



Impact of migration on the consumption of education and children's services and the consumption of health services, social care and social services

Anitha George, Pamela Meadows, Hilary Metcalf and Heather Rolfe

December 2011

National Institute of Economic and Social Research

**2 Dean Trench Street
Smith Square
London SW1P 3HE**

The robustness of the analysis presented in this report is the responsibility of the authors, and the findings and views presented do not necessarily reflect those of the Migration Advisory Committee.

Contents

Contents	i
Tables	iv
Summary	v
Aims.....	v
Method.....	v
Literature on migrants’ state education and public service demand	v
Health services: literature review evidence.....	vi
Personal social services for adults, older people, children and families: literature review evidence	vi
Education: literature review evidence	vii
UK Estimates of public expenditure on state education and public services for migrants and non-migrants.....	vii
Sub-national estimates of public expenditure on state education and public services for migrants and non-migrants.....	viii
Implications for immigration policy	viii
Improving research on migrants’ impact on state education and public service	ix
1 Introduction.....	1
1.1 Background	1
1.2 Aims of the study	2
1.3 Methodological issues	3
1.4 Method.....	5
1.5 Layout of the report.....	5
2 Review of literature on the impact of migration on the consumption of state education and public services	7
2.1 Introduction.....	7
2.2 Research on the impact of migration	7
2.3 Health	8
2.4 Personal Social Services	18
2.5 Education.....	19
3 Estimation of public expenditure on state education and public services for migrants and non-migrants: the approach	27
3.1 Introduction.....	27
3.2 Migrants and their characteristics: data	28
3.3 Defining migrants and their migrant status	28
3.4 Public expenditure data	33
4 Estimation of public expenditure on state education and public services for migrants and non-migrants: findings.....	35
4.1 Introduction.....	35
4.2 Education.....	35
4.3 Personal Social Services	38
4.4 Health	41
4.5 Aggregate expenditure on state education and public services.....	44
5 Discussion	48
5.1 Introduction.....	48

5.2	Limitations on estimating the impact of migrants and potential for improvement.....	48
5.3	Implications for immigration policy.....	49
Appendix A	Literature covered by the review.....	52
Appendix B	Tier 1 and 2 migrants occupations.....	54
Appendix C	Public expenditure data sources.....	55
Appendix D	Health expenditure by age.....	57
6	Bibliography.....	58

Tables

Table 3.1 Public expenditure data.....	34
Table 4.1 Education expenditure by migration status, 2009/10	36
Table 4.2 Education Expenditure, Tier 1 and 2 (wider definition), Selected Regions, 2009/10.....	38
Table 4.3 Personal Social Services expenditure by migration status, 2009/10	39
Table 4.4 Personal Social Services, Tier 1 and 2 (wider definition), Selected Regions, 2009/10.....	41
Table 4.5 Health expenditure by migration status, 2009/10	42
Table 4.6 Health Expenditure, Tier 1 and 2 (wider definition), Selected Regions, 2009/10.....	44
Table 4.7 Aggregate expenditure by migration status, 2009/10	45
Table 4.8 Aggregate Expenditure, Tier 1 and 2 (wider definition), Selected Regions, 2009/10.....	47
Table 4.8 Relative expenditure per adult migrants:non-migrants, 2009/10	50

Summary

Aims

The main aims of the study were to estimate migrants' consumption of under-18 education, health and personal social services¹ and the related costs and to assess the implications for UK immigration policy, particularly for the Points Based System (PBS). The study also aimed to identify the limitations to evaluating the impact and the potential for improving measurement.

Given the interest in the PBS, the focus was non-EEA economic migrants (especially Tier 1 and 2 migrants²) and Tier 4 migrants (students). The aim was to provide both national and, where possible, sub-national estimates of impact.

Method

Two approaches were used: a literature review and estimates of consumption based on public expenditure data. The latter allocated the consumption and costs of state education and public services pro-rata to migrants and non-migrants, based on their demographic characteristics. (For example, if migrants' children comprise 10 per cent of primary school age children, then they are estimated to consume ten per cent of the national education budget for primary schools.)

This method assumes migrants' and non-migrants' consumption patterns are identical once allowance has been made for these demographic differences. Whilst it would be preferable to adjust for a wide range of factors, this is precluded by data limitations. However, the approach improves on estimates based on migrant numbers alone.

Analysis was conducted using the Annual Population Survey Household dataset 2009, the Public Expenditure Statistical Abstract 2009-10, together with other expenditure data.

Literature on migrants' state education and public service demand

There is a paucity of literature on the impact of migration on public services. Moreover, most evidence relates to all (or unspecified) migrants or to sub-groups outside the interest of this study (e.g. refugees and asylum seekers).

¹ For brevity, these public services are referred to as „state education and public services“ in this report.

² Tier 1 and Tier 2 visas are for employment. They mainly allow the migration of „exceptionally talented“ individuals, migrants to shortage occupations and migrants on intra-company transfers.

Health services: literature review evidence

Overall, it seems reasonable to conclude that migrants in general are unlikely to pose a disproportionate burden on health services (that is, one that is greater than would be expected, given their proportion of the population). For Tier 1 and 2 economic migrants, the evidence is strong that they are likely to pose a disproportionately small burden on health services.

- The demographic and socio-economic characteristics of Tier 1 and 2 migrants suggest they are likely to be relatively light to moderate users of health and social care services: they are relatively young, healthy, employed and, disproportionately, in professional roles.
- Although there is evidence that some migrants do place greater demands on parts of the health service, this is associated with social deprivation (e.g. a higher incidence of TB), poor English language skills and, possibly, lack of knowledge of the health system³. These issues are unlikely to relate to Tier 1 and 2 migrants, many of whom work in UK-based companies, originate from English speaking countries and are disproportionately in professional roles. Similar, issues apply for Tier 4 migrants.
- There is mixed evidence of health behaviours of migrants (for example drinking, smoking and diet) and the impact of these on demand for services. The health of migrants deteriorates with length of stay but this may not affect healthcare use. If Tier 1 and 2 migrants adopt the health-related behaviours of their non-migrant equivalents, this will mean that they take on the relatively healthy lifestyles of those in similar, professional and skilled roles.
- Tier 1 and 2, and perhaps non-EEA economic migrants in general, have characteristics which suggest they may be higher users of private medical care than the general population.

Personal social services for adults, older people, children and families: literature review evidence

There is very little evidence on the impact of migrants on the demand for personal social services, although the broad conclusions are likely to be similar to that for health services. We were only able to identify three key messages:

- there is evidence of lack of awareness and difficulty in accessing personal social services among some migrant groups, but no evidence in relation to non-EEA economic migrants;
- reported low levels of use of services by economic migrants may reflect low levels of need; this would apply to Tier 1 and 2 migrants given their age profile;

³ The potential for bias through examining selected aspects of higher health service demands should be recognised: research on diseases less prevalent amongst migrants was not found.

- migrants' demand for personal social services may increase as they age; whether this results, over time, in demand from the current intake of Tier 1 and 2 migrants becoming more similar to that of the non-migrant population depends on the extent of settlement and out migration.

Education: literature review evidence

The literature review identified both positive and negative impacts of non-EEA economic migration on education. The overall impact was unclear.

The main additional demands placed by migration on schools are for help with language. This is considerably less likely to be relevant to the children of Tier 1 and 2 migrants than other migrant groups because many come from English-speaking countries and to take up posts with UK companies.

Negative impacts also derive from pupils arriving mid-year and pupil churn. Whilst mid-year entry may be more common amongst migrants, the impact of non-EEA migrants is likely to be lower because they are likely to have lower language support needs. Churn tends to relate to highly transient groups. The extent of churn by migrants is unknown, but, for non-EEA migrants, there seems little reason to expect them to be highly transient. However, migrants who settle in the UK for short periods will contribute to churn .

There are some reports of over-subscribed pupil rolls resulting from migration. However many schools currently have spare capacity.

On the positive side, the children of Tier 1 and 2 migrants are younger than those of non-migrant parents, with more of pre-school age. This reduces their demand for school places, although the effect over time depends on length of stay. Moreover, the professional status of many economic migrants, particularly in Tier 1 and 2, may mean that a higher proportion use private schools than in the general population. This will reduce demands on the state school system, although since rates of private education use for this group are not known, we cannot say by how much.

Data on pupil performance suggests a positive relationship between proportion of pupils with English as an additional language (who will include migrants and children of migrants) and achievement. The significant outperformance of schools in London relative to those in other regions also suggests that high levels of migration are not in general associated with worse school performance or for poorer outcomes for non-migrant children; if anything, the reverse.

UK Estimates of public expenditure on state education and public services for migrants and non-migrants

Total expenditure on education, health and personal social services accounts for 44 per cent of public services expenditure (2009/10, PESA, 2011).

Migrants who enter the UK on work or study-related visas place very limited demands on this expenditure in absolute terms. We estimate that between 0.3 and 0.4 per cent of the expenditure goes to Tier 1 and 2 migrants and their families, and 0.1 to 0.2 per cent to Tier 1 migrants and their families.

In proportional terms, average demand per adult for education, health and personal social services is estimated to be lower than for non-migrants: expenditure per Tier 1 and 2 adult migrant is estimated at between 16 per cent and 23 per cent less than for non-migrants and, for Tier 4 migrants, between 41 per cent and 49 per cent less. Furthermore, these estimates are likely to over-estimate the cost of Tier 1, 2 and 4 migrants.

Average costs per Tier 1 and 2 migrant adult are estimated to be slightly higher than for non-migrants for children's education (up to six per cent), but substantially lower for personal social services (19 per cent to 24 per cent lower) and for health (23 per cent to 25 per cent lower). For Tier 4 migrants, average costs are substantially lower for all three categories: 35 per cent to 51 per cent lower for education; 41 per cent to 48 per cent lower for personal social services and 45 per cent to 48 per cent lower for health.

What cannot be established readily are the long-term costs. These depend on whether migrants remain in the UK into middle age and beyond, and whether, if they do remain, their pattern of service use mirrors that of the UK-born population. It may not do, given their relatively high income and social class status and cultural differences. High income and social class are likely to reduce public sector personal social care demand in older age. The same is likely for any cultural differences.

Our overall conclusion is that Tier 1, 2 and 4 migrants clearly impose significantly less demand on these public services than their proportion of the total population would imply. Given their demographic characteristics, this result is unsurprising.

Sub-national estimates of public expenditure on state education and public services for migrants and non-migrants

Relative expenditure per adult between Tier 1 and 2 migrants and others across the three regions with the greatest number of migrants (London, the South East and Scotland) was estimated and found to vary⁴.

The variation implies that the impact of migration is not directly proportionate to the extent of immigration and raises questions of why the family composition of Tier 1 and 2 migrants differs between regions, the role of local domestic policies in affecting migration location and how expenditure patterns vary across other regions. Further research into location decision for Tier 1 and 2 migrants would be useful.

Implications for immigration policy

It is clear that the cost of points based migration to UK state education and public service is small both relative to the total cost of these services and to the share of these groups in the population as a whole. Moreover, although the fiscal and economic benefits of these groups are outside the scope of this study, it is well established (and unsurprising given the immigration system for economic migrants) that they tend to be in higher income groups, so are likely to pay relatively high rates of tax and contribute to the economy via both the

⁴ Owing to caveats on the estimates, the figures are not presented in this summary.

output they produce and, for Tier 4, via their fees and maintenance costs. This means that the relative balance between what they cost and what they contribute is firmly weighted towards a very substantial net contribution, both to the economy, and to public finances. Substantial reductions in net migration of these groups is therefore likely to have, overall, a negative impact on the public finances (and hence, indirectly, on public services).

Improving research on migrants' impact on state education and public service

Data limitations, in both public expenditure data and migrant data, mean that estimates of migrants' impact are limited to our approach of allocation of expenditure pro-rata based on age or age and gender. This approach cannot take into account the full range of factors which also affect consumption of state education and public services. Most importantly, it is unable to take into account the long-term implications of migration and, given that most migrants are young, the eventual demands on personal and health care for older people.

It would be extremely helpful to have data on the place of birth of parents in major surveys in order to be able to identify adults who were born in the UK to migrants. As the share of this group increases in the population, this will be of considerable research and policy interest going forward.

The need to identify migrants' visa status (particularly on entry) is another difficulty. This should be helped by the recent introduction of a variable on the purpose of migration in the Labour Force Survey. Not only should this enable more accurate identification of recent migrants' visa status, but it should also provide an indication of the former visa status of earlier migrants, allowing assessment of impact with length of residence (although this would not overcome the inter-dependence of migration decisions amongst family members and hence inability to fully distinguish economic from other migration).

The reliance on cross-sectional datasets also restricts the assessment of the impact of migrants over time, particularly their personal social care impact as they age. Here, longitudinal data would be useful.

1 Introduction

1.1 Background

It is frequently argued that while the evidence suggests that the impact of migration on the economy, and particularly the labour market, is largely positive - especially migration under Tiers 1 and 2 of the Points-Based System (PBS)⁵, since such workers are generally skilled or highly skilled - migration also imposes significant costs on public services. Such costs impact on both the taxpayer and, potentially, existing resident users of public services. Important amongst these are education and health, which, combined, account for a very large proportion of (non-transfer) public spending. So setting migration policy involves tradeoffs, in particular between the likely economic and labour market benefits of migration and the potential costs resulting from the impact on public services.

This has been the subject of considerable public debate, and the Government has stated that it forms a major part of the rationale for the government's policy of reducing net migration, in particular by reducing immigration from outside the EEA. For example, the Minister for Immigration, Damien Green MP, recently stated that "*Unlimited migration has placed unacceptable pressure on our public services over the years. That is why we are currently carrying out major reform of the system to reduce net migration to the tens of thousands*" (22 February 2011). So quantifying the impact on the consumption of public services, and in particular that of non-EEA migrants, is highly relevant to policy.

Clearly, migration, by adding to the population, increases the consumption of these services. But since migrants are likely to differ in terms of basic demographics (age, income, educational attainment, geographical location) from non-migrants, the simple population effect will not reflect the actual impact. In general, migrants are far more likely to be of working age than non-migrants. Moreover, going beyond the basic demographics, migrants may impose specific burdens on health and education services, for example those resulting from children for whom English is not a first language or from specific health conditions which tend to originate abroad. Conversely, some, such as highly skilled migrants, may place fewer demands due, for example, to the use of private education and fewer health problems.

1.1.1 Previous quantitative research on the impact of migration on public services

The first attempt in the UK to quantify the impact of migration on public services was reported in Glover *et al.* (2001) and subsequently published in Gott and Johnston (2002). This used the basic demographic information (from the LFS) on migrants to estimate their consumption of services, including health and education. It found (not surprisingly, since migrants are

⁵ Tier 1 and Tier 2 mainly allow migration to exceptionally talented individuals, to shortage occupations and for intra-company transfers.

disproportionately of working age) that they consumed less than the population average of these services. This was subsequently updated in Sriskandarajah *et al.* (2005). Other relevant work examining impacts across the public sector include Dustmann and Frattini (2010) and Metcalf and Rolfe (2009).

MAC (2010) summarises in some detail evidence on migrant impact on selected public services, including on consumption of education, health care and social services. The evidence is acknowledged as problematic, due to data inadequacies, and much is anecdotal. Relatively little relates specifically to Tier 1 and Tier 2 migrants, or even to those from outside the EEA. The broad conclusion remains that migrants are unlikely to impose disproportionate costs on the education and health services, but the specific impacts are not quantified.

1.2 Aims of the study

The main aims of the study were to provide improved estimates of migrants' impact on the consumption and costs of selected public services, namely,

- education, for those under 17, including schooling, other education and children's services (such as early years schooling and Sure Start)
- health
- personal social care, including older people's, adult and children and families services.

These public services are referred to as „state education and public services“ in this report.

As far as possible, the study aimed to provide estimates:

- for a range of types of migrants (all migrants, non-EEA economic migrants, for Tier 1 and Tier 2 migrants and Tier 4⁶ migrants);
- for various periods since migration;
- nationally and disaggregated geographically;
- to identify differences in consumption and costs between migrants, non-EEA migrants, Tier 1 and Tier 2 migrants and non-migrants.

The study aimed to draw out the implications of the analysis for UK immigration policy, particularly for the Points Based System. It also aimed to identify the limitations to evaluating the impact of migration on state education and public services and to identify the potential for improving the measurement of the impact.

⁶ Tier 4 covers student visas.

1.3 Methodological issues

Neither public expenditure on state education and public services for migrants, nor migrants' use of these services, is identified in data. Therefore it needs to be estimated, based on individuals' consumption patterns.

Individual consumption of state education and public services depends on needs, preferences (e.g. between private, state and familial provision), availability of alternatives and access to services. A range of factors clearly affect these and include:

- age (e.g. health needs, care in old age)
- gender (e.g. health needs)
- family composition (e.g. schooling, alternative support structures, dependent adults)
- health and disability (e.g. health needs, adult social care)
- income (e.g. health, access to private provision)
- ethnicity (e.g. health needs)
- social class (e.g. health needs, access to state provision, preferences and access to private provision and social services support)
- culture (e.g. preferences including between state, private and familial provision, availability of alternative support).

For migrants, migrant status itself may have some impact, affecting knowledge of and access to provision.

The multiplicity of factors affecting consumption present problems in assessing migrants' consumption of state education and public services and related costs. Migrants, like the native population, are not a homogeneous group. Their consumption will vary with the above factors. The impact of migrants as a group will change as the composition of the migrant group changes. Obviously, this calls for a multivariate model of state education and public services consumption. However, the data to create such a model does not exist.

An alternative approach to assessing migrant state education and public services consumption would be to focus on migrants, trying to identify their consumption of specific services and their differential needs and summing over these to provide estimates of consumption: a „bottom up“ approach. This approach is dangerous, as consumption would only be identified for a subset of provision: unidentified consumption may substantially alter the migrant/non-migrant balance.

A third approach would be to assume similar consumption to the native population and allocate costs based on differences in characteristics between migrants and non-migrants known to strongly affect state education and public services use: a „top down“ approach (as used by Glover *et al.* 2001). This approach assumes similarity between migrants and non-migrants over all characteristics which cannot be incorporated in the analysis. Given the limitations of cost data, national (and regional) cost estimates can only take into account a small number of characteristics (age, family composition,

gender and location) and so have to assume similarity in consumption despite differences in other characteristics. Whilst this is a problem, in practice an individual's age is, for obvious reasons, generally by far the most powerful demographic characteristic driving health care needs, schooling requirements and some aspects of social care. Given the difference in age composition between migrants and non-migrants, we would argue that the top down approach, allowing us to estimate differences in state education and public services costs based on age and age of children is useful and is likely to provide a useful guide to migrants' consumption of such services, relative to natives.

It may be possible to take the top down approach further by considering differences between migrants and non-migrants in respect of other factors which have a strong influence on state education and public services consumption. One obvious issue is differences in the incidence of health and disability between migrants and non-migrants: if there are differences this would imply a need to adjust health and social care estimates. Another issue is the choice of between private and state provision for education and for health care. Since these are related to income, occupation (due to employer provided health insurance), class and location (e.g. the percentage of London children in private schooling is significantly higher than the national average), if migrants and non-migrants differ in these characteristics, estimates of state education and public services consumption and costs should be adjusted. Adjustments for non-state provision may be particularly important when considering non-EEA economic migrants and for estimates of Tier 1 and 2 migrant costs. Data allow identification for migrants of some of the characteristics which influence consumption of state education and public services. Identification of differences in the incidence of these characteristics between migrants and non-migrants alone is useful, allowing a critique of cost estimates based on age and children. However, the literature may indicate ways in which such data might be used to adjust such cost estimates.

In addition, there may be differences in consumption or costs directly related to migration or clearly affecting specific migrant groups. The obvious one is the cost of language support and communicating with non-English speakers, but others might include a strong preference for private health care amongst some migrant groups. Incorporating these type of costs moves towards the bottom up approach and so runs the danger of only incorporating selected differences in costs (e.g. language difficulties might reduce access to services and so counter additional costs of language support). However, it seems appropriate to at least note additional costs which are clearly attributable to migrant groups. This is particularly important for education, where those migrant children for whom English is not a first language are likely to impose additional costs.

Two other methodological issues arise. Firstly, the treatment of costs. Should we be concerned with average or marginal costs? And how should non-rival public goods (e.g. health service research) be treated? The first depends on the scope for adjustment at the margin and is affected by the concentration of migrants and the degree of current utilisation of capital. This increases the importance of local and regional analyses, that regional analyses might need to differ in their approaches and that there may be a need for different

approaches between services. Following discussion with MAC, it was decided that long-term costs were of most interest and so average costs have been used and all expenditure (including on public goods) have been included. This is probably appropriate for most capital costs (e.g. building schools and hospitals) because migration is sufficiently important not to be “marginal” in the medium or long run; we do need more schools and hospitals as a result. Arguably, it is less appropriate for pure non-rival goods such as medical research: it is not obvious why we need more research into kidney cancer, say, as a result of a larger population. This may impart some bias to the results.

The second issue is the incorporation of time in the estimates. Cross-sectional data and analysis provide estimates based on the current migrant population; they do not attempt to provide an analysis of the past or future costs of these migrants as they age (the latter, of course, will depend on return migration). If the migrant population were in a steady-state (relative to the non-migrant population) this would not matter much, but, of course, this is not the case. The current migrant population reflects past immigration regimes, as well as other factors (e.g. economic ones) influencing both immigration and return migration; the future migrant population will reflect future policies and developments. Projecting the future needs of current (and future) migrants and assessing the possible costs to public services is, therefore, extremely difficult even in principle and close to impossible in practice; it is certainly well beyond the scope of this project. It is therefore important to recognise that the estimates provided here are simply a “snapshot” of current costs, which will change going forward, as current migrants age, some migrate onward, and others arrive.

1.4 Method

The study was conducted in three stages:

1. a literature review of the impact of migrants on state education and public services;
2. estimates of migrant consumption of education, health, social services and social care and their costs, through allocating costs pro-rata based on migrant and non-migrant characteristics; and
3. consideration of the implications of the findings for UK immigration policy and improvements in measurement.

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. Further details of the estimation method are given in Chapters 2 and 4.

1.5 Layout of the report

The next chapter reports on a review of literature on migrants demands on state education and public services. Chapters 2 and 4 turn to the estimates of

the expenditure effects of migrants on state education and public services, with the first chapter describing the method and the second the findings. The final chapter discusses the implications of these findings for the points-based system, the limitations of such estimations and the potential for improved estimates.

2 Review of literature on the impact of migration on the consumption of state education and public services

2.1 Introduction

The aims of the literature review were threefold:

- to identify research on the impact of migrants and their children on the consumption of state education and public services, the related costs and quality;
- to explore whether existing research allows for better estimates of the impact of migrants and their children on the consumption of these services and the related costs; and
- to inform our adjustments, where possible, of the consumption and cost estimates made through our use of data.

We examined evidence relating to how migrants use health and education services, migrant-specific evidence on differential use of state education and public services and differential costs. We aimed to cover a wide range of types of studies: national, local, qualitative, quantitative and those covering all and specific types of migrants, but where possible focusing particularly on Tier 1 and 2 and non-EEA economic migrants. The robustness of the evidence was assessed, including its relevance to the groups of most interest to the research. We describe the literature covered by the review in Appendix A.

After presenting an overview of the literature in the next section, the rest of the chapter presents our findings in respect of health, social services and education respectively.

2.2 Research on the impact of migration

A number of features of the literature affect its potential use in measuring the impact of non-EEA economic migration. These are principally the focus of the research on access to services; the migrant groups covered by research; and the unavoidability of partial coverage by the literature.

There is very little research which looks directly at the impact of migration on public services. The focus of much of research is on migrants' access to and use of services, and this is therefore the emphasis of much of the literature included in our review. Its emphasis is on whether migrants are aware of and make use of services to which they are entitled and may need, rather than on the impact on services they may access. This approach is found particularly in research on health. Another key theme covered in the literature on migration and in relation to all the services being considered is the difficulty of estimating the number of migrants accessing services, in order to assess impacts.

It is important to note that most publications have a very broad focus on all migrants. We excluded from our review publications focused specifically on asylum seekers and refugees, but these migrants were included in a number of reports with a wide focus on migrants in general. Some research includes migrants resident in the UK for many years and does not make a clear distinction between migrants and Black and Minority Ethnic groups. This was found most commonly in research on migration and health. We included fourteen reports with a focus on A8 migrants or migrants from within the EEA because these have implications for how other recent economic migrants use education and health services.

A second key point to note about the literature is a focus on particular health, social service or education issues, for example migrants' use of translation services or of secondary healthcare. As described in Section 1.3, it would be unwise to try to assess impacts generally through consideration only of these issues while other impacts, which might have different effects, are not included.

We present the findings of literature relating to the impact of migration on health, education and personal social services taking into account these limitations.

2.3 Health

The main areas of interest included in literature relating to migration and health services:

- the effect of migration on levels of demand for health services;
- how migrants use health services; and
- public health impacts arising from migration.

These are examined in turn below. This is followed by a discussion on private health care, examining the broader factors which affect access and so may affect migrants' use of public health provision. At the end of the section we present the key findings and messages and findings.

Research on health and migration overlaps with epidemiological interest in ethnicity and health differences, and we look at how this literature might inform understandings of health impacts of migration.

2.3.1 Migration and levels of demand for health services

Research on the demand for health services has largely been based on demand from EU migrants or migrants in general and we have found no research focused on demand from non-EEA economic migrants.

Overall demand

The impact of migration on health services has been assessed principally within reviews of service impacts more widely, and through use of evidence gathering, either from literature reviews or from consultation with service providers at health authority or local authority level. These have included research and reviews on impacts on services in various regions of the UK: London (Gordon *et al.*, 2007a and b); Scotland, (Rolfe and Metcalf, 2009;

Scottish Parliament, 2010) and Wales, (National Assembly for Wales, 2008; WLGA, 2008 Wales Rural Observatory, 2006).

A review of evidence by the Scottish Parliament concluded that there is little evidence of increased demand for health services resulting from migration into Scotland (Scottish Parliament, 2010). Focusing on the impact of A8 migration, its report cites evidence provided by NHS Lothian that migrants are mostly in their 20s and 30s with low healthcare needs. A distinction is made between these, economic, migrants and asylum seekers and refugees who have more significant and specific health needs.

Health authorities submitting evidence to an enquiry by the Welsh Assembly Government reported that migrants were making little impact on health services. This was believed to be because economic migrants are generally young and healthy, aged between 18 and 34, return to their country of origin for treatment and are not aware of services available to them (National Assembly for Wales, 2008).

Research in London, which included interviews with local authorities, reports pressure on services, resulting from problems of under-investment in infrastructure, and increased costs of health provision. However, these costs are not measured (Gordon *et al.*, 2007a). The additional costs of providing healthcare services to migrant groups may not be recorded and therefore hidden. Research which has looked at whether organisations record the costs of delivery of health services to migrant communities concludes that it does not and that:

'Absence of specific resource allocation may mask the cost impact of migrant health to PCTs, e.g. interpreting costs' (Taylor and Newall, 2008: 7).

A number of researchers state that it should not be assumed that levels of demand for health care will remain low. This is based on observations of increased settlement among migrant workers in local areas, for example Norfolk and Wales, rather than forecasting based on existing data or research on migrants' intentions (National Assembly for Wales, 2008; Collis *et al.*, 2010).

The use of secondary health care by migrants and non-migrants has also been compared. Research on hospital admissions of international migrants found that recent migrants were more likely than others to have had a hospital admission, but the research does not distinguish between groups of migrants, for example between refugees and asylum seekers and economic migrants (Steventon and Bardsley, 2011).

Disproportionate demand

While these studies explore implications for overall demand for health services resulting from population increases, some research looks for any disproportionate demand, for example on maternity services (Klodawski and Fitzpatrick, 2008) and at whether 'health tourism' exists (Kelly *et al.*, 2005; Medecins du Monde, 2007; Kofman *et al.*, 2009). On the question of demand for maternity services, analysis for the London Health Observatory of 'additional' births in London in recent years found that the majority have

involved mothers born in England and Wales and in the rest of the world, but not recent migrants from A8 countries (Klodawski and Fitzpatrick, 2008).

A number of studies raise the issue of „health tourism“ and whether migrants enter the UK to access state health provision. This research concludes that this is not a common practice: a London-based third sector organisation, Medecins du Monde found no evidence of health tourism among more than 600 migrants accessing its services and that these had been living in the UK for an average of three years before seeking healthcare. The health conditions seen in project users were found to broadly reflect those seen among the general population in GP clinics, requiring primary care or antenatal services rather than expensive specialist treatment (Medecins du Monde, 2007).

Conversely, some research indicates that migrants may return to their home country for healthcare (Cook *et al.*, 2008; Scullion and Morris, 2009). Interviews with migrants have found that reasons for this practice include faster access to specialists (Cook *et al.*, 2008). Research which included a survey of more than 700 EU migrants in the South East of England found that, even for basic health care, many migrants return home (Green *et al.*, 2008). Sargeant and colleagues also state that the transient nature of some migrants makes them less likely to register with a GP (Sargeant *et al.*, 2009). This practice is likely to be explained by the frequency with which Eastern European migrants travel to and from the UK and the temporary nature of some of this migration. The practice of returning to a country of origin for health care is therefore less likely to apply to non-EEA economic migrants.

Disproportionate demands may derive from other issues, such as information and language difficulties. Research in Wales, based on reports from local authorities and published data, found some health professionals reporting difficulties treating migrant patients because they are not aware of their previous ailments and do not have access to their treatment records of immunisation history (Wales Rural Observatory, 2006). Again, the impact of this, for example on consultation times has not been measured or suggested.

Interpreting costs have been identified as a key additional cost associated with providing health services to migrants. A study of migrant workers in Peterborough, finds stakeholders reporting language interpretation and translation as the main demand resulting from migrants' use of health services. This includes telephone interpretation services (Scullion and Morris, 2009). Research by the Audit Commission (2007) found interpretation records from Health Authorities not informative and also found evidence that patients often use informal, unrecorded interpreters such as family and friends. These may have an impact, by slowing consultation processes, but this has not been measured, or even identified as an issue for health service staff.

The relevance of interpreting costs for non-EEA economic migrants is likely to be limited. For example, many Tier 1 and Tier 2 migrants are from English-speaking countries or from countries where English is the official language. More than a quarter of Tier 1 and Tier 2 migrants are from India where English is the secondary official language⁷. Other countries accounting for significant

⁷ Annual Population Survey, January 2009 - December 2009, our estimates

numbers of Tier 1 and Tier 2 migrants include the United States (10 per cent), Australia (7 per cent) and South Africa (7 per cent). Nigeria, where English is the official language, accounts for 5 per cent of Tier 1 and Tier 2 migrants and the Philippines, where English and Filipino are both official languages, for 7 per cent. This, combined with the professional status of many Tier 1 and Tier 2 migrants and higher than average qualification levels, as well as the fact that the employers who sponsor their applications are likely to require that they speak English, makes it unlikely that this group of migrants places significant any additional demands on health services for interpretation and translation services.

Reports also refer to late presentation of pregnancy among migrants who have not registered with a GP (Scottish Parliament, 2010; Steventon and Bardsley, 2011). Research on the health of migrants in the UK using data on migrant workers in the Millennium Cohort Study found 7.1 per cent of mothers born abroad had no antenatal care compared to 2.4 per cent of those born in the UK. However, regression analysis found that younger age, education level and occupational background were major factors in late presentation rather than migrant status per se (Jayaweera, 2011). This indicates that late presentation is unlikely to be common among skilled migrants. While late presentation of pregnancy is likely to have an impact on costs of NHS treatment, we have not found any calculation of costs associated with lack of antenatal care for migrant women, for example in dealing with pregnancy complications and pregnancy-related conditions.

2.3.2 Migrants' access to health services

Migrants' access to and use of services, and particularly of primary and secondary health care, is a focus of much research on health service impacts of migration. A number of studies look at migrants' levels of registration with GP practices and dentists and their use of hospitals, particularly Accident and Emergency facilities (Orchard *et al.*, 2007; WLGA 2008; Scullion and Morris, 2009). Studies have also investigated migrants' awareness of services and those that they have utilised (Zaronaite and Tirzite, 2006; Hargreaves *et al.*, 2006; Audit Commission, 2007; ICOCO, 2007; Medecins du Monde, 2007; Fife Partnership, 2007; WLGA, 2008; Cook *et al.*, 2008; Green *et al.*, 2008; Scullion and Morris, 2009; Sargeant *et al.*, 2009; Khan and Flak, 2010).

Low rates of GP registration have been found: two separate surveys each of around 700 migrants found that around a half had registered with a GP (Zaronaite and Tirzite, 2006; Green *et al.*, 2008). Low rates of GP registration are also reported by NHS Lothian in evidence to the Scottish Parliament (Scottish Parliament, 2010). Rates of registration have been found to be higher among migrants living with a partner, children or parents (Green *et al.*, 2008).

A number of explanations are put forward for relatively low levels of GP registrations. They include lack of knowledge and understanding of the primary and secondary healthcare systems in the UK, language barriers, time off for appointments and opening hours. As with demand for healthcare generally, some research also suggests that the need for health services is lower among migrants than the general population (Scullion and Morris, 2009)

Zaronaite and Tirzite (2006) state that the UK has different rules than other countries for GP registrations and that lack of information and poor English language skills prevent migrant workers accessing healthcare services. Language difficulties are also identified in other research as a barrier to use of healthcare services (Uscreates, 2008; Schneider and Holman, 2009). Research for the Wales Rural Observatory, which included interviews with migrants and with service providers found that lack of familiarity with a primary care, GP based, service was a factor in low registration levels among migrants (Woods and Watkin, 2008). Other research with service providers identifies lack of understanding of the UK health systems and entitlement to care as barriers to using services (Raphaely and O'Moore 2010; Scullion and Morris, 2008) and lack of awareness of specific health services (Taylor and Newall, 2008). Lack of trust in NHS services has also been identified as an issue for some migrants (Uscreates, 2008).

Certainly, some migrants report problems accessing healthcare, particularly in semi-rural areas (Schneider and Holman, 2009). Access problems are found to arise from difficulties taking time off for healthcare (Uscreates, 2008) and opening hours (Sikora *et al.*, 2010).

Use of Accident and Emergency services

A number of reports state 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 (Zaronaite and Tirzite, 2006; Scullion and Morris, 2009; Scottish Parliament, 2010).

A survey of patients presenting at the Emergency services of a London hospital 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, although the practice may be more common among non-economic migrants than those on tourist visas. Neither these details nor the extent of this practice are indicated by current research. Some research notes that there is little evidence of strain on Accident and Emergency departments resulting from inappropriate use by migrants (Audit Commission, 2007; National Assembly for Wales, 2008; Collis *et al.*, 2010). However, evidence is largely second-hand and anecdotal.

2.3.3 Public health impacts of migration

Research on the health-related behaviours of migrants, including smoking and alcohol use, and on rates of disease and conditions among migrant populations, may inform understandings of their impact on consumption of health services. This body of research includes epidemiological studies of health and disease differences between population groups.

A number of studies note the absence of readily accessible data on the health of new migrants and the lack of clarity about health issues and healthcare needs (Crawley, 2009). However, a key message from research on migration and health impacts is that economic migrants are generally healthy, because they are generally young and are less likely than non-migrants to have disabilities affecting their day lives (Johnson, 2006).

Some research refers to more healthy lifestyles among some migrant groups, resulting from low alcohol use, lower levels of smoking and vegetarian diets (Johnson, 2006). However, other research identifies higher rates of smoking among recent migrants compared with non-migrants, particularly from Eastern Europe (Dawson, 2009; Jarvis, 2009; Collis *et al.*, 2010). However, it is not known whether higher rates of smoking among migrants lead to higher differential costs of healthcare between migrants and others. Collis and colleagues note that smoking and problem drinking are higher in the countries of origin of some A8 migrants. They also note the limited health promotion work carried out in some Eastern European countries, where some migrants within the UK originate (Collis *et al.*, 2010).

There is little published research which has surveyed migrants about their general health. A study of migrants in Peterborough, which included a survey of 278 migrant workers, found that 13 per cent of Polish respondents said they or a family member had a health problem, but only three percent of Lithuanian migrants. Most said they had received help or support for this problem. A large, mixed methods, study of migrants in the East of England found that health issues led to a shorter length of stay in the UK for some migrants, suggesting that those migrants with health issues do not make an impact on UK services but prefer to return home (Schneider and Holman, 2010).

With regard to mental health, literature has addressed mental health and wellbeing among migrant groups, but as Crawley (2009) points out, much of this research does not include analyses by immigration status or length of residence in the UK and uses terms such as 'ethnic minority' and 'immigrant' imprecisely. This is a problem found in a number of epidemiological studies, discussed later. Some research presents evidence on rates of mental health in migrants' home countries, for example suicide rates in Poland and Lithuania, connected to alcohol use (Sargeant *et al.*, 2009). However, the extent of these behaviours among migrants in the UK is not known.

It has been noted that migrants' health can deteriorate with length of stay within the UK, for example in relation to alcohol use, smoking behaviour and eating habits, as well as access to healthcare services (Harding, 2004; Johnson, 2006; Spencer and Cooper, 2006; Collis *et al.*, 2010; Jayaweera and Quigley, 2010). Research findings suggest that UK Indian male migrants, especially Sikhs, are showing rates of alcohol abuse and related problems of liver cirrhosis considerably higher than English males (Caballo *et al.*, 1998). Other research refers to increases in cardiovascular problems and cancer (Jayaweera and Quigley, 2010). However, the costs of this and other hazardous behaviour in relation to medical intervention and healthcare have not been calculated. Research showing a decline in health status among migrants with length of stay found no independent association between length of residence and healthcare use (Jayaweera and Quigley, 2010).

Epidemiological studies relating to the health of minority groups, which include migrants

Epidemiological research comparing rates of disease and health conditions between populations has relevance for understanding the impact of migration. However, there is sometimes a lack of clarity in the epidemiological literature between 'migrants' and ethnic minorities.

Research has looked at particular diseases, for example TB and HIV and different immunisations within migrants' countries of origin and among migrants (HPA, 2008; Raphaely and O'Moore, 2010; Jayaweera, 2011). It has also been noted that the risk of TB transmission is higher in overcrowded accommodation (Sargeant *et al.*, 2009). However the impact of migrant TB cases has not been calculated. Most TB cases in the UK are foreign-born (HPA, 2008), particularly the Indian sub-continent and Africa. Therefore, potentially, non-EEA economic migration may contribute to cases of TB because a significant proportion of Tier 1 and Tier 2 migrants originate from these countries. However, since TB is strongly associated with poverty and deprivation, it is less likely to be found among such migrants.

Higher rates of diagnosed mental health conditions among Afro-Caribbean populations have been identified in research (Claassen *et al.*, 2005) but studies do not necessarily make a distinction between migrants and non-migrants. A review of mortality of migrants from the Caribbean to the UK remarks that much of the evidence on health-related behaviours among Caribbeans does not distinguish between migrants and those of subsequent generations (Harding, 2004).

2.3.4 Private health care

Migrants' public health service demands may differ from that of non-migrants' because of differential use of private health care. We found no literature on private health care and migrants specifically. However, the incidence of private health and private medical insurance is correlated with a range of other characteristics. If the incidence of these characteristics differs between migrants and non-migrants, this may provide an indicator of different usage of private and hence public health care between migrants and non-migrants. Laing and Buisson's most recent report state that eleven per cent of UK residents had private medical insurance at the start of 2011.

Age, gender, income and education have been shown to be significant determinants of private medical care (Besley *et al.*, 1999; Emerson *et al.*, 2001; Propper *et al.* 2001; Ryan *et al.*, 2009).

Demand for private medical insurance increases with age until the 50s or 60s and then declines (Wallis, 2004; Propper *et al.*, 2001). Emerson *et al.*, (2001) estimated demand to be greatest between 40 and 65 and lowest for those aged 70 or over and under 30. Although the decline was likely to be due to prohibitively higher premiums and more pre-existing conditions for older age groups, Propper *et al.* (2001) also identified cohort effects, with younger groups being more likely to have private medical insurance than older cohorts. Those covered through employer private medical insurance tend to be younger and healthier (Deber *et al.*, 1999). There appears to be an indication that employer paid insurance is displacing private subscriptions (King and Mossailos, 2005; Wallis, 2004).

Men were overwhelmingly the main subscribers to both individual and employer paid private medical insurance (around 70 per cent, King and Mossailos, 2005), but, of those covered by another family member, 75 per cent were women. Men were also more often covered by employer purchased

medical insurance: 7.4 per cent of men and 2.5 per cent of women (Wallis, 2004).

As would be expected, private medical insurance increases with income. King and Mossailos (2005) found the mean monthly income of individuals with employer-paid company insurance and individually financed insurance were £2,462 and £1,731 respectively, in comparison to £953 for those without private medical insurance. Wallis (2004) found the income effect was greatest for employer-paid private medical insurance, with 22.4 per cent of the highest earning decile having access to private medical insurance in contrast to 0.5 per cent in the lowest decile. For individually financed private medical insurance, the proportions were 14.3 per cent in the highest in comparison to 2.4 per cent in the lowest.

Educational attainment has been associated with increased use of private healthcare (Propper, 2000; Emerson *et al.*, 2001). King and Mossialos (2005) found that those with post-secondary school qualifications were six times more likely to have private medical insurance than those without.

Not surprisingly, employment and socio-economic group are also associated with private medical insurance. Those in employment are more likely to have private medical insurance than those not working. Professionals and managers are more likely to have private medical insurance than the semi-skilled, unskilled or unemployed (King and Mossailos, 2005). This applied to both employer and individually financed private medical insurance but the difference was greater for the former (with odds ratios 9.58 and 1.84 respectively). Wallis (2004) showed that the occupational differences were more evident for employer paid private medical insurance with approximately 16 per cent of those in professional occupations versus less than 1 per cent of unskilled occupations having this form of private medical insurance; whereas, for individually purchased private medical insurance the percentages are approximately 11 per cent versus 6 per cent. Wallis (2004) also found a positive association between being self-employed and private medical insurance use, though earlier research had found the converse relationship. Employer private medical insurance was more common in the financial services (22 per cent) and metals and mineral extraction (13 per cent), compared with other industries (Besley *et al.*, 1999).

Some have suggested that disposable income, rather than gender, educational attainment or income, is the causal factor (King and Mossailos, 2005; Taylor and Ward, 2006). This has been supported by the finding that the presence of children is negatively associated with private medical insurance (King and Mossailos, 2005; Taylor and Ward, 2006) and a positive association between being married or living with a partner and buying private medical insurance (Taylor and Ward, 2006).

Certain behavioural and attitudinal characteristics were associated with private medical insurance purchase, for example risk aversion (positively associated, King and Mossailos, 2005), political views (support for the Conservative party, positively associated, Besley *et al.*, 1999; Wallis, 2004; King and Mossailos, 2005; Taylor and Ward, 2006) and smoking (negatively associated, Propper, 2000; Wallis, 2004).

Supply side factors have been examined by several studies. The association between waiting times and perceived waiting times and private medical insurance is unclear, with contradictory findings across different studies (Propper *et al.*, 2001; King and Mossailos, 2005; and Wallis, 2004). Availability of private care, proxied by the number of part-time NHS consultant contracts was found to be positively correlated with private medical insurance (Propper *et al.*, 2001; King and Mossailos, 2005). Other reasons given for private care in a focus group study were quality related issues such as speed of access, time spent with staff and a better environment, though the group did not associate private health care with better clinical care (Coulter and Magee, 2003).

The above suggests that non-EEA economic migrants and Tier 1 and 2 migrants may have a greater propensity to access private health services than the population as a whole, due to a range of non-migration characteristics, notably age (62 per cent are aged between 18 and 39)⁸, employment status (with all tier 2 migrants having a job offer and tier 1 very likely to be in work or self-employed), earnings, education (one half have at least a Level 4 qualification⁹), the small size of their families, occupational group and marital status. However, users of private health care are still eligible for NHS treatment, and in practice many use a mixture of private and NHS treatment (e.g. NHS GP services and private hospital care and dentistry). Moreover, some elements of healthcare costs (e.g. public health, accident and emergency, ambulance and blood transfusion services) need to be provided for the whole population, including those who use private healthcare for routine needs.

2.3.5 Key findings: research on the impact of migration on health services

- Migrants are generally healthier than average, compared to non-migrants in their countries of origin and in the UK. This is referred to as the 'healthy migrant' effect. Non-EEA economic migrants are most likely to contribute to this effect because of their age and employment status.
- There are low rates of GP registration among some migrant groups for reasons which include language barriers and knowledge and understanding of the UK health system. There is some evidence of disproportionate use of accident and emergency services as a substitute for primary care, but there is limited evidence of additional strain on these services. There is also insufficient evidence relating to reports of late presentation of pregnancy among migrants. However, it is unclear the extent to which this would be the case for non-EEA economic migrants.
- Some of the patterns of health service use and health risks which have been related to migrants are associated with barriers such as language and social deprivation rather than with being a migrant *per se*. These issues are unlikely to be applicable for non-EEA economic migrants.

⁸ Annual Population Survey, January – December 2009, our calculations.

⁹ Annual Population Survey, January – December 2009, our calculations. Note that a further 40 per cent have „other qualifications“, which, given difficulties recording foreign qualifications, suggests that the percentage with a Level 4 qualification may be higher.

- While migrants are reported to make some additional demands on services, principally through language needs, the additional costs are rarely recorded. These demands are not likely to be placed on services by Tier 1 and 2 migrants who will generally speak English. The phenomenon of 'health tourism' is also unlikely to apply.
- There is mixed evidence of health behaviours of migrants and the impact of these on demand for services. The health of migrants deteriorates with length of stay but this may not affect healthcare use. If Tier 1 and 2 migrants adopt the health-related behaviours of their non-migrant equivalents, this will mean that they take on the relatively healthy lifestyles of those in similar, professional and skilled roles.
- The factors associated with private medical care and insurance are more prevalent amongst non-EEA economic migrants and particularly Tier 1 and 2 migrants than the general population.

The key messages from the literature review for understanding the impact of non-EEA economic migration on health and social care are therefore that:

- Tier 1 and 2 migrants are relatively young and healthy and are therefore likely to be relatively light users of health and social care services;
- the status of Tier 1 and 2 migrants as employees and their disproportionate presence in professional roles also implies that they will be moderate users of health and social care services;
- research on inappropriate use of accident and emergency services and late presentation of pregnancy by migrants is both unreliable and of questionable relevance to non-EEA economic migrants, who are likely to understand the UK healthcare system;
- the costs of translation and interpreting services cannot be attributed to any significant extent to non-EEA economic migration, since many such migrants come to the UK to work in UK-based companies and originate from English speaking countries;
- diseases associated with migrants, such as TB, are related to poverty and are less likely to be found among non-EEA economic migrants;
- the impact of different health behaviours among migrants on health and social care use, for example drinking, smoking and diet, are largely unknown; and
- Tier 1 and 2, and perhaps non-EEA economic migrants in general, have characteristics which suggest they may be higher users of private medical care than the general population.
- Overall, it seems reasonable to conclude that migrants in general are unlikely to pose a disproportionate burden on health services (that is, one that is greater than would be expected, given their proportion of the population). For Tier 1 and 2 economic migrants, the evidence is strong that they are likely to pose a disproportionately small burden on health services.

2.4 Personal Social Services

There has been very little research carried out on the impact of migration on personal social services.

Research which explores migrants' use of social care and social services notes their low levels of take-up (Kofman *et al.*, 2009; Khan and Flak, 2010; Orchard *et al.*, 2007). Reasons for low take up of services and low levels of awareness of social care services are explored in a small number of studies. Research in Scotland which included a survey of 90 migrants and two focus groups, found that very few had used any social work services and were not aware of the services which they could access (Khan and Flak, 2010). Other research, on A8 migrants in Edinburgh, found that very few had accessed care and social services, with the exception of welfare services for children, accessed by only a small minority (Orchard *et al.*, 2007).

Kofman *et al.* (2009) link low rates of use of community care services with lower disability rates among migrants, but also say this is related to the age distribution of migrants. These researchers also note that there are higher disability rates among older migrants in some ethnic groups, for example Bangladeshis, Irish and Somalis. The authors refer to the recurring problem with data which categorises clients by ethnic minority status and does not identify migrants separately.

Certainly, the age distribution and labour market position of Tier 1 and 2 migrants would suggest that they would be very low users of personal social services. Sixty per cent of Tier 1 and Tier 2 migrants are aged 18-39, compared to 30 per cent of the population as a whole, while 14 per cent are aged 40-65 compared to 33 per cent of the UK population¹⁰.

There has been some research into the challenges of investigating the circumstances of transient migrant families, which describes how the complexities of ensuring effective safeguarding of migrant children can be exacerbated by language barriers and cross-cultural issues (ICOCO, 2007). The extent to which child protection services can meet the needs of transient families has also been questioned (WLGGA, 2008). Other research in Wales, which included interviews with 15 representatives of agencies and organisations working with migrants in rural Wales, also refers to the problem of children „disappearing“ because of high mobility, with particular concerns for children assessed as in need of protection (Map Analysis Ltd, 2009). The extent of this problem is not known, neither is its relevance for non-EEA economic migration because the mobility of this group has not been assessed.

There is speculation that the demand for social care will increase as migrants become more settled in the UK. With regard to family social services, in a study within Norfolk Collis and colleagues (2010) report anecdotal evidence that health visitors are seeing a rise in the number of migrant worker families on their case loads. However, there is no firm research evidence of growing impact. Another way in which demand is speculated to increase is through

¹⁰ Annual Population Survey, January 2009 - December 2009, our estimates.

entry to the UK of elderly relatives of non-EEA economic migrants. However, Kofman *et al.*, (2009) suggest that this may not happen:

'It seems most likely that economic migrants will use their earnings to remit money for care rather than bring over those in need of care' .

2.4.1 Key findings: research on the impact of migration on personal services for adults, older people, children and families

The extent to which conclusions can be drawn on this area of impact is limited by lack of research evidence, although the broad conclusions are likely to be similar to that for health services. Therefore we are only able to identify three key findings and messages:

- there is evidence of lack of awareness and difficulty in accessing personal social services among some migrant groups, but no evidence in relation to non-EEA economic migrants;
- reported low levels of use of services by economic migrants may reflect low levels of need; this would apply to Tier 1 and 2 migrants given their age profile;
- there is speculation that migrants' demand for personal social services may increase as they age; whether this is the case for Tier 1 and 2 migrants as a group depends on the extent of settlement.

2.5 Education

Research which is relevant to the impact of migration on education has focused on three issues:

- the increase in pupil numbers resulting from migration;
- the additional demands on schools arising from the needs of some migrant pupils; and
- the effects of pupil mobility and 'churn' on schools

These are examined in turn below. This is followed by a discussion on private education, examining the broader factors which affect the choice between private and state education and so may affect migrants' use of state provision. At the end of the section we present the key findings and messages and findings.

2.5.1 Increased pupil numbers resulting from migration

The impact of migration on demand for places and on the delivery of education to migrant pupils has been a central theme of research looking at education impacts of migration. The focus has been on the impact of recent migration and, particularly, migration from Eastern Europe (ICOCO, 2007; Gordon *et al.*, 2007a and b; Cook *et al.*, 2008; National Assembly for Wales, 2008; WLGA, 2008; Reynolds, 2008; Scottish Parliament, 2010). It is reported that some schools are unaccustomed to the change which can result from the arrival of migrant children or lack the capacity to manage a significant number

of new arrivals effectively (Audit Commission, 2007). A number of studies have sought to estimate the number of migrants in UK schools but have encountered problems in identifying migrant children from the data (Rolfe and Metcalf, 2009; Sargeant *et al.*, 2009; von Ahn *et al.*, 2010). There are particular problems with identifying migrant children from the National Pupil Database (Simpson *et al.*, 2010).

Data on school capacity indicates that many schools are under-subscribed and therefore would benefit from an increase in applications, including from migrant families. Data published by the Department for Education in 2010 shows around 80 per cent of maintained primary schools have surplus places and 70 per cent of secondary schools (DfE, 2010). However, under-subscribed schools may not be in areas where migrants choose to live.

Projections of the number of pupils in schools suggest future spare capacity. If net migration is assumed to be zero for future population estimates, there will be around 17,500 fewer pupils aged 5 to 15 in state schools in 2015. The fall in pupil numbers is projected to be higher at secondary than at primary school level because of the upward trend in birth rates since 2002 (DfE, 2011b).

Some reports note that the impact of migration, particularly of A8 migration, has been limited because many migrants are young and single or come alone rather than with families (Audit Commission, 2007). The children of Tier 1 and Tier 2 migrants are generally younger than those of the wider population: 16 per cent have an eldest child of lower than school age (no older than three years old, compared to 8 per cent of the population as a whole).

We described, in the context of demand for health services, how the impact of migration is expected to increase as migrants become settled. It is noted in research covering education impacts that pressure on schools is growing as more family groups arrive to join migrant workers (ICOCO, 2007).

2.5.2 *The demands and benefits of migration for schools*

A number of reports describe the additional demands on schools which arise from the needs of some migrant pupils. However others, and statistical data on performance, suggest that school performance and pupil achievement is, if anything, enhanced by migration (both because of the performance of migrant pupils themselves and, more tentatively, because of possible spillover effects).

Additional requirements, which lead to higher costs of education provision, are described as including translation and interpreting services, numeracy and literacy of young children who have not received formal education, understanding cultural differences by staff and lack of records and assessments (Gordon *et al.*, 2007b).

The additional language needs of some migrant pupils have been considered within the research literature. Despite additional funding from the Ethnic Minority Achievement (EMA) Grant and Migration Impacts Fund to assist migrant pupils with English language needs, there are reports that the available support is insufficient and that schools need additional resources and support, particularly for bilingual teaching assistants to relieve pressure on teaching staff (Scullion and Morris, 2009). Unpublished research in one

local authority, Edinburgh City Council estimated the cost of providing EAL support to 50 pupils at roughly £33,000 a year, based on the cost of employing an EAL teacher (Edinburgh City Council, 2008). Research for the former Department for Children, Schools and Families derived a figure for the mean additional cost relating to EAL pupils with a single need relating to their language of £1001 per annum and a median cost of £631. This figure was based on only 48 pupils so is unlikely to be reliable. However, the authors note that the relatively low figure, compared to the costs of meeting their needs, for example Special Educational Needs, may reflect the temporary nature of language support required by EAL pupils, with the cost decreasing as pupils become more fluent. Other research, for example with seven London boroughs reports that schools' costs have increased as a result of the additional needs presented by some new migrants to the capital (Gordon *et al.*, 2007b) but does not quantify these costs.

Other needs identified as placing additional demands on schools include complex special needs and attendance patterns among some migrant groups (ICOCO, 2007; Scullion and Morris, 2009). Lack of knowledge of the backgrounds of migrant pupils is also identified as a problem for schools by research conducted in Wales (Wales Rural Observatory, 2006). The extent to which this applies to children of non-EEA economic migrants is not known.

Research on education impacts of migration rarely distinguishes between groups of migrants and sometimes makes assumptions that all migrants have similar needs. However, as we noted earlier, the children of Tier 1 and 2 migrants are unlikely to require assistance with translation and interpreting because, in many cases, they originate from countries where English is the official language. Moreover, the parents of these children have higher than average qualification levels and work in professional occupations where they will be required to speak English. It is therefore unlikely that this group of migrant children will place significant additional demands on education services for help with English language.

It is frequently asserted that the presence of significant numbers of non-English speaking children will put pressure on schools and local educational authorities, resulting in reduced performance for all children, including native English speakers. For example, the Minister for Immigration Damian Green argued: "The number of pupils with English as a second language makes life difficult for teachers, parents and pupils. Whether or not they can speak English, everyone suffers when it's more difficult for teachers in the classroom. This is also a huge pressure on local authorities trying to cope with uncontrolled immigration"¹¹

However, while research on education and migration, as well as anecdotal reporting, has focused on the demands placed on schools by migrant pupils, statistical data on attainment, and recent research, suggests that migration has, if anything, a positive effect on school and pupil performance. For some time the performance of schools with higher proportions of pupils with English as an additional language, who include migrants and children of migrants, has

¹¹ <http://www.dailymail.co.uk/news/article-1162782/British-Babel-English-foreign-language-seven-primary-school-pupils.html>

been better than other schools with equivalent levels of disadvantage (DfES, 1999).

More recent data on Key Stage 2 assessments of eleven year olds shows a small but positive correlation at local authority level between the proportion of pupils for whom English is not a first language and the proportion of those for whom it is who achieve the expected standard (level 4). Since EAL status is correlated with deprivation, this effect would increase substantially if this was taken into account, through Free School Meals status (DfE, 2011a). In other words, it appears that pupil performance amongst English-speaking pupils is positively, rather than negatively, correlated with the presence of pupils with English as an additional language, who will include migrants and children of migrants, although the causal mechanism is unclear.

The apparent positive effect of migration on pupil performance is illustrated by recent research on the performance of schools in London. The capital's schools have a much higher proportion of pupils who speak English as a second language, at 30 per cent, compared to 10 per cent outside London. Research on academic attainment found schools in London outperform those in other areas, when factors such as poverty, ethnicity, EAL are taken into account. Pupils who speak English as a second language, who will include migrants and children of migrants, perform slightly better than native English speakers in London schools (Wyness, 2011).

2.5.3 *The response of schools to migration*

The finding that schools with high proportions of pupils with English as an additional language, including migrants, can out-perform others, suggests that how schools respond to migration may be of crucial importance to the achievements of both migrant and non-migrant pupils.

Some research has focused on the ability of schools and teachers to work effectively with migrants (Wales Rural Observatory, 2006; ICOCO, 2007) and has suggested that teachers may lack expertise in meeting the needs of migrant children (Audit Commission, 2007). If widespread, this is likely to lead to additional costs. A report by the Welsh Local Government Association, drawing on responses from 22 local authorities, states that children's language needs are sometimes misunderstood as special educational needs, thereby resulting in the allocation of more additional resources than may be necessary (WLGA, 2008).

Other research on the experiences of minority ethnic children and their families suggests that schools have not responded well to the impact of migration, and particularly to an increase in Black and Minority Ethnic (BME) pupils. Research in Scotland for the Scottish Government found that schools commonly adopted an approach of ignoring differences between pupils rather than openly appreciating and acknowledging diversity. Issues of identity, discrimination and inclusion were also dealt with inadequately. By adopting an essentially ethnocentric approach, both schools and pupils were failing to benefit from the potential valuable impact of increased diversity, including through migration (Arshad et al., 2005).

In-depth qualitative research in two schools, combined with a literature review, describes how the emphasis of education of migrant children has moved

through various policy paradigms but is now informed by values of an „inclusive“ education (Reynolds, 2008). However, the report notes that the assumption of much research and commentary is that migrant children are a „problem“ to be dealt with. The author quotes one study of primary schools in Oxford which report the presence of children from culturally diverse backgrounds as enriching. Reynolds also notes that:

‘In certain areas of the country where school populations are dwindling, the arrival of migrant children can provide a much-needed boost’.

Reynolds argues that much of the difficulty around accommodating migrant children is one of a „perception“ of being over-whelmed, and that schools become used to enrolling migrants so that their arrival does not have negative impacts.

2.5.4 The effects of pupil mobility on schools

One of the main impacts of migration on schools is reported as the additional cost to schools of arrivals within the school year, rather than at the start of the Autumn Term (Gordon *et al.*, 2007b; ICOCO, 2007; Scullion and Morris, 2009); Woods and Watkin, 2008; Scottish Parliament, 2010). The school funding formula is based on numbers at the time of the annual schools census, and additional numbers do not result in additional payments. The former Association of London Government is reported as estimating the cost of registering new pupils at non-standard times at in 2005 as £400 for primary school children and £800 for children enrolling in a secondary school. This estimate did not include the costs of additional learning and teaching support staff and liaison with other services to meet children“s needs (ICOCO, 2007). Schools have greater difficulty in meeting the language needs of pupils who arrive mid-term (Woods and Watkin, 2008). Mobility can also lead to difficulties in maintaining records of a child“s educational progress (Gordon *et al.*, 2007b).

The effect of pupil mobility is a key theme in research on the impact of migration on education services. A number of studies have explored the effects of pupil mobility, 'churn' within the school population and of arrival within the school year, once funding has been allocated to schools through the pupil formula. Some of this research looks specifically at the impact of recent migration, while other research has a wider focus than on migrants, looking at mobile families and the effects of mobility on schools more widely (Dobson and Pooley, 2004). Their report states that these schools found difficulty in meeting the learning needs of all pupils while managing frequent movement and that the problems included:

‘heavy demands on staff time, constantly changing learning needs, instability in year 7 and intensive help needed by late joiners in Key Stage 4’ (Dobson and Pooley, 2004).

A number of studies point out that pupil mobility has impacts which are different from those of migrant entry to schools. While groups other than migrants are known to be mobile, for example Gypsy, Roma and Traveller families, mobility is reported to be high among new migrants (Travers *et al.*, 2007).

However, the relationship between the number of migrants in schools and performance is not clear cut because schools receiving the highest numbers of migrant children are in some of the most deprived areas and also experience high levels of churn (Dobson and Pooley, 2004; Cook *et al.*, 2008).

2.5.5 Private education

Migrants' public education demands may differ from that of non-migrants' due to differential use of private schooling. Approximately seven per cent of children attend private schools in the UK (Independent Schools Council, 2011). We found no literature on private schooling and migrants specifically. However, differences in the characteristics (such as income) between the migrant and non-migrant population may suggest differential usage.

Limited research was found on the characteristics of those attending independent schools in the UK. Unsurprisingly, Dearden and colleagues (2010) found that children attending private schools were more likely to come from families with higher household incomes. However, they found the relationship was U-shaped, with those at the bottom of the income distribution slightly more likely to attend a private school than those at the middle. They also found significant positive correlation with parental education to degree level, parents having attended private school and parental self-employment and a negative relationship with the number of siblings.

Blundell and colleagues (2010) investigated the demand for private schooling taking into account price and state school quality. They found a negative relationship with state school quality.

The Independent Schools Commission (2009) has produced a demographic analysis. However, their use of the MOSAIC geo-demographic system to identify different groups of individuals means that we are not able to translate their results into usable comparisons in the Annual Population Survey data.

These findings suggest that non-EEA economic migrants and Tier 1 and 2 migrants may have a greater propensity to access private education than the population as a whole, due to a range of non-migration characteristics, notably education¹² and a concentration in higher level occupations¹³. However, we do not know the size of the saving this represents to the State, since the rate of use of private education among migrants is not known.

2.5.6 Key findings: research on the impact of migration on education

- There are some reports of over-subscribed pupil rolls resulting from migration. However many schools currently have spare capacity.
- Data on pupil performance suggests a positive relationship between proportion of pupils with English as an additional language (who will include migrants and children of migrants) and achievement. The

¹² One half of Tier 1 and 2 migrants have at least a Level 4 qualification (Annual Population Survey, January – December 2009, our calculations). Note that a further 40 per cent have „other qualifications“, which, given difficulties recording foreign qualifications, suggests that the percentage with a Level 4 qualification may be higher.

¹³ Fifty-three per cent of Tier 1 and 2 migrants are in professional or managerial occupations (Annual Population Survey, January – December 2009, our calculations).

significant outperformance of schools in London relative to those in other regions also suggests that high levels of migration are not in general associated with worse school performance or for poorer outcomes for non-migrant children; if anything, the reverse.

- Tier 1 and 2 migrants are more likely to have pre-school children than the population as a whole and therefore to make fewer initial demands on education services.
- The professional status of some non-EEA economic migrants, particularly Tier 1 and 2 migrants, also makes it more likely that they will use private education rather than access State provision
- The main demands on schools are reported to arise from language needs of migrant children. Many Tier 1 and 2 migrants originate from countries where English is the main or official language and are therefore unlikely to require language support. Moreover, language support is temporary and less costly than other additional needs. Other needs of non-EEA economic migrant children are likely to be met as part of schools' normal integration and pastoral care practices.
- One of the impacts of migration on education is the arrival of children within the school year, once resources have been allocated to schools. This impact is likely to result from non-EEA economic migration as much as other forms. However, there are unlikely to be implications for interpreting budgets.
- The effect of transient life-styles among some migrants, resulting in 'churn' among the pupil population has been identified as an issue for some schools. This is not likely to apply to Tier 1 and 2 migration, because Tier 2 migrants enter the UK to take up a particular employment opportunity and Tier 1 migrants are very likely to be employed or self-employed. Therefore, they are unlikely to be mobile within the UK, but this is not known. Short settlement periods among non-EEA economic migrants may contribute to pupil 'churn'.

The key messages from the literature review for understanding the impact of non-EEA economic migration on education are therefore that:

- The children of Tier 1 and 2 migrants are younger than those of non-migrant parents, with more of pre-school age. This reduces their demand for school places, although the effect over time depends on length of stay
- The professional status of many economic migrants, particularly in Tier 1 and 2, may mean that a higher proportion use private schools than in the general population. This will reduce demands on the state school system, although since rates of private education use for this group are not known, we cannot say by how much.
- The main additional demands placed by migration on schools are for help with language. This is considerably less likely to be relevant to the children of Tier 1 and 2 migrants than other migrant groups because many come from English-speaking countries and to take up posts with UK companies.

- Schools report difficulties accommodating pupils who arrive mid-year and this pattern is likely to be found among non-EEA economic migrants as any other migrant group. However, their impact is likely to be less because they are likely to have less need of language support, on average.
- Non-EEA economic migrants may not be a highly mobile group within the UK, but this is unknown. Migrants who settle in the UK for short periods will contribute to pupil 'churn' experienced by schools.

3 Estimation of public expenditure on state education and public services for migrants and non-migrants: the approach

3.1 Introduction

The estimation of public expenditure on state education and public services was conducted following the method of Glover *et al.* (2001). This allocates public expenditure pro-rata to migrants and non-migrants, based on their demographic characteristics.

In brief, the method allocates consumption and costs of state education and public services pro-rata to migrants and non-migrants, based on their demographic characteristics. For example, if migrants' children comprise 10 per cent of primary school age children, then they are estimated to consume ten per cent of the national education budget for primary schools. Thus it assumes migrants' and non-migrants' consumption patterns are identical once allowance has been made for these demographic differences. It does not allow for cultural or other differences in patterns of use. The reasons for taking this approach have been discussed in Chapter 1. Whilst it would be preferable to adjust for a wide range of factors, this is precluded by data limitations. However, the approach improves on estimates based on migrant numbers alone.

Our estimates update those previously published and so reflect more recent immigration patterns. However, they also take our understanding of the impact of different types of migrants further, by estimating expenditure by type of migrant (including Tier 1, 2 and 4 migrants and non-EEA economic migrants).

The analysis was conducted for non-migrants and migrants and five migrant sub-groups: those who had migrated in the previous five and ten years; non-EEA economic migrants; Tier 1 and 2 migrants; and Tier 4 migrants.

The basic method is simple, particularly as public expenditure data only allows allocation of costs by age and, in the case of health, by gender. The main challenges of the study were:

1. to estimate the number of migrants and identify their characteristics for each sub-group.
2. to identify public expenditure on state education and public services which provided consistent data on total expenditure and which was disaggregated by the same characteristics which could be identified for migrants.

How these were addressed is discussed below. We start with the dataset used for identification of migrants and their characteristics, as this affected the way in which migrant sub-groups were defined and the public sector expenditure data required. We then describe how migrants and their sub-groups were defined, before turning to the public expenditure data.

3.2 Migrants and their characteristics: data

It was clear at the outset that the only datasets which provided the necessary data on the migrant population and their characteristics were the Annual Population Survey (APS) or the Labour Force Survey (LFS) household data.

These datasets each allow estimation of the number of migrants and members of their family resident in the UK, their employment and personal characteristics. Other datasets which identify migrants suffer from various shortcomings for our purposes (providing data on in-flows only, limited employment data), but, most importantly, provide data on individuals rather than families. In the absence of visa information, family data are essential for identifying economic migrants and various sub-groups and for taking into account migrants' children born in the UK. Given the LFS contained no additional variables of interest, the APS was used because of its larger sample size¹⁴.

The APS household dataset identifies families (comprising the head of the family unit, their partner and children living at home). For each member of the family, the APS provides: country of birth; date of first entry to the UK; relationship with other household members; a wide range of personal characteristics; employment and educational activities; and location of residence. Thus it is possible to identify:

- migrants¹⁵ and their children living at home
- period since migration for each family member
- age and gender of migrants and their children living at home
- current economic activity of the head of family and their partner
- current occupation of the head of family and their partner
- current participation in education of all family members
- location of residence.

The way in which these were used to define migrants is described in the next section.

3.3 Defining migrants and their migrant status

The following first discusses the general issue of classifying migrant sub-groups using the APS. It then describes how children were classified. Detailed definitions for each migrant sub-group are then given.

¹⁴ The LFS contains a new, additional, highly pertinent variable: purpose of migration (including employment and education). This would be very useful for identifying economic and Tier 4 migrants. However, as a new variable, it was not available to us in the time period of this study.

¹⁵ with a small degree of error, as it will include those born outside the UK to otherwise UK resident parents.

3.3.1 *Definitional issues*

The study aimed to examine the impact of migrants and of sub-groups of migrants, with sub-groups defined by the period since migration and by visa type. Identifying all migrants and migrants by period of migration in the APS is relatively simple (see Section 3.3.3), although the way in which children are treated needs to be decided. However, visa type is not collected in the APS and identifying such migrants using the data available is complex.

The visa sub-groups we wished to identify were non-EEA economic migrants, Tier 1 and 2 migrants and Tier 4 migrants. Although such non-EEA migrants might be expected to be identified by their activity (economic migrants being employed and Tier 4 migrants being in education), this is complicated because:

1. migration status may change over time;
2. a migrant's visa status may be that of their partner; therefore their own activity may not provide an indicator of their visa status;
3. some non-EEA migrants in employment or education have entered through other visa routes (for example, as refugees and asylum seekers and as family members) or none at all (e.g. Commonwealth citizens with permission to enter or stay in the UK because at least one of their grandparents was born in the UK);
4. visas allow combinations of activities (e.g. a Tier 1 and 2 migrant is not precluded from studying and, conversely, a Tier 4 migrant may work).

Therefore, not all employed non-EEA migrants are economic migrants, nor are all non-EEA economic migrants employed. The same applies to Tier 4 migrants in respect of education.

Whilst these difficulties apply to the identification of Tier 1 and 2 migrants, a further layer is added for this group. Tier 1 and 2 migrants might be expected to be able to be identified by their occupation. However, as well as difficulties in identifying which occupations might be considered Tier 1 and 2, other non-EEA migrants may be employed in these „Tier 1 and 2 occupations“.

The way in which we addressed these issues for the visa sub-groups was as follows. Firstly, we restricted the definition of non-EEA economic migrants and Tier 1, 2 and 4 migrants to those migrants who had migrated in the previous five years. This is the minimum period for applying for indefinite leave to remain, which, if granted would mean that economic activity is no longer restricted (i.e. an economic or a Tier 4 migrant need no longer be, respectively, employed or studying). Within five years of migration, current activity should provide a reasonable proxy for type of visa, although it does not avoid identification problems stemming from an individual's migration status being due to their partner's migration status and not their own activity, nor stemming from certain other controls, described above¹⁶.

¹⁶ For example, Commonwealth citizens with permission to enter or stay in the UK because at least one of their grandparents was born in the UK and Australians on working holiday visas may be employed, unemployed, economically inactive or in education. Their activity provides no indication of their visa status.

Secondly, we based the definition on current activity.

Thirdly, for families with two adults, we based the definition on the migration history and current activity of both partners and use two sets of criteria, one narrow and one broad, to allow estimation of a likely minimum and maximum. The narrow definition excludes migrants whose migration history and current activity might class them in the visa sub-group, but whose partner's history and activity might allow them to be a different type of migrant. Thus, in the narrow definition, in two adult families, both partners are in the same visa sub-group. The broad definition allocates individuals whose migration history and current activity fits with the visa sub-group to that sub-group. Their partners are classified to the same sub-group, unless they are either EEA or, if non-EEA, migrated more than five years previously. Thus individuals in two adult families can have different visa sub-group status.

This approach minimises many of the problems. However, it should be recognised that it results in an estimate of migration status and not a fully accurate identification of the migrant sub-groups.

The way in which we defined each group of migrants is detailed in Section 3.3.3.

3.3.2 *Defining children's migration status*

Children living at home with their parent(s) were categorised as the same migrant group as their parent(s) whether the child itself was a migrant or not. This was on the basis that migrants' children whether born abroad or in the UK are almost always in the UK because of their parent's migration.

Where two parents were in the household and one was not a migrant (or the relevant migrant sub-group), each child was weighted by 0.5.

It should be noted that this issue has been the subject of considerable controversy in previous analyses of the fiscal costs and benefits of migration Calculations which adopt this methodology (for example, Migration Watch, 2006)¹⁷ for the "costs" of the non-migrant children of migrants, typically do not count the fiscal "benefits" of such children when they are adults (since the LFS and other data sources do not identify whether an adult is the child of migrants). As explained in Gott and Johnston, this error leads to a significant structural bias, meaning this approach overstates the "costs" of migration relative to its "benefits". Since this paper is concerned primarily with costs, this issue does not apply, so for completeness we take the more expansive definition; however, to the extent that the analysis here is used for wider comparison of costs and benefits, it will be important to correct for this bias; see the discussion in section 4.5.1 below.

3.3.3 *Migrant groups: definitions*

The following describes the definitions used for each migrant group of interest, i.e. all migrants; migrants who had migrated in the previous five and the previous ten years; non-EEA economic migrants; Tier 1 and 2 migrants; and Tier 4 migrants.

¹⁷ <http://www.migrationwatchuk.org/briefingPaper/document/12>

All migrants

„Migrants“ were defined as all adults born abroad (i.e. outside the United Kingdom). This presents few definitional or identification problems, although it does mean that those born abroad to otherwise UK resident parents were included as migrants. An adult’s migration status was not affected by that of their partner. Children were accorded the migration status of their parent(s) (see Section 3.3.2).

Migrants who arrived in the UK in the previous five or ten years¹⁸

These were defined in the same way as all migrants, except migration had to have taken place within the specific period. An adult’s migration status was not affected by that of their partner. Children were accorded the migration status of their parent(s) (see Section 3.3.2).

Non-EEA economic migrants

As already discussed, in the APS, it is not possible to identify definitively whether a non-EEA migrant is an economic migrant or another type of migrant. Therefore, two sets of criteria were used to try to identify non-EEA economic migrants: a narrow definition, identifying a likely minimum for this group and a broad definition identifying a likely maximum. The difference between the criteria hinges on how couples are treated.

In the narrow definition, employed non-EEA migrants who migrated to the UK in the previous five years are treated as economic migrants, but only if they are not a full-time student (and so could be working under a student visa) and either they are single or their partner’s status could not allow them to work in the UK other than if their partner were a non-EEA economic migrant¹⁹. Their partner, whether they are employed or not, is also defined as a non-EEA economic migrant.

In the broad definition, employed non-EEA migrants who migrated to the UK in the previous five years are treated as economic migrants, so long as they are not full-time students, irrespective of the status of any partner. Moreover, their partner, if from outside the EEA, is also defined as a non-EEA economic migrant, irrespective of when they migrated or their current activity.

In two-adult families, the narrow definition results in either both or neither adult being categorised as non-EEA economic migrants; the broad definition allows partners to have different statuses.

¹⁸ MAC expressed interest in looking at public expenditure implications over different periods since migration. This was not a problem for all migrants. However, for the migrant sub-groups (non-EEA economic migrants, Tier 1 and 2 migrants; and Tier 4 migrants), their identification already required restriction of the period since migration to a maximum of five years. Extending the period would have resulted in increasing error in identification of the migrant sub-groups. The non-EEA economic migrants and Tier 1 and 2 classification would include an increasing number who had entered through other routes and settled, including entering as Tier 4. Non-EEA economic migrants who left the labour market would cease to be classified as non-EEA economic migrants. Tier 1 and 2 who became unemployed, left the labour market or moved in to lower level jobs would no longer be identifiable. Increasingly, Tier 4 migrants would complete their studies and so become unidentifiable. Therefore a single period was used.

¹⁹ I.e. their partner is not from the EEA; and their partner, if a non-EEA migrant, did not migrate to the UK more than five years ago (and so might have settlement) and is not a full-time student (in which case they might be working as the partner of a full-time student).

Tier 1 and 2 migrants

The classification of Tier 1 and 2 is similar to that for non-EEA economic migrants, except that employment must be in a „Tier 1 and 2 occupation“. „Tier 1 and 2 occupations“ are defined as the occupations for which at least one percent of Tier 1 and Tier 2 visas are issued. Occupation is defined narrowly, as minor groups (i.e. three digit) in the Standard Occupational Classification 2000. There are 24 such occupations (see Appendix B). As for non-EEA migrants, narrow and broad definitions were used to identify likely minimum and maximum numbers.

Thus, in the narrow definition, non-EEA migrants employed in a „Tier 1 and 2 occupation“ who migrated to the UK in the previous five years are treated as Tier 1 and 2 migrants, but only if they are not a full-time student and either they are single or their partner’s status could not allow them to work in the UK other than if their partner were a non-EEA economic migrant (but not necessarily a Tier 1 and 2 migrant). Their partner, whether they are employed (and irrespective of occupation) or not, is also defined as a non-EEA economic migrant.

In the broad definition, non-EEA migrants employed in a „Tier 1 and 2 occupation“ who migrated to the UK in the previous five years are treated as Tier 1 and 2 migrants, so long as they are not full-time students, irrespective of the status of any partner. Moreover, their partner, if from outside the EEA, is also defined as a Tier 1 and 2 migrant, irrespective of when they migrated or their current activity.

In two-adult families, the narrow definition results in either both or neither adult being categorised as Tier 1 and 2 migrants; the broad definition allows partners to have different statuses.

Tier 4 migrants

Tier 4 migrants are full-time students who need a visa to study in the UK. They and their partner may be in employment. As before, two definitions, to provide minimum and maximum estimates, were used.

In the narrow definition, non-EEA migrants aged 17 and over who were either full-time students at college or university, or sandwich students or on nurse training and similar are classified as Tier 4 migrants, but only if they are single or if their partner’s status could not allow them to be a full-time student in the UK other than if their partner were a Tier 4 migrant²⁰. Their partner, whether a student or not is also defined as a Tier 4 migrant.

In the broad definition, non-EEA migrants aged 17 and over who were either full-time students at college or university, or sandwich students or on nurse training and similar are classified as Tier 4 migrants, irrespective of the status of any partner. Moreover, their partner, if from outside the EEA, is also defined as a Tier 4 migrant, irrespective of when they migrated or their current activity.

²⁰ I.e. their partner is not from the EEA; and their partner, if a non-EEA migrant, did not migrate to the UK more than five years ago (and so might have settlement) and is not employed (in which case they may be studying as the partner of an economic migrant).

The narrow definition excludes those who have employed partners; this is because of the difficulty of identifying whether such partners are working due to their partner's Tier 4 status or due to some other reason.

3.4 Public expenditure data

The degree of sophistication of our approach depended, in part, on how finely public expenditure can be identified by users' personal characteristics.

HM Treasury's Public Expenditure Statistical Analysis provides annual expenditure (out-turn) data for each country by functional area. This uses the UN classification of functions of government (COFOG) which identifies health spending in aggregate and services by age for education (including early years), social care and social services.

An extensive search for expenditure data was undertaken to try to identify finer breakdowns of expenditure, including by location. Sources searched included the Departments of Education (for education, early years and children's personal social care) and Health (for health and other personal social care), the devolved governments, their departments and other organisations. Many finer breakdowns were identified. However, to be useable, we needed to be able to produce datasets which covered expenditure (out-turn) across the full service (both current and capital). Data also needed to be available across appropriate areas. Little of the expenditure data could fulfil these criteria, individually nor in aggregate.

Strictly, none of the data on public expenditure is provided by beneficiaries' characteristics. Instead, characteristics can be identified for some services by the nature of the service (e.g. nursery, primary and secondary schools). However, few services are characteristic-specific. The ones which are are age-related only. In addition, for age-related services, some expenditure is not allocatable by age (e.g. central services).

Table 3.1 summarises the public expenditure (capital plus current) out-turn data identified which was consistent across a geographical level. The specific sources of data are given in Appendix C. For education and social services, these are the data used in the analysis.

Table 3.1 Public expenditure data

education^a	
UK	✓ age
Country	✓ age
English regions	✓ age
social services^b	
UK	✓ age
Country	✓ age
England: regions	✓ age
health	
UK	✓
Country	✓
England: regions	✓

^a Age derived from pre-primary, primary and secondary schooling

^b Age derived from children and families services (aged under 18), adult services (aged 18-64) older people services (65 and over)

Given the lack of data by characteristics for health, an alternative approach was explored which drew on both top down and bottom up information. Total expenditure on healthcare in the UK (and in Scotland and the two English regions where numbers permitted estimation) was taken from PESA. Healthcare is a devolved activity, so the allocation of spending from each national authority to local areas is based on a mixture of capitation elements (which vary with age), need elements (reflecting particular health outcomes) and cost elements (reflecting the fact that some areas, notably London, have higher costs due to higher wages and higher capital costs). The formulas for each nation differ from each other. For the purposes of this exercise we have taken the age-related capitation elements for primary and secondary care for England as the foundation for building a bottom up estimate of healthcare costs. These capitation elements are then all scaled up by the same proportion to take account of the needs and higher cost elements as well as public health and centrally funded services including research.

We recognise that these estimates are not exact, but they are likely to be good indicators of broad orders of magnitude. If anything they will tend to overstate the cost of providing healthcare to non-EEA economic migrants, as the latter are likely to be a relatively low need group, but the cost per head figures used reflect average levels of need. In the case of London and Scotland, this approach led to lower total expenditure than the actual expenditure derived from PESA.

In order to bring the totals into line with the PESA total all the per capita costs were scaled up so that the bottom up total was equivalent to the top down total. In the case of South East England the reverse was true – the bottom up approach led to a total above the actual PESA figure, In this case the capitation figures were scaled down so that the total was in line with the actual total. These differences are almost certainly attributable to differences in levels of need relative to the national average (high in the case of London, low in the case of South East England). In Scotland expenditure per head is higher than in England across all the age ranges.

4 Estimation of public expenditure on state education and public services for migrants and non-migrants: findings

4.1 Introduction

This section presents the estimates of the expenditure on state education and public services, based on the method described in the previous section.

For each area of expenditure (education, personal social services and for health) the same data are given for each migrant group (including for the whole population and all non-migrants):

- total expenditure
- the percentage of total expenditure per migrant group
- the percentage of the population in each migrant group
- expenditure per head of the population in the migrant group
- expenditure per head of the adult population in the migrant group.

The two expenditure per head figures are given because the migration groups of most interest to this study are adults who make an economic contribution, either through their economic activity or through purchasing post-schooling education. In which case, expenditure per head is misleading: expenditure per head decreases the larger the number of dependents accompanying such a migrant. Of more concern is the expenditure per migrant making an economic contribution to the country. Ideally, the expenditure should be per head of such migrants rather than all adult migrants (within the migrant group). However, this is precluded due to the way in which, in the absence of actual migration status, migration status has had to be estimated.

The above analysis was conducted for the United Kingdom. However, the impact of migrant groups at a local level may differ from the national picture, due to concentration of migrants in some localities placing pressure on resources at a local level. The number of migrants in the Annual Population Survey sample is not sufficient to look at local levels, but there were three regions of the country (Scotland, London and South East England), where there were enough Tier 1 and 2 migrants and their families to estimate the impact on regional, as opposed to national, spending.

4.2 Education

Estimates of education expenditure per migrant group were made using a top down approach, allocating education expenditure identifiable by age (pre-primary, primary and secondary) pro-rata by age for all children aged under 16 and all in full-time education aged 16 and 17. Expenditure not identifiable by age was allocated pro-rata across all children. Thus estimates are almost wholly determined by the age composition of children in the family and differences between migrant groups reflect differences in this composition.

4.2.1 National expenditure

The first point to note is the size of the education budget estimated to be spent on migrants' children, Table 4.1. Of the £74 billion education expenditure, we estimate that £11.5 billion or 15 per cent is spent on migrants' children. This is slightly higher than migrants' share in the total population, 13 per cent, although this comparison is biased since the expenditure figure includes the UK-born children of migrants, while the population figure treats as non-migrants adults who were born in the UK to migrants. Migrants' total share of education spending is therefore slightly greater than proportionate to their share of the population.

Table 4.1 Education expenditure by migration status, 2009/10

	Expenditure				Population
	£ million	£ per head	£ per adult	% of UK expenditure	% of UK population
Whole population	74559	1223	1728	100.0	100.0
Non-migrants	63100	1190	1662	84.6	87.0
All migrants	11459	1449	2216	15.4	13.0
Migrant in last 10 years	4155	1280	1838	5.6	5.3
Migrant in last 5 years	1724	1064	1403	2.3	2.7
Non-EEA economic migrant (wide definition)	639	1221	1695	0.9	0.9
Non-EEA economic migrant (narrow definition)	491	1359	1919	0.7	0.6
Tier 1 or 2 (wide definition)	347	1209	1676	0.5	0.5
Tier 1 or 2 (narrow definition)	335	1342	1936	0.4	0.4
Tier 4 (wide definition)	162	917	1086	0.2	0.3
Tier 4 (narrow definition)	96	744	819	0.1	0.2

Estimates based on PESA 2011 chapter 10 table 10.1 2009-10; Annual Population Survey Jan 2009-December 2009.

This effect, however, largely disappears for more recent migrant groups, where their share of expenditure is very close to their share of the population.

Non-EEA economic and education migrants appear to differ from other migrants. Non-EEA economic migrants (and Tier 1 and 2 migrants) have a higher per adult expenditure on education than recent migrants more generally. The method does not allow us to examine whether this may persist (as each cohort ages) or whether it is due non-EEA economic migrants being at a different stage in family formation.

Tier 4 migrants have a much lower per adult expenditure on education than recent migrants more generally, reflecting the lower number of children accompanying Tier 4 migrants.

The literature review provided little indication of whether migrants and, particularly, non-EEA economic migrants' use of public education might differ from the population average. The literature review did not identify differences between migrants (and non-migrants) in propensity to use private education. However, we might expect a greater use of private sector education amongst Tier 1 and 2 migrants than amongst the population as a whole, both because of the U-shaped relationship between private education usage and income and because of the greater concentration of migrants in London, an area with a particularly high propensity to use private education. These tendencies would both reduce the public expenditure (and expenditure per head) for Tier 1 and 2 migrants.

4.2.2 Regional expenditure

Tier 1 and 2 migrants account for a much higher percentage of the population in London than nationally, at 1.5 per cent, whilst they are similar to the national figure in Scotland and the South East, Table 4.2. However, because of the different age composition of the populations in the three areas, this is not wholly reflected in the percentage of education budget spent on Tier 1 and 2 migrants, which is estimated at 1.2 per cent in London, compared with the national figures of around 0.5 per cent. Scotland and the South East relative expenditure are similar to national.

The regional expenditure data for London and the South East cover current expenditure only, whereas the data for Scotland (like the UK data) include capital expenditure. Therefore expenditure per head for London and for the South East is not comparable with the UK figures above (nor with Scotland). However, the relative expenditure within a region is comparable.

Relative expenditure on Tier 1 and 2 migrants differs substantially across the three regions. In Scotland, expenditure per head of Tier 1 and 2 adults is much higher than for the rest of the adult population, £1,909 and £1,577 respectively (i.e. expenditure per Tier 1 and 2 adult migrant is 21 per cent higher than the expenditure for others). In the South East slightly less is spent on Tier 1 and Tier 2 migrants per head of adults than on others, £1,072 and £1,180 respectively (or nine per cent less). In London, expenditure per adult head of Tier 1 and 2 migrants is much lower than for the rest of the population, at £1,057 and £1,482 respectively, or 29 per cent less.

Obviously, these different patterns of demand reflect the differing migrant family and age compositions between areas. However, they are important in considering the stress that larger numbers of Tier 1 and 2 migrants may place on an area. In particular, stress might be expected to be highest in London, where the number of Tier 1 and 2 migrants is greatest. However, the estimates suggest this may not be the case. Indeed, relative demands are greater in Scotland.

Table 4.2 Education Expenditure, Tier 1 and 2 (wider definition), Selected Regions, 2009/10

	Expenditure				Population
	£ million	£ per head	£ per adult	% of UK expenditure	% of UK population
London^b					
Tier 1 and 2	92	817	1057	1.2	1.5
All others ^a	7751	1023	1482	98.8	98.5
Tier 1 and 2 migrant as percentage of all others			71%		
South East^b					
Tier 1 and 2	32	801	1072	0.5	0.5
All others ^a	6912	836	1180	99.5	99.5
Tier 1 and 2 migrant as percentage of all others			91%		
Scotland					
Tier 1 and 2	25	1313	1909	0.4	0.4
All others ^a	5872	1150	1577	99.6	99.6
Tier 1 and 2 migrant as percentage of all others			121%		

^a Other migrants and non-migrants

^b Current expenditure only

Estimates based on Annual Population Survey Jan 2009-December 2009 and, for Scotland, PESA 2011 chapter 10 table 10.2 2009-10 (capital and current expenditure) and, for London and the South East, SHA/Local Authority Outturn data, 2009/10 (current expenditure only).

4.3 Personal Social Services

Estimates of Personal Social Services expenditure per migrant group were made using a top down approach. Personal Social Services expenditure is reported largely by client group: families and children, adults and older people. Therefore expenditure was allocated to migrants and non-migrants by age: families and children expenditure to those under 18, adult personal social services to those aged 18 to under 65 and expenditure for personal social services for older people to those aged 65 and over. Remaining expenditure, where no client group was identified was allocated equally across the population. Thus estimates are wholly determined by the age composition of migrant groups.

4.3.1 National expenditure

Total personal social services expenditure in 2009/10 was £31,006 million, of which, allocating expenditure pro-rata by age, an estimated 11.8 per cent was allocated to migrants, rather less than their share of the total population. Table 4.3. This effect was also apparent for narrower definition of migrants; again they appear to consume less personal social services than their share of the population.

Table 4.3 Personal Social Services expenditure by migration status, 2009/10

	Expenditure				Population
	£ million	£ per head	£ per adult	% of UK expenditure	% of UK population
Whole population	31006	509	719	100.0	100.0
Non-migrants	27344	515	720	88.2	87.0
All migrants	3662	463	708	11.8	13.0
Migrant in last 10 years	1319	407	584	4.3	5.3
Migrant in last 5 years	624	385	508	2.0	2.7
Non-EEA economic migrant (wide definition)	204	389	540	0.7	0.9
Non-EEA economic migrant (narrow definition)	142	393	556	0.5	0.6
Tier 1 or 2 (wide definition)	113	392	544	0.4	0.5
Tier 1 or 2 (narrow definition)	101	403	581	0.3	0.4
Tier 4 (wide definition)	63	359	425	0.2	0.3
Tier 4 (narrow definition)	43	337	371	0.1	0.2

Estimates based on PESA 2011 chapter 10 table 10.1 2009-10; Annual Population Survey Jan 2009-December 2009.

These figures reflect not only the small percentage of non-EEA economic and Tier 4 migrants, but also that recent migrants are younger and so not in the highest cost group to social services, the over 65s.

Thus, if the pattern of personal social services expenditure by age is similar between non-EEA economic migrants (and Tier 1, 2 and 4) and the total population, these migrants make relatively smaller demands per adult migrant than does the native population. There are two obvious qualifications to this. Firstly, the restriction in our definition of non-EEA economic migrants (and Tier 1, 2 and 4) to those who migrated in the last five years means that they include very few in the older, most expensive, age group. Over time, as the cohort ages, this would change. However, given return migration, it seems likely that the migrant population will always have a smaller proportion of elderly people requiring substantial level personal social services expenditure than the non-migrant population. (Some of those who settle do bring over dependent older relatives, but this is very small and unlikely to outweigh return migration among ageing migrants, UK Border Agency, 2011.) Secondly, the pro-rata allocation of expenditure is likely to overestimate expenditure for Tier 1 and 2 (and, probably, for all non-EEA economic migrants), as demands on

social services tend to be lower amongst those with higher income. This continues into older age, particularly where, in England and Wales, much assistance is means-tested.

4.3.2 Regional expenditure

As with education, the regional personal social services expenditure data for London and the South East cover current expenditure only, whereas the data for Scotland (like the UK) also include capital expenditure. Therefore expenditure per head for London and for the South East is not comparable with the UK figures above (nor with Scotland). However, the relative expenditure within a region is comparable and is discussed below.

In the three regions with the highest number of Tier 1 and 2 migrants, the percentage of personal social services expenditure estimated spent on Tier 1 and 2 migrants was lower than their representation in the population, Table 4.4. This is unsurprising, given their age profile and that personal social services expenditure is concentrated on the older age group. The result is a much lower spend per adult head than for the rest of the population. The percentage difference was highest in London (£442 and £637 per head respectively) and the South East (£318 and £470 per head respectively), with expenditure on Tier 1 and 2 migrants running at less than 70 per cent of that on the rest of the population. The differential was lower, but still large, in Scotland, 77 per cent (£653 and £852 per head respectively).

Obviously, these patterns of demand reflect the differing migrant/non-migrant age composition in these areas (as well as nationally) and reinforce the fact that stress on public services is not always well identified by the number of migrants. However, the differences in expenditure also seem likely to reflect differences in local service provision. This raises the issue that the overall public services expenditure on migrants depends not only on the demands they place on services, but where they are located.

Table 4.4 Personal Social Services, Tier 1 and 2 (wider definition), Selected Regions, 2009/10

	Expenditure				Population
	£ million	£ per head	£ per adult	% of UK expenditure	% of UK population
London^b					
Tier 1 and 2	38	342	442	1.1	1.5
All others ^a	3331	440	637	98.9	98.5
Tier 1 and 2 migrant as percentage of all others			69%		
South East^b					
Tier 1 and 2	9	238	318	0.3	0.5
All others ^a	2754	333	470	99.7	99.5
Tier 1 and 2 migrant as percentage of all others			68%		
Scotland					
Tier 1 and 2	8	450	653	0.3	0.4
All others ^a	3172	621	852	99.7	99.6
Tier 1 and 2 migrant as percentage of all others			77%		

^a Other migrants and non-migrants

^b Current expenditure only

Estimates based on Annual Population Survey Jan 2009-December 2009 and, for Scotland, PESA 2011 chapter 10 table 10.2 2009-10 (capital and current expenditure) and, for London and the South East, SHA/Local Authority Outturn data, 2009/10 (current expenditure only).

4.4 Health

Analysis was based on the proportion of migrants² and non-migrants² and their children by age and gender, using the per capita estimates of expenditure outlined above and described in more detail in the Appendix D.

Expenditure on healthcare varies markedly by age, being significantly higher in older age groups, rising sharply after the age of 75. By contrast, expenditure on children and young adults, who are strongly represented in recent migrant populations, and in the non-EEA economic migrant population, is relatively low. This means that for each migrant group, the proportion of healthcare expenditure that they account for is lower than their proportion in the population as a whole.

4.4.1 National expenditure

Total public expenditure on healthcare in 2009/10 was £117.6 billion across the whole of the UK. This represents £1,930 per head of population, Table 4.5.

Table 4.5 Health expenditure by migration status, 2009/10

	Expenditure				Population
	£ million	£ per head	£ per adult	% of UK expenditure	% of UK population
Whole population	117,627	1,930	2726	100.0	100.0
Non-migrants	104,954	2,003	2765	89.2	87.0
All migrants	12,672	1,602	2,450	10.8	13.0
Migrant in last 10 years	4,262	1,313	1,886	3.6	5.3
Migrant in last 5 years	2,110	1,302	1,717	1.8	2.7
Non-EEA economic migrant (wide definition)	669	1,268	1,757	0.6	0.9
Non-EEA economic migrant (narrow definition)	460	1,274	1,799	0.4	0.6
Tier 1 or 2 (wide definition)	364	1,251	1,734	0.3	0.5
Tier 1 or 2 (narrow definition)	315	1,261	1,820	0.3	0.4
Tier 4 (wide definition)	228	1,295	1,533	0.2	0.3
Tier 4 (narrow definition)	168	1,305	1,436	0.1	0.2

Estimates based on PESA 2011 chapter 10 tables 10.1-10.4 2009-10; Annual Population Survey Jan 2009-December 2009.

Starting with all migrants, whatever their date of arrival (and therefore including those who arrived from Europe around World War II and from the Commonwealth during the 1950s and 1960s and their dependent children), total healthcare expenditure in 2009/10 was £12.6 billion. This was 10.8 per cent of total healthcare spending, whereas this group accounts for 13 per cent of the population. Expenditure per head was £1,602, compared with non-migrant expenditure per head of £2,003 (reflecting the fact that the non-migrant population contains a higher proportion of older and middle aged people than the migrant population, even in this widest definition of migrants). Expenditure per adult (assigning expenditure on dependents to adult migrants in a family) was £2,450. This reflects the fact that longer-established migrant populations are likely to have more children than more recently arrived groups, who are more likely to be young and unmarried. Expenditure for non-migrants on the same per adult basis was £2,765.

Around a third of expenditure on healthcare for migrants and their families (£4.2 billion) is accounted for by those who have migrated in the last ten years. This group accounts for 3.6 per cent of expenditure and 5.3 per cent of the population. This group includes migrants from within the European Union, particularly the A8 countries²¹ in Eastern Europe. Expenditure per head on this group was £1,313. Roughly half the people in this group arrived in the last five

²¹ Poland, Czech Republic, Slovakia, Lithuania, Estonia, Latvia, Hungary and Slovenia

years. Expenditure per head was nearly the same for both groups. However, attributing expenditure on dependents to adult migrants indicates that the earlier arrivals in this group were more likely to have dependants than the later arrivals (£1,886 for arrivals in the last ten years, £1,717 for arrivals in the last five).

Taking all non-EEA economic migrants and their families together, healthcare expenditure was between £460 million and £669 million in 2009/10. This group accounted for between 0.6 and 0.9 per cent of the population, but around 0.5 per cent of healthcare expenditure. Expenditure per head was around £1,270. Expenditure per adult was between £1,757 and £1,799.

Tier 1 and Tier 2 migrants accounted for between £315 million and £364 million of healthcare expenditure in 2009/10 or around 0.5 per cent of the UK total. This was around £1,255 per head or between £1,734 and £1,820 per adult. In other words, the cost of providing healthcare to the whole family of each Tier 1 and 2 migrant was less than the average expenditure per person across the whole population.

Tier 4 migrants cost between £168 million and £228 million in 2009/10. This is around 0.2 per cent of all healthcare spending. This group are less likely to have children (whose costs per head are low) than Tier 1 and 2 migrants, so their cost per head was a little higher (around £1,300). However, the gap between the per capita cost and the cost per adult was smaller (£1,436 to £1,533) because the primary migrant on a Tier 4 visa is more likely to be on his or her own.

All these estimates should be treated as an upper bound. The literature review indicated that migrants are less likely to be registered with GPs and find it more difficult than non-migrants to access healthcare. Tier 1 and Tier 2 migrants tend to be from higher income groups where the use of private healthcare is higher than average. The estimates assume that healthcare use varies by age, but not according to other characteristics.

4.4.2 Health spending in particular regions

It is important to recognise that even though across the country as a whole Tier 1 and 2 migrants account for a very small proportion of healthcare spending, this does not mean that there is no pressure on resources at a local level. If an area experiences an influx of migrants, then the local healthcare infrastructure (GP surgeries and hospitals) may find it difficult to cope during the time it takes for provision to adjust. These stresses are not particular to international migration. They also happen where there are new housing developments creating an influx of domestic migrants. GP surgeries provide for very local populations (often within a mile or less in urban areas). Hospitals service a wider area, but an estate of 500 homes might have a measurable impact on local hospital provision in the short term.

For London, the region with the highest proportion of Tier 1 and 2 migrants, such migrants still account for less than one per cent of healthcare spending (£145 million as opposed to a total expenditure of £17 billion), based on our assumption that their healthcare use is the same as that of non-migrants in the same age group, Table 4.6. Given the greater likelihood that higher income groups will use private healthcare and given that health expenditure in

London is higher than the national average because the London population has higher levels of need, and Tier 1 and 2 migrants are likely to have lower than average levels of need, the impact of this group of migrants and their families on the demand for healthcare in London appears to be small – less than one per cent of total expenditure without taking account of differences in need, which will reduce it still further.

Table 4.6 Health Expenditure, Tier 1 and 2 (wider definition), Selected Regions, 2009/10

	Expenditure				Population
	£ million	£ per head	£ per adult	% of UK expenditure	% of UK population
London					
Tier 1 and 2	145	1,589	2,057	0.9	1.5
All others ^a	16,806	2,217	3211	99.1%	98.5%
Tier 1 and 2 migrant as percentage of all others			64%		
South East					
Tier 1 and 2	45	1,139	1,525	0.3	0.5
All others ^a	14,361	1,737	2,451	99.7%	99.5%
Tier 1 and 2 migrant as percentage of all others			62%		
Scotland					
Tier 1 and 2	25	1,343	1,953	0.2	0.4
All others ^a	10,591	2,074	2,844	99.8%	99.6%
Tier 1 and 2 migrant as percentage of all others			64%		

^a Other migrants and non-migrants

Estimates based on PESA 2011 chapter 9 tables 9.11 2009-10; Annual Population Survey Jan 2009-December 2009.

For the two regions with the next highest percentage of Tier 1 and 2 migrants, such migrants account for 0.2 per cent of expenditure in Scotland (£25 million) and 0.3 per cent in South East England (£45 million).

On a per adult basis, taking account of spending on dependants, the cost of providing healthcare to Tier 1 and 2 migrant families is around a third lower than the cost of providing similar services to other families in all three regions.

4.5 Aggregate expenditure on state education and public services

This section brings together the estimates from the preceding three sections, to provide estimates of total public expenditure on state education, personal social services and health. These three areas of expenditure account for a

substantial proportion of public services expenditure: 44 per cent in 2009/10 (PESA, 2011).

4.5.1 National expenditure

Total expenditure on state education and public services was £223 billion in 2009/10, of which an estimated 12.5 per cent was allocated to migrants and their children, Table 4.7. This was less than their share, 13 per cent, of the population as a whole, so spending per head on migrants was about five per cent less than on natives. In other words, migrants account for a slightly less than proportionate share of total expenditure on these services. These figures are slightly biased by the fact that the population figure treats as non-migrants adults who were born in the UK to migrants; accounting for this would mean that migrants share of expenditure, relative to their share of the population, would be even smaller.

For narrower definitions of migrants, especially non-EEA migrants, levels of spending are disproportionately low relative to population. Spending per head on non-EEA economic migrants is estimated to be about (20%) lower than on natives.

Table 4.7 Aggregate expenditure by migration status, 2009/10

	Expenditure				Population
	£ million	£ per head	£ per adult	% of UK expenditure	% of UK population
Whole population	223,192	3,662	5,173	100.0	100.0
Non-migrants	195,398	3,708	5,147	87.5	87.0
All migrants	27,793	3,514	5,374	12.5	13.0
Migrant in last 10 years	9,736	3,000	4,308	4.4	5.3
Migrant in last 5 years	4,458	2,751	3,628	2.0	2.7
Non-EEA economic migrant (wide definition)	1,512	2,878	3,992	0.7	0.9
Non-EEA economic migrant (narrow definition)	1,093	3,026	4,274	0.5	0.6
Tier 1 or 2 (wide definition)	824	2,852	3,954	0.4	0.5
Tier 1 or 2 (narrow definition)	751	3,006	4,337	0.3	0.4
Tier 4 (wide definition)	453	2,571	3,044	0.2	0.3
Tier 4 (narrow definition)	307	2,386	2,626	0.1	0.2

Estimates based on PESA 2011 chapter 10 tables 10.1-10.4 2009-10; Annual Population Survey Jan 2009-December 2009.

Focussing on expenditure per adult²², state education and public services expenditure is estimated at £5,147 per non-migrant adult. Estimated expenditure per migrant adult is marginally higher (four per cent), at £5,374. However, for recent migrants and all sub-groups of recent migrants examined, the cost per adult migrant is at least 16 per cent lower than for non-migrants.

For non-EEA economic migrants, the figure is estimated to range from £3,992 to £4,274 and is similar to that estimated for Tier 1 and 2 migrants, at £3,954 to £4,337 per adult migrant. The figure is yet smaller for Tier 4 migrants, £2,626 to £3,044 per adult.

4.5.2 Regional expenditure

The analysis of expenditure on state education and public services in aggregate for selected regions is complicated by the lack of capital expenditure data for education and for personal social services for London and the South East. Therefore, for London and for the South East, the total expenditure figures presented below comprise current expenditure for education and personal social services and current and capital expenditure for health. These figures are therefore not comparable with the UK figures above (nor with Scotland). Moreover, the relative expenditure figures are also not directly comparable between regions (unlike education, personal social services and health expenditure separately)²³.

In all three regions with the highest number of Tier 1 and 2 migrants, the estimated percentage of state education and public services expenditure spent on Tier 1 and 2 migrants was lower than their representation in the population, Table 4.8. The result was a much lower spend per Tier 1 and 2 adult than for the rest of the population.

As we have said, the London and the South East figures exclude capital expenditure for education and personal social services. This suggests that the London and the South East estimates are too low. However, given that relative expenditure on Tier 1 and 2 adult migrants for education, in particular, and personal social services was lower than for Scotland, the spend per adult Tier 1 and 2 migrant in London and in the South East will be substantially below that for Scotland, i.e. below 86 per cent, but higher than the 67 per cent and 71 per cent given in the table.

²² This refers to estimated expenditure on adults and their children.

²³ This is because the exclusion of capital expenditure from education and from personal social services, but not from health, differentially weights these budgets.

Table 4.8 Aggregate Expenditure, Tier 1 and 2 (wider definition), Selected Regions, 2009/10

	Expenditure				Population
	£ million	£ per head	£ per adult	% of UK expenditure	% of UK population
London^b					
Tier 1 and 2	275	2748	3556	1.0	1.5
All others ^a	27888	3680	5330	99.0	98.5
Tier 1 and 2 migrant as percentage of all others ^c			67%		
South East^b					
Tier 1 and 2	86	2178	2915	0.4	0.5
All others ^a	24027	2906	4101	99.6	99.5
Tier 1 and 2 migrant as percentage of all others ^c			71%		
Scotland					
Tier 1 and 2	58	3106	4515	0.3	0.4
All others ^a	19635	3845	5273	99.7	99.6
Tier 1 and 2 migrant as percentage of all others			86%		

^a Other migrants and non-migrants

^b London and the South East data exclude capital expenditure for education and personal social services.

^c These estimates are likely to be too low. The figure should be below that for Scotland, see text.

Estimates based on PESA 2011 chapter 9 tables 9.11 2009-10; Annual Population Survey Jan 2009-December 2009.

The variation in the relative costs of Tier 1 and 2 migrants and others between the three regions is largely due to the greater percentage of migrants with children, and hence greater expenditure on migrants' children's education, in Scotland compared with London and the South East. Whilst economic (particularly housing) and labour market factors might be expected to affect this pattern, Scotland has sought to attract migrants, not only to address labour shortage, but also to repopulate sparsely populated areas. Whilst visa policies (with the exception of that towards students graduating from higher education) did not differ between Scotland and the rest of the UK, the positive approach to migrants in domestic policy may have affected the nature of settlement.

5 Discussion

5.1 Introduction

The study has estimated the impact of migrants on public expenditure on state education and public services. Our estimates update previous estimates and so reflect more recent immigration patterns. However, they also take our understanding of the impact of different types of migrants further, by estimating expenditure by type of migrant (including non-EEA economic migrants and Tier 1 and 2 and Tier 4 migrants).

Here we discuss the limitations on estimating the impact, the potential for improving the measurement of the impact and discuss the implications for immigration policy, particularly for the Points Based System.

5.2 Limitations on estimating the impact of migrants and potential for improvement

Before considering the limitations and ways to improve measurement, it is important to consider the need for this. The evidence shows that the demands on state education and public services from Tier 1, 2 and 4 migrants are small as a proportion of total expenditure on these services, and considerably lower than spending per head on natives. There is no disproportionate burden – if anything the reverse – resulting from non-EEA economic migration. Improvements in the accuracy of estimation will not change this conclusion. Whilst investing in data improvements would be useful for understanding the wider social and economic impacts of migration, it will not provide greater guidance for fine tuning the points based system. Nevertheless, below, we consider limitations and possibilities for data improvements.

As with all migrant research, the limitations on estimating the impact of migrants on state education and public services lies with the limited data available. However, in this case, this relates to public expenditure data, as well as migration data.

We will not discuss the much repeated inadequacies of migration data, but point out additional issues arising in this study. These relate to assessing impacts related to sub-groups of migrants defined by their visa status (in this study, specifically economic migrants, Tier 1,2 and 4 migrants). This is highly problematic: administrative data does not provide data by household (essential for assessing impacts), whilst other data sources do not identify visa status. The difficulty of estimating visa status using cross section data grows with length of residence, as current activity increasingly cannot serve as a proxy for migration purpose. To some extent, the inclusion in the Labour Force Survey of a question of purpose of migration will assist with this. However, the problem will remain that migration decisions are not always individual. In particular, an individual may migrate for family reasons, but the causal factor may be the prior migration of an economic migrant and, indeed, vice versa. Attributing the impact of migration to the availability of certain types of visas therefore becomes difficult. A further limitation stems from lack

of data on dependents of migrants. As done in this study, it is possible to identify children living within a migrant family. However, the visa status of other adults in the household is more problematic.

The reliance on cross-sectional datasets, together with lack of purpose of migration data restricted the possibility of assessing the impact of migrants over time, particularly their personal social care impact as they age. Once purpose of migration data are available, estimates using cross sectional data might be possible. However, longitudinal data would be useful.

Public expenditure data limits estimates chiefly through the lack of either data on expenditure specifically on migrants and on the characteristics of recipients. Whilst this is unlikely to change, it is further complicated by differences in the allocation of expenditure, for example to school or local authority budgets, making analysis less accurate.

These data limitations mean that estimates are limited to our approach of allocation of expenditure pro-rata based on age or age and gender. Whilst an improvement on allocation per head of migrants, this approach cannot take into account the range of factors which also affect consumption of state education and public services. Most importantly, it is unable to take into account the long-term implications of migration and, given that most migrants are young, the eventual demands on personal and health care for older people. It would be extremely helpful to have data on the place of birth of parents in major surveys in order to be able to identify adults who were born in the UK to migrants. As the share of this group increases in the population (with over 30 per cent of children born last year having at least one foreign born parent), this will be of considerable research and policy interest going forward.

Finally, in respect of limitations, there is a problem in using the outcomes of prior migration as an indicator of the effects of current or future migration. As visa rules and circumstances in the UK and source countries change, the characteristics of migrants might be expected to change. Therefore, past patterns may not be reliable predictors, especially if there are substantial changes in visa rules and economic circumstances.

Potential for improvement in measuring the impact is driven by data provision. We would see improvements for this purpose to be unlikely on the expenditure side, leaving estimation to rely on simple pro-rata methods. The only alternative to this would be through specialist surveys of state education and public services use. Otherwise, as we have said, the inclusion of purpose of migration in the Labour Force Survey should be very useful, allowing assessment of the impact of earlier economic migrants as they have aged (although this would not overcome the inter-dependence of migration decisions amongst family members and hence inability to fully distinguish economic from other migration).

5.3 Implications for immigration policy

The study aimed to draw out the implications of the analysis for UK immigration policy, particularly for the Points Based System.

Total expenditure on state education and public services accounts for 44 per cent of public services expenditure (2009/10, PESA, 2011). Migrants who enter the UK on work or study-related visas place very limited demands on this expenditure. We estimate that between 0.3 and 0.4 per cent of the expenditure goes to Tier 1 and 2 migrants and their families, and 0.1 to 0.2 per cent to Tier 4 migrants and their families. Not only is the number of these migrants relatively small, but average demand per adult for state education and public services is estimated to be lower than for non-migrants: expenditure per Tier 1 and 2 adult migrant is estimated at between 16 per cent and 23 per cent less than for non-migrants and, for Tier 4 migrants, between 41 per cent and 49 per cent less, Table 5.1. Furthermore, for the reasons we have already discussed, these estimates are likely to over-estimate the cost of Tier 1, 2 and 4 migrants.

Table 5.1 Relative expenditure per adult migrants:non-migrants, 2009/10

	cost per adult relative to non-migrants, per cent			
	Education	Personal Social Services	Health	Total
All migrants	133	98	89	104
Migrant in last 10 years	111	81	68	84
Migrant in last 5 years	84	71	62	70
Non-EEA economic migrant ^a	102-115	75-77	64-65	78-83
Tier 1 or 2 ^a	101-106	76-81	63-66	77-84
Tier 4 ^a	49-65	52-59	52-55	51-59

^a Range based on wide and narrow definitions of these groups.

Estimates based on PESA 2011 chapter 10 tables 10.1-10.4 2009-10; Annual Population Survey Jan 2009-December 2009.

The variation in the relative expenditure between Tier 1 and 2 migrants and others across the three regions with the greatest number of migrants (London, the South East and Scotland) is interesting. First, it shows that the impact is not directly proportionate to the extent of immigration. Second, it raises the question of why the family composition of Tier 1 and 2 migrants differs between these regions and, in particular, the role of local domestic policies in affecting migration location. Thirdly, it raises the question of how expenditure varies across other regions. These are all important issues for consideration of the PBS, as they suggest that impact may neither be related to the number of migrants (as indicated by London) nor their relative costs (as indicated by Scotland). Certainly, further research into location decision for Tier 1 and 2 migrants would be useful.

What cannot be established readily are the long-term costs. These depend on whether migrants remain in the UK into middle age and beyond, and whether, if they do remain, their pattern of service use mirrors that of the UK-born population. It may not do, given their relatively high income and social class status and cultural differences. High income and social class are likely to reduce public sector personal social care demand in older age. The same is likely for any cultural differences.

However, whatever the long-term picture, it is clear that the cost of points based migration to UK public services is small both relative to the total cost of these services, and to the share of these groups in the population as a whole. Moreover, although the fiscal and economic benefits of these groups are outside the scope of this study, it is well established (and unsurprising given the immigration system for economic migrants) that they tend to be in higher income groups, so are likely to pay relatively high rates of tax and contribute to the economy via both the output they produce and, for Tier 4, via their fees and maintenance costs. This means that the relative balance between what they cost and what they contribute is firmly weighted towards a very substantial net contribution, both to the economy, and to public finances.

Appendix A Literature covered by the review

Our review covered a total of 48 publications. We describe here first those which include primary research and then those which report and assess existing literature or evidence.

The review included 22 reports or papers presenting the findings of primary research. Of these, 19 covered health service use, 12 education and 9 both service areas. Therefore only 3 papers with a primary research element covered education but not health. The focus of four of the papers was on wider service impact but did include findings of direct relevance to education or health.

The papers with a primary research element largely reported on mixed methods approaches, for example by including a review of data, literature, a survey element and qualitative interviews. Research subjects were migrants, agencies and stakeholders and many studies included respondents from across these groups. Thirteen reports included surveys, which were typically focused on a range of areas of service provision: five included education and all included health. With only one exception, all had a regional focus. Of the 22 studies, 12 included research with migrants and 13 included research with service providers, stakeholders and agencies.

Most of the reports with a primary research element were conducted at regional or local level, with only 4 having a national coverage. Although regionally based, most reports draw implications for national policy and practice in relation to migration and service use. Therefore their focus is rarely explicitly local. Studies showed a wide regional spread, but there were more studies conducted in the East of England, Wales and the South East than other areas. Primary research focused on education and health impacts was more sparse in Yorkshire, the North of England and the Midlands.

At 26, just over half of the papers included in our review did not report on new data but were reviews or analysis of existing literature, data or other evidence. Of these, almost half included analysis of data. As with the papers involving primary research, health was covered more often than education, with 20 papers including health issues, 10 education and seven covering both service areas. Many of the papers covered other service areas in addition to education and health and six included findings relevant to the impact of migration on health and education, for example migrants' knowledge of services available to them. We described the regional spread of primary research on migration impacts. Reviews were more likely to have a national than regional focus, but the 12 regional studies were concentrated in particular areas: Scotland, Wales, London and the East of England. This is likely to reflect policy interest in migration in these areas of the UK.

The review focused on research with a policy emphasis in relation to migration and impact on services. Publications included papers and reports by research and social policy organisations, reports for Government departments and Government agencies such as the Home Office, Health Protection Agency

and Audit Commission and enquiries by Governments for Scotland and Wales, and regional assemblies. The review included and reports commissioned from local authorities, regional Strategic Migration Partnerships, Regional Development Agencies, Regional Public Health Observatories and by charities and third sector organisations with an interest in migration. The review also included the findings of academic research.

Appendix B Tier 1 and 2 migrants occupations

The following occupations were treated as Tier 1 and 2 migrant occupations.

111 Corporate Managers & Senior Officials
112 Production Managers
113 Functional Managers
115 Financial Institution and Office Managers
118 Health and Social Services Managers
122 Managers in Hospitality and Leisure
211 Science Professionals
212 Engineering Professionals
213 Info & Communication Technology
221 Health Professionals
231 Teaching Professionals
232 Research Professionals
241 Legal Professionals
242 Business & Statistical Professionals
244 Public Service Professionals
311 Science and Engineering Technicians
313 IT Service Delivery Occupations
321 Health Associate Professionals
322 Therapists
343 Media Associate Professionals
353 Business & Finance Assoc Professionals
354 Sales & Related Assoc Professionals
543 Food Preparation Trades
611 Healthcare & Related Personal Services

Appendix C Public expenditure data sources

Table C. 1 Education expenditure

Source	Description	Link/Reference
<p>PESA 2011 chapter 10 table 10.1 <i>UK and by country</i></p>	<p>Total (current plus capital) expenditure. Outturn: 2005-6, 2006-7, 2007-8, 2008-9, 2009-10. Pre-primary, primary, secondary, (post secondary), not definable by level (includes post secondary not definable by level)</p>	<p>http://www.hm-treasury.gov.uk/pesa2011_section4.htm</p>
<p>LA Revenue Expenditure and Financing England 2009-10 Final Outturn - table a English Local Authorities</p>	<p>Gross and net current expenditure²⁴ Outturn: 2009-10 Nursery, primary, secondary and special schools budgets</p>	<p>http://media.education.gov.uk/assets/files/xls/o/outturn%20detailed%20report%20table%20a%202009%2010.xls</p>

²⁴ Contacted DfE for capital expenditure figures

Table C. 2 Personal social services expenditure

Source	Description	Link/Reference
<p>PESA 2011 chapter 10 table 10.1 <i>UK and by country</i></p>	<p>Total (current plus capital) expenditure. Families and children, adult, old age, other personal social services Outturn: 2005-6, 2006-7, 2007-8, 2008-9, 2009-10.</p>	<p>http://www.hm-treasury.gov.uk/pesa2011_section4.htm</p>
<p>Adult Personal Social Services - Final Council Level Detailed Unit Costs 2009-10 <i>English SHAs</i></p>	<p>Gross total expenditure, no of weeks, gross weekly expenditure & gross total unit cost of services (older people and 18-64). Gross total costs include capital charges.</p>	<p>http://www.ic.nhs.uk/pubs/pss0910exp</p>
<p>LA Revenue Expenditure and Financing England 2009-10 Final Outturn - table a1 <i>English Local Authorities</i></p>	<p>Net and gross expenditure Children and families personal social services 2009-10</p>	<p>http://media.education.gov.uk/assets/files/xls/o/outturn%20detailed%20report%20table%20a1%202009%2010.xls</p>

Table C. 3 Health expenditure

Source	Description	Link/Reference
UK		
<p>PESA 2011 chapter 10 table 10.1 <i>by country</i></p>	<p>Total (current plus capital) expenditure. Outturn: 2005-6, 2006-7, 2007-8, 2008-9, 2009-10.</p>	<p>http://www.hm-treasury.gov.uk/pesa2011_section4.htm</p>
<p>PESA 2011 chapter 9 table 9.11 <i>by country and English region</i></p>	<p>Current, capital and total expenditure. Outturn: 2005-6, 2006-7, 2007-8, 2008-9, 2009-10</p>	<p>http://www.hm-treasury.gov.uk/pesa2011_section4.htm</p>

Appendix D Health expenditure by age

		£ per head																	
AGE		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
		years	years	years	years	years	years	years	years	years	years	years	years	years	years	years	years	years	years
UK AVERAGE	Derivation																		
Resource allocation formula for England 2008/09 general and acute (no adjustment for need or costs)	Department of Health weighted capitation formula	318	402	379	380	536	329	378	414	477	492	554	658	818	985	1,211	1,424	1,617	2,705
Mental health (average of males and females for each age group)					42	81	106	111	115	110	104	92	84	78	86	107	145	176	167
Primary care and prescriptions	Based on primary care proportion of total expenditure, and GP consultations by age	526	141	141	222	222	222	222	222	222	382	382	382	382	634	634	895	895	3,911
Total adjustment for needs, costs and nations	Based on UK acute and general share of overall expenditure, this element varies by area	245	157	151	187	244	190	206	218	235	284	298	326	371	495	566	715	780	1,967
Central and other services	based on share of total expenditure	282	195	194	225	279	213	228	236	254	309	330	368	429	573	645	758	823	2,146
Total for 2008/09		1,370	895	865	1,055	1,363	1,060	1,146	1,205	1,298	1,572	1,656	1,818	2,079	2,773	3,164	3,938	4,290	10,895
adjust to 2009/10 expenditure		1,471	946	907	1,123	1,465	1,145	1,242	1,309	1,411	1,707	1,793	1,960	2,230	2,975	3,405	4,298	4,688	11,829
SCOTLAND	national average amounts adjusted proportionally to equal Scotland total	1,556	1,001	959	1,188	1,549	1,211	1,313	1,385	1,492	1,806	1,896	2,073	2,359	3,147	3,602	4,546	4,959	12,513
LONDON	national average amounts adjusted proportionally to equal London total	1,820	1,170	1,122	1,389	1,812	1,417	1,536	1,620	1,745	2,112	2,218	2,425	2,759	3,680	4,213	5,318	5,800	14,635
SOUTH EAST ENGLAND	national average amounts adjusted proportionally to equal South East total	1,307	841	806	998	1,302	1,018	1,104	1,164	1,254	1,517	1,594	1,742	1,983	2,644	3,027	3,820	4,167	10,514

Key Source: Department of Health (2011) Resource Allocation: Weighted Capitation Formula Seventh Edition prepared by Dept H Financial Planning and Allocations Division

Note, all figures are approximations derived from our calculations. Their purpose is to provide an assessment of overall burden by age group of different population groups.

6 Bibliography

- Arshad, R., Almeida Diniz, F., Kelly, E., Sharp, S. and Syed, R (2004), Minority Ethnic Pupils' Experiences of School in Scotland, Edinburgh, Scottish Executive Report.
- Audit Commission (2007) Crossing borders: responding to the local challenges of migrant workers, London: Audit Commission.
- Besley, T., Hall, J. and Preston, I. (1999). *The demand for private health insurance: do waiting lists matter?* Journal of Public Economics Vol. 72:155-181.
- Blackburn, P. (2011) Health Cover UK Market Report 2011. London: Laing & Buisson.
- Blundell, R., Dearden, L. and Sibietta, L. (2010). The impact for Private Schooling in England: the Impact of Price and Quality. IFS Working Paper 10/21. London: Institute for Fiscal Studies.
- Carballo, M., Divino, J. J. and ZERIC, D. (1998). 'Migration and health in the European Union', *Tropical Medicine and International Health*, Vol. 3, pp. 936-944.
- Claassen, D., Ascoli, M., Berhe, T. and Priebe, S. (2005). 'Research on mental disorders and their care in immigrant populations: a review of publications from Germany, Italy and the UK', *European Psychiatry*, Vol. 20, pp. 540-549.
- City of Edinburgh Council. (2008, 2009, 2010). *Inward Migration: Policy and Strategy Committee*. Edinburgh: City of Edinburgh Council. .
- Collis, A., Stott, N. and Ross, D (2010) Workers on the Move 2: European migrant workers and health in the UK: A Review of the Issues, Keystone development trust. .
- Cook, J., Dwyer, P. and Waite, L. (2008) New Migrant Communities in Leeds, A research report commissioned by Leeds City Council.
- Coulter, A. and Magee, H (eds.). *The European Patient of the Future*. Maidenhead, UK: Open University Press .
- Crawley, H. (2009) The Situation of Children in Immigrant Families in the United Kingdom, Innocenti Working Paper, Special Series on Children in Immigrant Families in Affluent Societies, IWP-2009-18, Unicef Innocenti Research Centre.
- Department for Education and Skills (1999) Ethnic Minority Pupils and Pupils for whom English is an Additional Language 1996/97, Statistical Bulletin Number 3/99.
- Department for Education (2010) School Capacity 2010, Statistical Release, London: DfE.

- Department for Education (2011a) National Curriculum Assessments at Key Stage 2 in England, 2010/2011 (revised).
- Department for Education (2011b) National Pupil Projections: future trends in pupil numbers, Statistical Release, London: DfE.
- Dobson, J. M. and Pooley, C. E. (2004) Mobility, Equality, Diversity: a study of pupil mobility in the secondary school system, Department of Geography, University College London.
- Dearden, L., Ryan, C. and Sibieta, L. (2010). What determines Private School Choice? A Comparison between the UK and Australia. IFS Working Paper 10/22. London: Institute for Fiscal Studies .
- Deber, R. Gildiner, A. and Baranek, P. (1999). Why not private Health insurance? 1. Insurance made easy. *Canadian Medical Association Journal* Vol. 161 No. 5: 539-542.
- Dustmann, C. and Frattini, T. (2010) *Can a framework for the economic cost - benefit analysis of various immigration policies be developed to inform decision making and, if so, what data are required?* Report prepared for the Migration Advisory Committee, September 2010.
- Emmerson, C., Frayne, C. and Goodman, A. (2001) Should private medical insurance be subsidised? Health Care UK 2001.
- Fife Research Co-ordination Group (2007). *Migrant Workers in Fife - Survey 2007*. Fife: Fife Council.
http://www.fifedirect.org.uk/uploadfiles/publications/cF64_MigrantWorkersSurveyKnowFifeFindingsV1_2.pdf.
- Glover, S., Ceri Gott, Anaïs Loizillon, Jonathan Portes, Richard Price, Sarah Spencer, Vasanthi Srinivasan and Carole Willis (2001) Migration: an economic and social analysis. RDS Occasional Paper No 67. London: Home Office.
- Gordon, I., Travers, T. and Whitehead, C. (2007a), The Impact of Recent Immigration on the London Economy, Report to City of London by London School of Economics.
- Gordon, I., Tunstall, R. and Whitehead, C. (2007b), Population Mobility and Service Provision, Report to London Councils by London School of Economics.
- Gott, C. and Johnston, K. (2002) *The migrant population in the UK: fiscal effects*. RDS Occasional Paper No 77. London: Home Office.
- Green, A., Owen, D., Jones, P., Owen, C., Francis C. and Proud, R. (2008) Migrant Workers in the South East Regional Economy, Report to SEEDA from Warwick Institute for Employment Research and BMG Research.
- Harding, S. (2004) „Mortality of migrants from the Caribbean to England and Wales: effect of duration of residence.“ *International Journal of Epidemiology* 33:382-386.
- Hargreaves, S., Friedland, J. S., Gothard, P., Saxena, S., Millington, H., Eliahoo, J., Le Feuvre, P. And Holmes, A. (2006). 'Impact on and use

- of health services by international migrants: questionnaire survey of inner city London A and E attenders', *BMC Health Services Research*, Vol. 6.
- Health Protection Agency (2008) Migrant Workers from the EU Accession countries: A demographic overview of those living and working in England and Wales and a comparison of infectious disease and immunisation rates in the Accession countries with those in the UK, London: HPA.
- Independent Schools Council (ISC) Facts and Figures from the ISC website http://www.isc.co.uk/FactsFigures_PupilNumbers.htm .
- Institute of Community Cohesion (2007) Estimating the scale and impacts of migration at the local level, Local Government Association .
- Jarvis, L. (2009) Alcohol Consumption in Black and Minority Ethnic Groups and recent immigrants in Scotland: current situation on information available, NHS Scotland.
- Jayaweera, H. And Quigley, M. A. (2010) 'Health status, health behaviour and healthcare use among migrants in the UK: Evidence from mothers in the Millennium Cohort Study', *Social Science and Medicine*, Vol. 71, pp. 1002-1010. .
- Jayaweera, H. (2011) Health of Migrants in the UK: What Do We Know? The Migration Observatory, University of Oxford.
- Johnson, M. (2006) Health and the Integration of new migrants. In S. Spencer (Ed). Refugees and other new migrants: A review of the evidence on successful approaches to integration. London: Home Office.
- Jon Dawson Associates and the Health Promotion Foundation, Poland (2009), Phase 1 Research: Polish Migrants Community Project in Crewe.
- Kelly, R., Morrell, G. and Sriskandarajah, D. (2005) Migration and Health in the UK: an IPPR Factfile, London: IPPR.
- Khan, G. and Flak, A. (2010) Renfrewshire Minority Ethnic Consultation on Social Work Services, West of Scotland Regional Equality Council and Renfrewshire Social Work Department.
- King, D.R. and Mossailos, E. (2005). The Determinants of Private Medical Insurance Prevalence in England, 1997-2000. *Health Services Research* Vol. 25: 195-212.
- Kofman, E., Lukes, S., D'Angelo, A. and Montagna, N. (2009) The equality implications of being a migrant in Britain, Equality and Human Rights Commission, Research Report 19.
- Klodawski, E., and Fitzpatrick, J. (2008), Estimating Future Births in the Capital: a discussion document, London Health Observatory .
- MAC (2010) *Limits on Tier 1 and Tier 2 for 2011/12 and supporting policies*. London: MAC.
- Map Analysis Ltd (2009), Mapping the Response to Migrant Workers in Wales, Report for Wales Strategic Migration Partnership .

- Medecins du Monde UK (2007) Project London: Report and Recommendations 2007
<http://www.doctorsoftheworld.org.uk/lib/docs/104524-report2007light.pdf> .
- Metcalf, H., Rolfe, H and Dhudwar, A (2009) Employment of migrant workers: case studies of selected employers in Wales and Scotland, Report to the Scottish Government and Welsh Government.
- National Assembly for Wales, Equality of Opportunity Committee (2008), Issues affecting migrant workers in Wales, their families and the communities in which they live and work, National Assembly for Wales.
- Orchard, P., Szymanski, A. and Vlahova, N. (2007) A Community Profile of EU8 Migrants in Edinburgh and an evaluation of their access to key services, Scottish Government Social Research.
- Propper, C. (2000). The demand for private health care in the UK. *Journal of Health Economics* Vol. 19: 855-876.
- Propper, C. Rees, H. and Green, K. (2001). The Demand for Private Medical Insurance in the UK: A Cohort Analysis. *The Economic Journal* Vol. 111 No. 471: C180-C200.
- Raphaely, N. and O'Moore, E. (2010) Understanding the health needs of migrants in the South East region, A report by the South East Migrant Health Study Group on behalf of the Department of Health.
- Reynolds, G. (2008) The Impacts and Experiences of Migrant Children in UK Secondary Schools, University of Sussex, Sussex Centre for Migration Research. Working Paper No 47.
- Rolfe, H. and Metcalf, H (2009) Recent Migration into Scotland: the Evidence Base, Scottish Government Social Research.
- Sargeant, L., Kitcat, J., Gielnik, K., Stevens, S., O'Meara, I., Gumy, J., Head, V. and Vartoukian, S (2009) Joint Strategic Needs Assessment for Migrant Workers in Cambridgeshire, Cambridge County Council and NHS Cambridgeshire .
- Schneider, C. and Holman, D. (2009) Longitudinal study of migrant workers in the East of England, Interim Report to East of England Development Agency.
- Schneider, C. and Holman, D. (2010) Longitudinal study of migrant workers in the East of England, Interim Report 2 to East of England Development Agency.
- Scottish Parliament Equal Opportunities Committee (2010) 5th Official Report.
- Scullion, L. and Morris, G. (2009) A study of migrant workers in Peterborough, University of Salford.
- Sikora, M., Mills, K., Nuttall-Smith Dicks, S., Green, R. (2010) Exploring the Needs of New Migrant Communities in East Sussex: a scoping study, Report to East Sussex County Council, University of Hertfordshire .

- Simpson, L., Jivraj, S. and Marquis, N. (2010) Measuring Internal and International Migration from the National Pupil Database, Report to the Department for Communities and Local Government, London: DCLG.
- Spencer, S & Cooper, E (2006) Social Integration of Migrants: A Review of European Literature, Oxford: Compas paper.
- Sriskandarajah, D., Cooley, L. and Reed, H. (2005) Paying Their Way The fiscal contribution of immigrants in the UK. London: IPPR.
- Steventon, A. And Bardsley, M. (2011) 'Use of secondary care in England by international immigrants', *Journal of Health Services Research and Policy*, Vol. 16, pp. 90-94.
- Taylor, B. and Newall, D. (2008) Maternity, mortality and migration: the impact of new communities, Heart of Birmingham Teaching Primary Care Trust and West Midlands Strategic Migration Partnership.
- Taylor, A.J. and Ward, D.R. (2006). Consumer Attributes and the UK Market for Private Medical Insurance. *International Journal of Bank Marketing* Vol. 24 No. 7: 444-460.
- UK Border Agency (2011) Securing our border – controlling migration. Family migration a consultation. London: UK Border Agency.
<http://www.ukba.homeoffice.gov.uk/sitecontent/documents/policyandlaw/consultations/family-migration/>
- Uscreates (2008) Improving Health and Wellbeing in Mid-Essex. London: Uscreates.
- von Ahn, M., Lupton, R., Greenwood, C. and Wiggins, D. (2010) Languages, Ethnicity and Education in London, ESRC Research Findings, Understanding Population Trends and Processes (UPTAP).
- Wales Rural Observatory (2006) Scoping Study on Eastern and Central European migrant workers in rural Wales.
- Wallis, G. (2004). The demand for private medical insurance. *Economic Trends* No. 606. London: HMSO.
- Welsh Local Government Association (2008) Response to NAFW Equality of Opportunity Committee: Migrant Workers Inquiry, WLGA/ CLILC.
- Woods, M. and Watkin, S. (2008) Central and Eastern European Migrant Workers in Rural Wales, *Arsyllfa Wledig Cymru/Welsh Rural Observatory*, Report 20.
- Wyness, G (2011) London schooling: lessons from the capital, Centre Forum.
- Zaronaite, D. and Tirzite, A (2006) The Dynamics of Migrant Labour in South Lincolnshire, East Midlands Development Agency.