding factors such as socioeconomic status and health status were taken into account differences in health care use between migrants and host populations were less marked. The majority of studies included in the review were non-UK based which limits the generalizability of the findings. The included studies were heterogeneous in nature, with many based on patient survey data and not health service activity data. The findings of the UK studies included in the review are discussed below along with other UK research assessing migrant use of healthcare services.

15.3.2 Findings specific to the UK from the research literature:

Research findings on health service use are equivocal. Surveys have reported higher (4, 5) and lower (6) numbers of GP consultations amongst certain migrant groups compared to non-migrant groups However one study (4) found this was due to poorer physical health amongst migrants. Participants were over 65 and from a socio-economically deprived inner city area.

Stagg et al (7) found low primary care registration rates amongst newly arrived migrants. After a maximum of 9 months of follow up approximately one third of immigrants identified through port health services had registered with a GP. Women were more likely than men to register as were the under 16s. Those aged over 65 were the least likely of all age cohorts to register. Registration also varied by area of origin with individuals from the Americas 60% less likely to register than Europeans (the reference group). South East Asian visitors were 40% more likely to register than Europeans. Analysis by migrant groups showed that refugees/asylum seekers had the lowest rates of registration although this group was very small (less than 0.5%) of the overall linked dataset. The study method only assessed GP registration in a sub-set of all migrants, the majority coming from low and middle-income countries. The authors concluded that health need in these migrants is likely to be higher than the UK and therefore GP registration rates were disproportionately low. However the majority of migrants were students and younger adults that will mitigate country of origin effects.

A survey examining place of birth and migration status amongst patients referred to an inner city Infectious Diseases Department found that not being registered with a GP before referral was statistically significantly associated with being a refugee/asylum seeker, not having English as a first language and being in the UK for under 5 years (8).

Steventon et al (9) assessed first generation migrant use of inpatient secondary care services by linking pseudo-anonymised primary care data with Hospital Episode Statistics data. Migrant status was assigned to all individuals registering after the age of 15 as it was assumed that UK born residents would be registered from birth or childhood. Secondary care use was compared to within England migrants matched for socio-demographic factors and all other registrants. They found that migrants had half the rate of secondary healthcare use than non-migrants in the first year following their registration and this trend persisted over the course of several years and existed for 3 separate cohorts of migrants studied. This difference was apparent across all age groups. The study did not assess how long migrants had been resident within the UK (migrants could be resident in the UK for many years before registering) so was less informative regarding the relationship between length of residence and propensity to use secondary care services.

Analysis of the Millennium Cohort Study (10) showed that mothers born abroad (from India, Pakistan, Bangladesh, Africa and the Caribbean) were less likely to use antenatal care and antenatal classes than White/Irish mothers and were less likely to immunize their new-borns. However, this association disappeared once

self-reported ethnicity and socio-economic status were adjusted for. Elsewhere socio-economic status has been reported to account for many health discrepancies between migrants and non-migrants (11).

In an analysis of the British Household Panel Survey (12), Wadsworth found no difference in self-reported annual hospital visits or length of stay amongst migrants who had been in the UK since or before 1991 and the UK born population. This effect persisted across different decade of entry cohorts and when the findings were adjusted for self-reported health status and socioeconomic factors. There was a difference between the numbers of annual self-reported visits to the GP between the two population groups, but this was small, with migrants reporting 0.3 annual visits more than the UK born population (conditional analysis). Both hospital and GP visits increased with age, notably over 50 for both UK born and migrant groups. The strength of this study is that it did not rely on proxy measures to identify migrant groups, but as visits were self-reported they could have been subject to recall bias. As participants had to have arrived before 1992 it is not informative on recent immigrants.

A survey of patients presenting at the Emergency services of a London hospital (13) found that factors associated with not having a GP were: being under 35, being male, being a migrant from Europe or Australia, New Zealand or South Africa and living in the UK for less than 5 years. This suggests that this practice may be more associated with non-EEA migration than migration from elsewhere.

A survey of patients in a London inner city infectious diseases department found that migrants were over-represented in the patient population compared to local Census demographic profiling (8). They had a greater range of and more severe disease than UK born patients suggesting that access to services at an earlier stage of disease was lacking. However a survey carried out in North East England comparing stage of disease presentation for HIV patients in refugees/asylum seekers versus UK born patients, found no difference in disease severity (14). In this study the pathway into specialist care for non-UK born patients differed to the host population; refugees/asylum seekers were over-represented and were more likely to have presented through Non-Governmental Organisation services.

15.3.3 What else is known about migrant use of healthcare?

The following is taken from a scoping review carried out by a team of researchers at the National Institute of Economic and Social Research in 2011 that aimed to understand the impact of migration on use of healthcare services in the UK. The evidence contained in this report comes from a variety of sources including but not restricted to empirical research.

- Tier 1 and 2 UK migrants impose a lesser burden on the NHS than the UK born population because they are younger, healthier and may have occupational access to private healthcare.
- But some specific migrant groups carrying out low paid/manual work have reported higher use of certain services e.g. emergency services for injury related illness.

- Primary care registration is low. Low rates of GP registration have been found: two separate surveys each of around 700 migrants found that around a half of migrants surveyed had registered with a GP (15,16). Primary care registration is higher if migrants are living with a partner, children or parents. Green et al surveying migrants in the South East of England found that registration increased with length of residence with 80% of respondents who had been resident since 2004 claiming they had registered with a GP compared to 9.1% in 2008 (the year of study). Registration rates increased with each year of residence.
- A number of survey results suggest that migrant workers who do not know how to register with a GP go directly to hospital Accident and Emergency departments for primary healthcare needs (15,17).
- Explanations put forward for relatively low levels of GP registrations include a lack of understanding of the UK healthcare system; a lack of information available to migrants in their own language; language difficulties in general; a lack of understanding of the rules of entitlement and a lack of trust in NHS services.
- There may be a difficulty in treating patients because previous health records and immunization histories are not available. Service providers report language difficulties and lack of translation services as being a difficulty.
- A large, mixed-methods, study of migrants in the East of England found that 24% of respondents reported experiencing barriers to accessing healthcare (18).

Very little empirical research has been done on health tourism and much of what is publically reported is based on estimates or anecdotes. George et al. did not find documented evidence of health tourism based on research carried out by clinics provided by the third sector. It also cited locally commissioned surveys in Leeds and South East England that found evidence of migrants returning back to their country of origin for healthcare. These were more likely to come from EEA countries.

15.4 Discussion

Studies assessing migrant healthcare use are limited by poor reporting systems and difficulties in identifying individuals who are born outside of the host country within healthcare databases. European studies show that data availability is a problem across many countries with many having no specific data recording systems. Kluge at al (19) reported that a survey of primary, mental and emergency health service providers in 16 countries (including the UK) showed that only 15% of service providers held any data on patients country of birth. Many studies identify migrants through proxy measures that can lead to misclassification. There is also a lack of research at a national level and many studies are only applicable to local settings. Additionally studies tend to be cross-sectional in design and give a snapshot of healthcare use that is likely to change over time. Migrants are not a homogenous group and overall findings will mask variations in healthcare use amongst different migrant populations.

However the literature does provide some insight into migrant healthcare use within the UK. In general those born abroad are not disproportionately high users of healthcare relative to the UK population in either primary or secondary care. Available information suggests that most migrants seek help for so-called common-or-garden complaints that are also common among the non-migrant population (20). The 'healthy migrant effect' could explain lower healthcare needs, especially amongst economic migrants, resulting in less healthcare use.

Migrants tend to become less healthy the longer they stay in the host population, and research points to greater healthcare use amongst elderly migrant populations (12, 21). However, other factors such as health status, socio-economic deprivation and ethnicity are much greater determinants of healthcare use across all age groups as was shown by Jayweera et al. Few studies specifically addressed length of residence and healthcare use and therefore it is difficult to say whether the patterns of healthcare use described are applicable to recent immigrants or those who have been in the country for several years. Wadsworth found approximately equivalent numbers of self-reported GP and hospital visits amongst migrant and UK born groups, but most migrants studied had been resident in the UK for many years, telling us little of healthcare use amongst recent arrivals. Stagg et al. showed low UK primary care registration rates amongst recent arrivals and Steventon et al. found that low in-patient activity rates persisted with time over a few years, which suggests that migrants may be resident for a substantial amount of time before use of healthcare services approximates the UK born population. In order to complete this picture more research is needed regarding migrant use of other parts of the system such as urgent/emergency care. Cultural, language and system knowledge barriers may deter migrants from accessing care within the UK or make it preferential to return to their country of origin for care

Empirical knowledge on the magnitude and effect of health tourism is lacking. George et al (3) suggests that it is not an issue but this may be because the research they identified was based outside mainstream services. In a health impact assessment looking at the impact charging for overseas visitors may have on migrant groups within the London Borough of Newham, Hargreaves et al report from a review of the general literature that healthcare providers, both acute trusts and primary care surgeries, anecdotally report abuse of the system of people travelling to the UK to receive medical treatment (22).

Both systematic reviews did not include studies relating to undocumented migrants and only one UK specific study analysed health service use (7) differentiated by migrant type. Undocumented migrants have high physical and mental health needs, but are not entitled to NHS care and for this reason their use of healthcare is low. However the research reviewed here did not quantify this.

Although this work suggests overall that recent migrants are less likely to use UK primary and secondary care services the findings do not give rise to a direct numerical estimation of the likelihood to use healthcare services compared to the UK born population.

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16 Annex C Rules for accessing the NHS in England

Current	Proposed
Only NHS secondary care in an NHS hospital is chargeable (outpatient and in-patient). If secondary care treatment is provided in another setting e.g. an Independent Sector Treatment Centre but is NHS funded, this is not currently chargeable. Other healthcare settings/circumstances which are non-chargeable: • GP consultations (scheduled or emergency) • Accident and Emergency visits • Community Care	The core principle of the proposed new system is that everybody makes a fair contribution. Visitors and newly arrived migrants should contribute explicitly for NHS services until established as residents. Charges will be applied across all areas of the NHS including primary care. For non-EEA nationals subject to immigration control, entitlement to free NHS treatment will be based on PERMANENT RESIDENCY status.
Charges can apply to anyone who is not Ordinarily Resident (OR) here (although exemptions from charge apply to some – see below). Those not OR generally comprise: • Any individual, including UK-born, coming to the UK for a holiday, on business or to visit family members • Irregular migrants living here	• Ordinary residence to include a requirement to have a right of permanent residence in the UK (for non-EEA nationals subject to immigration control only) as well as currently exercising that right. This means only those non-EEA nationals (not subject to immigration control) who have 'Indefinite Leave to Remain' (ILR) can go on to pass the Ordinary Residence definition.
Eligibility for OR is assessed on a case-by-case basis. An individual is OR if they can prove that they are lawfully and properly settled in the UK for the time being. In reality this is assessed using factors such as whether an individual is employed, is a settled resident and the length of time they have been in the country. The individual must be legally entitled to live in the UK. If the person does not have an automatic right to take up permanent residence but has applied to the Home Office for leave to enter/remain on a settled basis, they will be charged for any hospital treatment up to the point their application is granted or until they accrue 12 months lawful residence in the UK[99]	The proposal is to introduce a health levy as a condition of receiving entry clearance (including visas) to reside. The health levy would be registered on an immigration record. When the patient accesses treatment, their record will show entitlement to access without further charge. It will exclude EEA nationals and their families who don't require a visa to live in the UK.

[99] Source: Health Protection Agency

Current	Proposed
A visitor to the UK who is not classified as an OR can still be exempt from the charges if: • They are a national of a country that has a reciprocal agreement with the UK. People who are visiting the UK from a country that has a bilateral healthcare agreement with the UK are exempt from charges for NHS hospital treatment in England, usually only if the treatment is needed promptly for a condition that arose, or acutely worsened, after their arrival in the UK.[100] • People from European Economic Area member states[101] and Switzerland are also exempt from charge for treatment for chronic conditions, including routine monitoring, but must show a valid European Health Insurance Card (EHIC) or a Provisional Replacement Certificate. In neither case is pre-planned treatment included free of charge without special, prior arrangement. • In the UK, the EHIC provides access to free medical treatment which is seen, by a medical professional in the UK, to be clinically necessary and needed before the patient's planned return to their home country. Visitors are also covered, with an	Short-term visitors e.g. tourists would still have to pay for NHS care directly. It is proposed that ALL NHS care – primary, community and secondary care should be chargeable irrespective of the setting in which it takes place. This includes immediate and urgent care, although no one should be denied this type of care if they are unable to pay. The consultation proposes that all patients should be screened for eligibility and chargeable status prior to receiving any treatment with the exception of emergency/life threatening treatment. Expatriates who have paid National Insurance contributions for a significant period (propose at least 7 years) should also retain the right to free treatment whilst returning to the UK on a visit. It is not proposed to limit this to 'needs arising' treatment.

[100] **Nationals of, and UK nationals in, the following countries:**
Armenia, Azerbaijan, Belarus, Bosnia, Georgia, Gibraltar, Serbia, Montenegro, Kazakhstan, Kirgizstan, Macedonia, Moldova, New Zealand, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.
Residents irrespective of nationality of the following countries:
Anguilla, Australia, Barbados, British Virgin Islands, Falkland Islands, Iceland, Isle of Man, Jersey, Montserrat, St. Helena, Turks and Caicos Islands.

[101] **European Economic Area countries (EEA):**
Austria, Belgium, Bulgaria, Croatia, Cyprus (Southern), Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Republic of Ireland, Romania, Slovakia, Slovenia, Spain, Sweden, UK, plus Iceland, Liechtenstein and Norway. Switzerland by special arrangement

Current	Proposed
EHIC, for the treatment and routine monitoring of pre-existing conditions. • If the person from the EEA is a state pensioner they should register an "S1" form in the UK, allowing the UK to be paid by their home member state for their healthcare. But in reality, if they move to the UK they will pass the OR test and be entitled to free NHS care regardless of registering the S1. • The UK has recently put infrastructure in place to allow NHS trusts to submit EHIC and treatment details to the Department for Work and Pensions. This enables the UK to claim back the cost of the treatment provided from the patient's home member state. As this system is currently being trialled for primary care, submission of these data is not currently required by GPs. GP practices are however, still requested to ask to see the card when a patient from an EEA member state requires treatment. • The card does not provide cover for the cost of medical treatment where that is the reason for the patient being in the UK. Residents of EEA member states should speak to the authorities in their home country if they wish to come to the UK specifically to receive treatment. • Many other types of visitor are currently exempt from charges, eg missionaries, UK crown servants etc.	

Current	Proposed
Certain treatment is free to visitors regardless of OR treatment or country of origin. These include: • Emergency treatment provided inside an A&E department (but not emergency treatment after admission to hospital) • Treatment for Sexually Transmitted Infections including HIV • Treatment for certain communicable disease • Family planning services • Those detained under the Mental Health Act	
State pensioners: • In relation to people entitled to a UK state pension, there are two separate exemption categories within the Charging Regulations that may apply. The first requires that the pensioner lives in the UK for six months or more each year and six months or less in another EEA member state without registering as a resident in that state. These pensioners are fully entitled to free NHS treatment during the period they reside in the UK. In practice, they are also likely to be ordinarily resident or exempt under another category. • The second exemption requires that the person entitled to a UK state pension is a former resident of the UK or a UK crown servant of ten continuous years or more. These pensioners are entitled to free treatment on visits to the UK (from wherever in the world they live) when the need for the treatment arises during their trip, or for pre-existing conditions that need prompt treatment, but elective treatment is not included.	The consultation proposes to extend full treatment provision rights to all UK state pensioners returning to the UK for treatment from abroad i.e. treating them as if they were ordinarily resident.

Current	Proposed
All asylum seekers in England who have not had their claim refused (including those who have an appeal outstanding) are entitled to free secondary health care. Those who have had their claim refused but are receiving section 4 or section 95 support from the UK Border Agency are also entitled to free secondary health care. Victims and suspected victims of human trafficking are also exempt as are children in the care of a Local Authority. Other undocumented migrants i.e. those who do not have legal rights to live in the UK are not entitled to any free healthcare with the exception of services that are free to all, or if the treatment is a continuation of treatment begun whilst they were exempt from charge. However treatment that is needed immediately or urgently will still be provided and billed afterwards if funds are not received in advance,	

17 Annex D: Scope

The model is designed to answer the following questions

- An estimated cost of the current use of the NHS in England by visitors (including health tourists) and migrants (temporary residents including workers students and others), split by EEA and non-EEA residents.
- An estimate of the future costs to the NHS if the current overseas visitors charging system continues.
- How these estimates will change in the future alongside changing composition of migrant users in the identified sub-groups and impact of external factors.

From these questions there are several key scope items for the model. The model deals with

17.1 UK Geography

Populations within the model represent, or are estimates, for England only, where possible all assumptions relate only to Visitors/Migrants to England.

Where the source data does not only represent populations for England appropriate assumptions will be used to limit the scope to England only.

17.2 Timing

Whilst the baseline estimates are to be for 2013, no actual 2013 data is available. Where prudent the data included will be forecast forward to 2013 levels.

However in many cases there is no reasonable method of forecasting movement between the source data and 2013. In these cases it is deemed prudent to use the source data as a reasonable estimate of the 2013 position.

17.3 Visitors/Migrants

The in-scope population of the model, and the results obtained, are heavily determined by what members of the population i.e. People in the UK who primarily live overseas, are considered to be in-scope of the analysis.

For the purposes of this model the population is set using the following rules

- People (including UK nationals) who do not permanently reside in England but are visiting for less than 1 year.
- People who are presently residing in England, but do not have a legal right to be present in England i.e. undocumented migrants.
- The scope of visitors/migrants purpose for being present in England does not contain any significant 'ignored groups' – essentially all visitors/migrants, irrespective of their purpose for being present in England, are considered to be in-scope.
- Transiting passengers, having zero length stay in the IPS are ignored

17.4 NHS Costs

Costs considered to be in scope are those NHS costs that are primarily driven by variable population demand. The model estimates likely variable demand cost driven by the in-scope population. The costs, based upon the Department of Health Annual Report and Accounts 2011-12, that are considered to be in-scope are PCT operating expenditures for the following services:

- Primary
    - General Practice.
    - Prescribing costs.
    - Other Primary costs (Dental, Ophthalmic, and Pharma).
- Secondary
    - Accident and emergency (A&E).
    - General & Acute.
    - Mental health.
    - Community Healthcare.
    - Learning difficulties.
    - Maternity.
    - Other contractual costs.

This means that the totals costs considered in-scope are £91.5 billion in 2012/13. The output of the model is to estimate the amount of these costs that have been consumed by visitors/migrants.

Other DH costs that are not PCT operating expenditures are regarded as out of scope of the model.

17.5 Foreign Geography – EEA and Non-EEA

All foreign born or residing visitors/migrants are considered to be in scope of the model, and where possible the model considers the country of origin/permanent residence.

Countries/regions within the model are split between those within the EEA and Non-EEA countries.

18 Annex E: Data Sources

18.1 Data Sources for Visitor/Migrant Populations

The [model] has three primary sources of data for the visitor migrant populations

- The International Passenger Survey, with assumptions about England relevant population
- The UK national Census 2011 – England Results
- Home Office Consultation Paper, Controlling Immigration - Regulating Migrant Access to Health Services in the UK

The table below shows how this data is used to derive populations based on length of stay and 'purpose' for being in England. Where the IPS and Census are not used, the separate source is listed

Purpose	Length of Stay in England						
	1-3 nights	4-13 nights	14-27 nights	28-90 nights	91-182 nights	183-365 nights	Over 1 year
EEA non-permanent residents and their families, including:-							
Students	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11
Workers	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11
Self-employed	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11
Jobseekers	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11
Economically inactive migrants who do not have a right of residence as a family member	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11
Economically inactive migrants who are state pensioners in another state	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11
Non-EEA non-permanent residents and their families, including:-							
Students	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11*
Workers	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11*
Self-employed	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11*
Residents on other basis (eg family)	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11*
British Expats visiting the UK for less than 1 year	IPS 2012	IPS 2012	IPS 2012	IPS 2012	IPS 2012	IPS 2012	N/A
Visitors to the UK (EEA & Non-EEA) including:-							
Holiday makers	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11
Business visitors	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11
Visiting friends or relatives	IPS 2012	IPS 2012	IPS 2012	IPS 2012	Census'11	Census'11	Census'11
Asylum seekers	included in visitor figures above - drawn out through assumptions						
Undocumented Migrants including:-							
Illegal immigrants	Figures generated from high-level assumptions						
Failed asylum seekers							
Overstayers							
Absconders							
Those applying for leave to remain							
Health tourists	included in visitor figures above - drawn out through assumptions						

* Denotes demographics are drawn from census 2011, but population numbers are taken from Home office statistics

18.1.1 International Passenger Survey (IPS) – Notes and limitations

18.1.1.1 *International Passenger Survey (IPS) Notes on usage*

The IPS has been used to provide detailed data on the numbers and demography for short-term Foreign National visitors (<3months) and British Expats (<12 months)

18.1.1.2 *International Passenger Survey (IPS) limitations*

The IPS is a regular survey of persons entering/exiting UK. The IPS has a number of limitations. Limitations of particular relevance to this model are:

- The data is based upon the sample questioned, and therefore IPS contains standards sampling issues of bias and estimation error, as the sample is extrapolated to cover a wider population.
- Groups identified within the IPS do not specifically align to the groups the model seeks to perform calculations for e.g. purpose, age groups
- At its lowest level of detail estimates for particular segments are based upon low, sometimes single sample responses.
- IPS uses regional groupings for low volume countries. When combined with sampling bias and estimation errors it is not possible to infer populations for some individual countries
- There is no access to raw data, therefore some statistics are available at a global or single level of breakdown, meaning those statistics must be inferred across a range of population segments.

18.1.2 Census 2011 – Notes & limitations

18.1.2.1 *Census 2011 Notes on usage*

The UK Census 2011 has been used to provide data on foreign-born nationals residing in the UK, in two tranches.

- Firstly, census data on "Short-Term" residents who are in England for between 3 and 12 months.
- Secondly, census data on "Usual Residents", who are in England for over 12 months.

18.1.2.2 *Census 2011 limitations*

Whilst there is much published information based upon Census 2011, usually at an England specific level, there are several limitations to the published information. These include:

- Census 2011 uses regional groupings for low volume countries. It is not possible to infer populations for some individual countries. Some regional groupings contain countries that may be of interest but the information cannot be split from the regional totals.
- The information available for Short-term residents is more limited than for 'Usual Residents' – there are only a handful of published tables relating to Short-term residents so much of the low-level detail must be inferred from higher level segment information.
- The Census 2011 is a snapshot of the stock as at March 2011 and may not fully represent the pattern across a calendar year.

18.1.2.3 *Home Office Consultation Paper, Controlling Immigration - Regulating Migrant Access to Health Services in the UK*

This document can be accessed at – https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/226744/consultation-health.pdf

To estimate those Non-EEA students, Workers and 'Family' migrants in England with valid but temporary visas, the estimates of visas issued and average lengths of those visas contained in this document are used to estimate these population numbers. The underlying census demographics for similar groups (Arrived 2001-2011 - Students, Employed, Family) are used to enrich this population with age, gender and country of birth information.

18.1.2.4 *Irregular Migrants Population*

The model estimates costs for Irregular migrants – Failed Asylum Seekers, Overstayers and Illegal Immigrants, but the values for these populations is not calculated in the model. Please see the Report for more detail on the estimation of these populations.

18.2 Data Sources for Costs

The are two primary sources for assumptions relating to NHS costs

18.2.1 Baseline costs - Department of Health Annual Report and Accounts 2012-13

This document provides a breakdown of PCT operating cost expenditures for a list of Primary and Secondary NHS services:

- Primary – General Practice.
  The 2012/13 costs for providing these services are £7.8 Billion
- Primary – Prescribing costs.
  The 2012/13 costs for providing these services are £7.9 Billion
- Primary – Other Primary costs (Dental, Ophthalmic, and Pharma).
  The 2012/13 costs for providing these services are £5.7 Billion
- Secondary – Accident and emergency (A&E).
  The 2012/13 costs for providing these services are £2.5 Billion
- Secondary – General & Acute.
  The 2012/13 costs for providing these services are £41.7 Billion
- Secondary – Mental health.
  The 2012/13 costs for providing these services are £8.8 Billion
- Secondary – Community Healthcare.
  The 2012/13 costs for providing these services are £9.7 Billion
- Secondary – Learning difficulties.
  The 2012/13 costs for providing these services are £1.4 Billion
- Secondary – Maternity.
  The 2012/13 costs for providing these services are £2.6 Billion
- Secondary – Other contractual costs.
  The 2012/13 costs for providing these services are £3.3 Billion

This means that the totals costs considered in-scope are £91.5 billion in 2012/13. The output of the model is to estimate the amount of these costs that have been consumed by visitors/migrants.

Other DH costs that are not PCT operating expenditures are regarded as out of scope of the model.

18.2.2 Cost Allocation by Age and Gender - Resource Allocation dh_124947

This NHS document provides information on methodologies for allocating money for providing services, largely based on Age and Gender of population. In particular there are Age/Gender weightings for General & Acute, Mental Health, General Practice and Prescribing as well as notes on how these weightings should be applied to the other services.

The [model] uses these weightings to project likely costs of services onto the visitor/migrant population according to their age/gender. This is more simplified than PCT resource allocation but a sufficient level of detail and the best available information.

18.3 Data Source for Health Usage

All projections of health need/NHS usage by visitors/migrants within the model are based upon project assumptions, with some support from qualitative studies. No valid empirical data that covers NHS need/usage across the entire population of visitors/migrants exists

18.4 Cost recovery

All projections of cost recovery for costs incurred by treating visitors/migrants are based upon project assumptions, with some support from qualitative studies and limited sample of bad debt information.