

# Scottish Migrant and Ethnic Health Research Strategy Group (SMEHRS)

Combined Report 2013 and  
Strategy 2014–2019

November 2014

We are happy to consider requests for other languages or formats. Please contact 0131 314 5300 or email [nhs.healthscotland-alternativeformats@nhs.net](mailto:nhs.healthscotland-alternativeformats@nhs.net)

Published by NHS Health Scotland

1 South Gyle Crescent  
Edinburgh EH12 9EB

© NHS Health Scotland 2014

All rights reserved. Material contained in this publication may not be reproduced in whole or part without prior permission of NHS Health Scotland (or other copyright owners). While every effort is made to ensure that the information given here is accurate, no legal responsibility is accepted for any errors, omissions or misleading statements.

NHS Health Scotland is a WHO Collaborating Centre for Health Promotion and Public Health Development.

# Scottish Migrant and Ethnic Health Research Strategy Group (SMEHRS)

## Combined Report 2013 and Strategy 2014-2019

### Foreword

By Andrew Fraser, Chairman of The Scottish Migrant and Ethnic Health Research Strategy Group

The Scottish Health and Ethnicity Research Strategy and Steering Group (SHERSS) has changed its name to the Scottish Migrant and Ethnic Health Research Strategy Group (SMEHRS) to encompass migration in future.

The purpose of this report is to provide the evidence base for the Scottish Migrant and Ethnic Health Research Strategy Group (SMEHRS) to refresh its strategy for the period 2014-19. It is based on evidence from published literature in the UK. The report will be of interest to researchers, research policy makers and funders. SHERSS was formed in late 2010 in response to recommendations in the Health In Our Multi-ethnic Scotland (HIOMS) report. The HIOMS report was the product of a working group set up by NHS Health Scotland to address a perceived lack of progress in developing an evidence base about the health of ethnic minorities in Scotland. It set out five main priorities for future research and made seven recommendations, one of which was to form a steering group for research on ethnicity and health in Scotland to oversee the implementation of the report's other priorities and recommendations.

There is an important place in ethnicity and health research for large quantitative research projects pulling together data from different sources. Those studies have the potential to describe ethnic groups that are more or less likely to require or use health care. We need more of that type of knowledge, but to give all ethnic groups the opportunity to achieve equal levels of health we need to know the reasons why some groups find it harder than others to use health services and other support services and to sustain a healthy lifestyle. That means understanding the wider

context, culture, living conditions and beliefs of groups of people. We need to understand how families and communities function in support of each other, what they view as normal and the types of support and services they like and value. For example, how do they view the work and advice of doctors and nurses? How do they help and care for each other? Why do they think people become ill? How do beliefs align with conventional medical practice, knowledge and health services? When it comes to seeking help from Scottish public services, how do their views and beliefs affect that?

This report is accompanied by an extensive review of recent literature from published research across the UK. Understanding patterns and trends, and seeking explanations and remedies for variations and inequalities in health and health services is a worthwhile enquiry and merits this research focus. To make a difference though, the use of available knowledge is key, to make health services and health better for people of all ethnicities. We need to solve the problems that caring services face in reaching out to people of all ethnicities. Finding solutions that work will provide opportunities to ensure and spread good practice, benefitting the health of communities and making best use of resources. The influence of the research work being done on ethnicity and health in Scotland is greater than the volume of work would suggest. One example is the adoption of recording of ethnicity at time of death registration. Another is the innovative Scottish approach to secure data linkage. For such reasons Scotland ranks among leaders in Europe in research on ethnicity and health, with leading Scottish researchers centrally involved in the organisation of the European Public Health Association's 2014 conference on migrant and ethnic minority health.

## **Summary**

### **Report**

In 2013-14 the Scottish Health and Ethnicity Research Strategy Steering Group (SHERSS) reviewed progress to date, and research needs for the future. The new SMEHRS five year strategy is the result of that review. With a new focus on migrant health included, the group was renamed as the Scottish Migrant and Ethnic Health Research Strategy Group (SMEHRS). This report includes the new strategy and a summary of progress over the three years 2011-13/14, since SHERSS was formed. The progress is described for each of the original SHERSS aims.

### **Strategy**

The new strategy development was informed by SMEHRS members' perspectives on the relevance to the Scottish context of a list of possible research gaps. The potential gaps were identified through a comparison of recent Scottish and English research in the field.

## 2013-14 SHERSS report

This has been a year of reviewing and refocusing for the Scottish Health Ethnicity and Migration Research Strategy and Steering Group (SMEHRS). The group has refreshed its strategy for the next five years (2014-2019) as an integral part of this combined report and strategy document. One result of that process has been a name change from the Scottish Health and Ethnicity Research Strategy and Steering Group (SHERSS) to 'SMEHRS'. Although the group has always encompassed migration we wish to emphasise it more by including the term in the title. Recent increased migration into Scotland and the close connections between minority ethnicity and migration provide the rationale for research strategy to emphasise both.

Details of the group's structures and processes during the year form appendix 1 in the separately published appendices to this document. During 2013 there was agreement in principle with National Records Scotland (NRS) to collaborate on a peer reviewed publication on the first 12 months of experience of recording ethnicity at the time of death (since 1 January 2012). This was postponed until completion of a survey of district registrars to explore the extent of possible under-recording in some areas, and because we decided it would be more reliable to have two years of data.

A sub-group produced recommendations for a Scottish survey of ethnic minority health. After further discussion we have taken the view that the ethnically boosted health survey should, in the current financially constrained environment, be reconsidered later, the issue being how to make it methodologically robust at a reasonable cost.

Following the successful conference in 2012, a further event is planned for 2015, seeking continued support for this event from Health Scotland as key sponsor.

During the year members completed research, worked on current projects and submitted research proposals for funding as follows:

- Completed research: Prevention of Diabetes and Obesity in South Asians (PODOSAs),<sup>22 25-27</sup> and the report: Adapting Health Promotion Interventions.<sup>19</sup>

- Research currently in progress: Scottish Health Ethnicity Linkage Study (SHELs), and ‘Adapting European Health Systems to Diversity’ (ADAPT) funded by DG Sanco and led by Prof David Ingleby, head of the European Research Centre on Migration and Ethnic Relations (ERCOMER) in Utrecht  
[http://costadapt.eu/index.php/Main\\_Page](http://costadapt.eu/index.php/Main_Page).
- Research proposal submitted: “Organising and mobilising the Scottish South Asian communities in the prevention of cardiovascular diseases and diabetes”, to the National Institute for Health Research (NIHR) (unsuccessful).

At all meetings members networked by giving updates on other work known to be in progress and sharing news of interest. Updates shared concerned:

- work being carried out at the University of Glasgow Medical Research Council (MRC) Social and Public Health Sciences Unit, (SPHSU)
- News about conferences, for example:
  - the Minority Communities and Blood Borne Viruses (BBVs) conference in Glasgow (March 2013), which aimed to examine Scottish health and social responses to BBVs in minority ethnic communities and build capacity in workers and services to help them engage with and provide best practice treatment and care to migrants,
  - the West of Scotland Ethnicity Network (WHEN) conference in Glasgow (October 2013), in which Professor Kamaldeep Bhui showcased latest thinking on mental health issues and ethnicity, and other sessions provided good practice guidelines for mental health service provision for ethnic minorities and featured research on mental health in the context of addiction, and
  - the 5<sup>th</sup> European Migrant and Ethnic Minority Health Conference in Granada (April 2014), to which several SHERSS group members contributed papers on Scottish research on ethnic health. A highlight was a presentation by Martin McKee on the impact of the global economic crisis on migrant and ethnic minority health.

Thinking through the new strategy has been an important part of the year's activity. The results of this are summarised in our strategic aims for 2014-19.

### Progress against SHERSS aims 2011-2013

SHERSS aims:

#### **1(a) To assist in implementing the priorities and recommendations of *Health in our Multi-ethnic Scotland – Future Research Priorities (HIOMS)*.<sup>28</sup>**

“HIOMS priority 1: *Good ethnic coding*

To ensure high quality ethnicity and health research in Scotland, consistent ethnic coding is needed. To achieve this we recommend that:

- I. the ethnic classification developed for the 2011 Census in Scotland is adopted as the standard for routine use,
- II. the death certificate in Scotland is amended to enable ethnic identity to be recorded using the same ethnic classification as the census,
- III. the ethnic identity of every person registered with the NHS should be recorded, with consent, on the Community Health Index (CHI) or its successor.”

Progress on ethnic coding has been excellent. On 1 January 2012, all district registrars began requesting and recording the ethnicity of the deceased at death registration. In the first 12 months, information on ethnicity was provided on 96.6% of 54,937 deaths.

- I. Both the NHS Health Scotland Review of Equality data in Scotland<sup>1</sup> and the Scottish Government's harmonised data categories for surveys<sup>7</sup> have adopted the use of census categories as standard ethnic classifications.
- II. Considerable improvements in the recording of ethnicity on hospitalisation and first out-patient appointments were achieved. By March 2014, 79% of hospital inpatient records and 70% of outpatient records had an ethnic code compared with only 37.5% and 25% respectively in March 2010<sup>10</sup> Nevertheless, there continues to be variation across the country with some NHS Boards having considerable room for improvement.
- III. The use of CHI to record ethnicity in primary care has not progressed owing to limitations in available technology and concerns about privacy.



### HIOMS Priority 2: *Making the best use of data linkage methods*

“For at least several years to come, ethnic identity will not be readily linked to death certificates, hospital admissions or other health service databases. We thus recommend that the Scottish Government gives full support to the current research programme, which links the ethnic coding on the census to a range of health-related databases.”

Progress: Use of data linkage methods in the Scottish Health Ethnicity Linkage Study (SHELS)<sup>6</sup> has been very successful. A large number of papers based on SHELS Phases 2 and 3 have been published or are in preparation. A bid for funding of Phase 4 was successful and this began in July 2013. The areas to be covered in Phase 4 include all-cause mortality and hospitalisation rates, infections and parasitic diseases, injuries and poisoning, and bowel screening.

### HIOMS Priority 3: *A health survey of ethnic minorities in Scotland*

“Information is needed on a wide range of health behaviours and risk factors such as the prevalence of smoking, alcohol consumption, eating behaviour, levels of physical activity, obesity, etc. which enable the larger ethnic minorities in Scotland to be compared with those of the majority White population. We thus recommend that a survey of ethnic minorities living in Scotland is conducted between 2011 and 2012 with the aim of adding significantly to the information obtained from the large, ongoing Understanding Society survey which is now being conducted across the United Kingdom.”

Progress: After further discussion the group has taken the view that the ethnically boosted health survey should, in the current financially constrained environment, be reconsidered later, the issue being how to make it methodologically robust, obtaining a valid sample at a reasonable cost.

#### HIOMS Priority 4: *Coordinated research on major health problems and issues*

“Research is needed to address the major preventable or treatable contemporary health problems and key health-related issues affecting ethnic minorities. We therefore recommend that the Scottish Government encourages and supports evaluations of larger scale interventions aimed at preventing or treating major health problems affecting ethnic minorities; and qualitative research designed to provide insights into the perceptions, attitudes, behaviour and experience of health services of relevance to major health issues in different ethnic minority groups.”

Progress: Coordinating ethnic health research in Scotland was addressed through the successful conference in October 2012, which showcased the wide range of current research in Scotland. SHERSS has taken an overview of research in ethnicity and health in Scotland in each of its annual reports,<sup>8,9</sup> which are disseminated through the NHS Health Scotland website. In addition an update of members’ research involvements was published in 2011<sup>11</sup> and is further updated in the appendices. This review summarises recent Scottish research in ethnicity and health, and recent research in the UK outside Scotland.

#### HIOMS Priority 5: *Catalysing, coordinating and using research*

“We recommend the establishment of a Scottish Ethnicity and Health Research Group to catalyse and coordinate high quality relevant research and make the best use of the findings.”

Progress: SHERSS has been formed, and includes active researchers in ethnicity and health from Scotland, and representatives from the Scottish voluntary sector, civil service, public health and academic institutions. SHERSS has produced annual reports each year since formation.

*In addition to identifying research priorities HIOMS found research gaps. These are listed below along with relevant progress:*

HIOMS gaps:

HIOMS gap 1: “Research attention has focused on illnesses which are more common among ethnic minorities, notably cardiovascular disease and diabetes among South Asians, with very little attention to major illnesses such as cancer and cerebrovascular disease (stroke), which are also common in ethnic minority groups.”

Progress: Research on both types of illnesses has been and is being addressed through the Scottish Health and Ethnicity Linkage Study (SHELS).

HIOMS gap 2: Little attention has been paid to evaluating the effectiveness of health promotion strategies delivered by mainstream statutory organisations to ethnic minority groups.”

Progress: Since HIOMS, it has been increasingly accepted that health promotion using education and information campaigns requiring individuals to ‘opt in’ from the general population tends to increase rather than reduce health inequalities by socio-economic group.<sup>2</sup> The effects of targeting such campaigns on specific ethnic minority groups to reduce health inequalities are not well researched. We do not know if these campaigns would increase or decrease socio-economic inequalities within particular ethnic groups as they have been tested only at the general population level. However some progress has been made in specifying principles for health promotion adaptation to ethnic groups,<sup>17-</sup><sup>19</sup> testing a prevention intervention<sup>22 23</sup> and a smoking cessation trial has been reported from Birmingham, but with Scottish input.<sup>24</sup> Targeting already healthier ethnic minority groups would be unlikely to reduce health inequalities in the wider population.

HIOMS gap 3: “There has been very little research on the relationship between ethnicity and socio-economic status in Scotland and how they combine to influence health.”

Progress: Attempts are being made to measure this interaction. One project led by NHS Health Scotland has analysed the interactions for all-cause mortality risk by social class and Carstairs 1991 with age group, gender, ethnicity, religion and disability. Some results were presented at the Faculty of Public Health (Scotland) conference in November 2013.<sup>3</sup> The report is not yet finalised. Another study has recently reported that socio-economic position is not consistently associated with differences in particular ethnic groups in cardiovascular disease in Scotland.<sup>12</sup>

HIOMS gap 4: “Very little research has been undertaken to evaluate the appropriateness and effectiveness of statutory mental health services for minority ethnic communities.”

Progress: Ethnicity and mental health is growing in importance as a research area in Scotland, and for Scottish researchers.<sup>13-16</sup> The [Mental Health Strategy for Scotland: 2012-2015](#)<sup>20</sup> states that the government will work with health boards & partners to monitor access to services (including information about ethnicity) so that this can inform decisions about service design and remove barriers. Also, the SRC Refugee Integration strategy ‘New Scots’<sup>21</sup> identified mental health and Gender-based violence as areas of unmet health need for asylum seekers and refugees.

HIOMS gap 5: “Few of the findings from this body of research have been acted upon. Until recently, there had been only one major intervention – preventing rickets in Glasgow – specifically aimed at addressing a health problem in an ethnic minority in Scotland. The campaign started 17 years after the problem was first recognised.”

Progress: We are pressing for action on the implementation of research findings through SHERSS yearly reports to the Scottish government. As a strategic group our remit does not extend to direct implementation. In support of implementation, some analysis of national level routine data has been completed for ethnicity.<sup>4</sup> The paper demonstrates that routinely collected ethnicity data in the NHS can be as valid as census-linked ethnicity data. Better routine data on ethnicity can help us identify and monitor variations in health service use, not only for rickets but for other health problems as well.

**SHERSS aim 1(b): The group will also address the interface with closely related issues arising from religion and migration in Scotland.**

Progress: Although there has been recent work in Scotland in relation to the interface between ethnicity and religion, more attention to this would be appropriate. At the WHEN conference (held October 2013) Reetoo and Shirjell referred to the ways religion can delay recovery e.g. attributing illness to possession by a Jinn (spirit), also being outcast by their religious leaders for this.<sup>5</sup>

**SHERSS aim 2: To keep under review and revise, where appropriate, the above priorities and recommendations in the light of changing circumstances and experience.**

Progress: This third annual report and revised strategy is evidence that the group is reviewing its priorities.

**SHERSS aim 4: To report annually to the Scottish Government on progress against these priorities and recommendations and on other strategic issues relevant to research on ethnicity and health in Scotland.**

Progress: Reporting has been as above, and through the previous two annual reports.

**SHERSS aim 5: To provide a strategic focus for researchers working in this field in Scotland.**

Progress: The SHERSS conference held in 2012 is likely to have contributed towards a strategic focus. The research activities of individual group members are an important part of the Scottish activity in this field.

**SHERSS aim 6: To maintain and promote awareness of current research and research- related issues relevant to health and ethnicity through the annual report and by other means.”**

Progress: This report and strategy and previous annual reports are intended to contribute to raising awareness.

## **Recent ethnicity and health research activity in Scotland – where, what and who?**

### **Main centres**

Research centres for ethnicity and health in Scotland are located mainly in universities such as Edinburgh and Glasgow and NHSBoards such as Lothian and

Greater Glasgow and Clyde, in the Glasgow-Edinburgh axis, where the largest non-White minority ethnic populations are based.

## Health variations

### *Health status*

In Edinburgh University Centre for Population Health Science (CPHS) Professors Raj Bhopal and Aziz Sheikh lead the Scottish Health Ethnicity Linkage Study (SHELS),<sup>6 16 29-35</sup> which has examined disease specific ethnic differences in hospitalisation and usually also includes mortality.

Research in ethnicity and health is supported by Public Health expertise in the Scottish Government information services directorate, where Dr Colin Fischbacher has carried out SHELS analyses on socio-economic health by ethnicity as well as scrutiny of ethnic variations for specific cardiovascular diseases.<sup>12</sup> The Scottish Health Survey (SHeS) aggregated analysis<sup>36</sup> reported that cardiovascular disease prevalence was higher in Pakistani people than some groups but lower than White British. That was perhaps rather surprising, but point prevalence of type II diabetes was the highest in people of Pakistani and Indian ethnicity. There is Scottish involvement in research based on English populations around cultural integration and better mental health<sup>14</sup> and parenting and well-being in minority ethnic adolescents.<sup>15 37</sup> This is through the University of Glasgow Social and Public Health Sciences Unit (SPHSU). The Scottish Health Survey (SHeS) aggregated analysis<sup>36</sup> showed that Pakistani people had one of the highest levels of well-being but were among the least likely to rate their health as good or very good (pp14-15). Research on stigma reduction for people with mental health issues, especially migrants and ethnic minorities, has been carried out using community based participatory research.<sup>38 39</sup> This has led to a national mental health arts and film festival which has been evaluated over a six year period (2007-2013), led by Neil Quinn, senior lecturer, and Lee Knifton, senior research fellow, at the University of Strathclyde.<sup>40</sup>

*Risk thresholds and factors – including obesity, vitamin D deficiency*

Suggestions of biological ethnic differences in BMI risk thresholds for diabetes are now being substantiated by research from the University of Glasgow.<sup>41</sup> An English-based comparison study of women in Surrey and Aberdeen concluded that vitamin D deficiency in Asian women at more northerly latitudes (Aberdeen) was a public health concern.<sup>42</sup> Scottish research published in 2011 found symptomatic vitamin D deficiency, including bowed legs, was prevalent in 2008 in the west of Scotland largely in minority ethnic children.

## Health behaviours

In the University of Glasgow Social and Public Health Sciences Unit (SPHSU) Professor Seeromanie Harding heads a programme on child, family and adolescent health behaviours<sup>43-47</sup> and sexual and mental health.<sup>15 37</sup> The programme has a commitment to UK/English research programmes such as Determinants of Adolescent Sexual Health (DASH) and the DiEt and Active Living (DEAL) studies.<sup>43-47</sup>

Additional research steered by the Black and Ethnic Minority Infrastructure in Scotland working group (BEMIS)<sup>1</sup> has mapped dietary patterns. BEMIS is the national Ethnic Minorities led umbrella organisation supporting the development of the Ethnic Minorities Voluntary Sector in Scotland and Community Food and Health (Scotland).<sup>48</sup>

### *Transferring lessons on achieving good health between ethnic groups*

SHELS found that minority ethnic groups of each sex had lower risk (age standardised rate ratio) of all cancer than the White Scottish population.<sup>32</sup> Similarly the best cardiovascular health was in Chinese people, but the poorest was seen in Asian, especially Pakistani people, although mortality was not poorer in Pakistanis.<sup>30</sup> Research on ethnic differences in breastfeeding in relation to deprivation<sup>49-51</sup> has been carried forward by researcher 'Tomi Ajetunmobi at Glasgow Centre for

---

<sup>1</sup> <http://bemis.org.uk/index.html>



Population Health (GCPH). This found an increase in breastfeeding in deprived areas between 2003-2009 was in part attributable to more mothers of non-British birth. SHELS has covered a number of aspects of maternal health. A key finding suggested the White Scottish had the lowest age adjusted breast feeding rates.<sup>32</sup> Other ethnic groups were c.1.5 to 2 fold better. Other Scottish research has also found higher rates of breastfeeding in non-White mothers.<sup>52 53</sup> Such better health and health behaviours in ethnic minority populations could be further assessed for their transferability to benefit the majority population.

## Health services

### *Cultural competence and access*

SHELS uncovered Inequalities in breast screening uptake between ethnic groups which especially affected South Asian and Black women.<sup>31</sup> The Centre for Population Health Science, led by Professor Bhopal and Professor Aziz Sheikh, has worked on improving the cultural competence of services by reviewing<sup>19</sup> the adaptation<sup>17</sup> of health promotion interventions for ethnic minorities and testing these for smoking<sup>40;41</sup> for type 2 diabetes.<sup>22 23</sup> Added attention has been given to end of life needs.<sup>54</sup> Other research has explored ethnic views on recruitment into research studies.<sup>55</sup> Further Scottish work on cultural competence includes understanding the importance of patients' cultural background in dementia care,<sup>56</sup> and the importance of maintaining hope in end of life care.<sup>57</sup> The most recent migrants in minority ethnic groups had the poorest access to these services.<sup>54</sup>

Evaluations of usage across a wide range of public services and health needs assessments are undertaken by councils and health boards. Lothian Health Board has spearheaded access and needs research for Eastern European migrants, focusing on maternal health<sup>58</sup> and cancer screening.<sup>59</sup> Likewise Lothian effort has revealed for all minority ethnic groups a lower uptake of retinopathy screening than in the general population.<sup>60</sup> Drug misuse services were the focus of partnership evaluations in Aberdeen<sup>61</sup> and in Glasgow.<sup>62</sup> There are indications that health

variations between ethnic groups need a response from a range of Scottish public services but that discrimination in treatment is not a major factor once the health system has been accessed.<sup>63</sup> Improving service access in appropriate person centred ways for the relevant minority ethnic groups is emphasised in current policy.

### *Care experience*

Scottish government research and development programmes include the assessment of care experience. Analyses by ethnic group were carried out for both primary<sup>64</sup> and secondary care.<sup>65</sup> In secondary care there were generally no differences in the experiences of White and non-White groups, but on seven aspects non-White people reported a better experience and on three aspects a worse experience. In primary care, there was a weak ethnic effect in 19 of 39 questions, where Asian groups tended to report a less positive experience.

## **Research support**

### *Routine information*

There is an enduring improvement in the inclusion in routine data of ethnic identifiers in support of research on ethnic variations for hospital inpatients and outpatients.<sup>1 4 66</sup> New efforts to make these improvements in primary care are also now being developed in NHS Lothian by the Additional Needs and Diversity Information Task Force (ANDI-TF). The new National 30 month universal child developmental assessment ought to provide a valuable routine data source in the future.

### *Research methods*

SHELS has demonstrated the value of data linkage methods in researching variations in the health status of population groups. Calls for the further development and use of linkage methods have resulted.<sup>67</sup> There has been some work by Dr Fatim

Lakha, Dr Dermot Gorman and colleagues on a research method<sup>68</sup> using surnames to identify the ethnicity of patients of ethnic minority heritage in Lothian.

## 2014-19 SMEHRS strategy

### Introduction

The SMEHRS strategy for 2014-9 is written in a context of rapidly changing ethnic demographics in Scotland and the UK. The 2011 census has recently reported on ethnicity.<sup>69</sup> Among the White groups, the White Scottish ethnic group reduced from 88% to 84% of the population from 2001 to 2011. White Other British remained stable (8% in 2011 compared to 7% in 2001). The other White groups were coded as Other White and White Irish in 2001 when they comprised 2% of the population. For 2011 the new codings were White Irish, White Polish, White Gypsy / Traveller and Other White, these comprised 4% of the population. The new codes were not fully comparable owing to a difference in answer options 2001-2011. The Non-White ethnic groups ('minority ethnic' is the census term) were 4% of the population in 2011, compared to 2% in 2001. Asian was the largest minority ethnic group at 2.7% of the population, up from 2.0% in 2001. Pakistani was the largest group among Asians (0.9% of the population). African, Caribbean or Black formed 0.6% of the total population in 2011, Mixed or Multiple groups accounted for 0.4%, and Other ethnic groups (including Arab) amounted to 0.3%.

Country of birth results from the 2011 census suggested that 93% of the people in Scotland were born in the UK, and 83% were born in Scotland. Of those not born in Scotland, 63% arrived between 2001 and 2011, 38% were aged 20-29 years on arrival and 44% had less than 5 years' residence.

From the 2011 census results for national identity, 62% of the Scottish population felt Scottish only and 2% felt English only. The percentage feeling Scottish varied by council area from under 49% in the City of Edinburgh to over 72% in West Dunbartonshire.

For language spoken at home, the 2011 census showed that 1.2% of the population aged 3 years and over was reportedly unable to speak English well. Scots (1%), Polish (1%) and Gaelic (0.5%) were the most common languages other than English used at home.

### **SMEHRS Strategic aims 2014-19**

The refreshed strategic aims now agreed by SMEHRS based on the evidence and experience detailed above are as follows:

1. Strengthen leadership, capability and collaborative infrastructure between the academic and public sectors for knowledge exchange in order to influence policy, practice and further enquiry, reflecting the changing population make-up of Scotland (and countries of comparative interest).
2. Harness the emerging possibilities of research linkage in enabling population-wide, comparative and intersectional research, reflecting the determinants of health for all ethnic groups.
3. Identify and advocate priorities for health research relating to ethnic minority and migrant groups. Early priorities in the context of ethnic and migrant health will be to address the gaps in knowledge and understanding of children's comparative health and wellbeing, and intergenerational studies.
4. Encourage and conduct further public service related research including person-centred studies; health needs assessment; access to, moving through and outcomes from all relevant public services; implications of diversity for the public sector workforce, including as employees in fair employment, as migrant workers and as service providers.
5. Review and refocus the governance of the group to reflect changing leadership, scope and focus of research, specifically to include the health and needs of migrants.

## Concluding remarks

After reflecting on progress over the last three years, SMEHRS will not focus as much on increased recording of ethnicity in routine data in future, because efforts to date have reached a plateau, and data linkage with other datasets is now seen as the most useful approach because of the high quality of census data and the availability of the 2011 census results. Instead SMEHRS will increase its efforts to persuade the Scottish Government and Information Services Division of the feasibility and value of including an ethnic identifier in the successor to the CHI index. SMEHRS will continue the SHERSS role of coordination, supporting the use of routine data and providing a focus for research, emphasising collaboration with international public health bodies such as the European Public Health Association.

SMEHRS members will continue to be active in ethnicity and health research, and continue involving other researchers through bids for research grants. In addition, if there is a change of focus to include more small scale qualitative research the group may wish to consider expanding its membership to include more qualitative research capacity and refreshing representation from the voluntary sector.

SMEHRS will continue to observe Scottish Health and ethnicity research, and act as a conduit for the transfer of information on this to the Scottish Government, and as a focus for debate of current knowledge on the health of research in the field. It will also continue its role in facilitating peer to peer discussion and debate through its conferences. Responding to grant competitions is one way of ensuring research is seen as relevant to policy, but influencing the debates that drive priorities and determine the knowledge needed from research to inform policy decisions is equally important.

SMEHRS now intends to move forward into a new era of expanded data linkage, allowing more powerful research, and addressing ethnicity in a more subtle and nuanced way through encouraging finer grained research taking more account of migrant health and the interactions between ethnicity and other equality dimensions,

and through qualitative research to develop explanatory hypotheses. Running through this new direction there will be a focus on identifying factors likely to underlie good health that may be transferable to groups with poorer health.

## Reference List

- (1) NHS Health Scotland. Review of equality health data needs in Scotland. Internet 2012; Accessed: 2013 Aug 1; Available from: URL: <http://www.scotpho.org.uk/publications/reports-and-papers/920-review-of-equality-health-data-needs-in-scotland>
- (2) MacIntyre S. Inequalities in Health in Scotland: What are they and what can we do about them? Internet 2007; Accessed: 2012 May 25; Available from: URL: <http://www.sphsu.mrc.ac.uk/reports/OP017.pdf>
- (3) Millard AD, Raab G, Eaglesham P, Craig P, McCartney G. Does the socio-economic gradient in all-cause mortality apply across equality subgroups in Scotland? 2013 Nov 7; 2013.
- (4) Millard A, Guthrie C, Fischbacher C, Jamieson J. Pilot ethnic analysis of routine hospital admissions data and comparison with census linked data: CHD rates remain high in Pakistanis. *Ethnicity and Inequalities in Health and Social Care* 2013;5(3):98-107. <http://www.emeraldinsight.com/journals.htm?issn=1757-0980&volume=5&issue=3&articleid=17086535&show=abstract>.
- (5) Reetoo N, Shirjeel S, Khan S, Bhui K, Sashidharan S. Good Practice in Mental Health Service Provision. 2013 Oct 26; Glasgow: West of Scotland Ethnicity Network; 2013.
- (6) Bhopal R, Fischbacher C, Povey C, Chalmers J, Mueller G, Steiner M, et al. Cohort profile: Scottish health and ethnicity linkage study of 4.65 million people exploring ethnic variations in disease in Scotland. *International Journal of Epidemiology* 2011 Oct;40(5):1168-75. <http://ije.oxfordjournals.org/content/40/5/1168.full>.
- (7) Scottish Government. Core and Harmonised Questions. 2011. [www.scotland.gov.uk/Topics/Statistics/About/SurveyHarm/corealldownload](http://www.scotland.gov.uk/Topics/Statistics/About/SurveyHarm/corealldownload).
- (8) Gruer L. Scottish Health and Ethnicity Research Strategy Steering (SHERSS) group, First Annual report. 2011. <http://www.healthscotland.com/uploads/documents/18297-SHERSS%20annual%20report.pdf>  
[Reprint:](#)
- (9) Gruer L. Scottish Health and Ethnicity Research Strategy Steering (SHERSS) Group Second Annual report 2012. 2013. <http://www.healthscotland.com/documents/20809.aspx>.  
<http://www.diversityrx.org/resources/scotlands-strategy-ethnicity-and-health-research-latest-information-may-2013>  
[Reprint:](#)
- (10) Information Services Division. Equality and Diversity Web pages. Internet 2013; Accessed: 2013 Aug 1; Available from: URL: <http://www.isdscotland.org/Health-Topics/Equality-and-Diversity/>
- (11) SHERSS. Current or recently completed research on Ethnicity and Health in Scotland: SHERSS members update. NHS Health Scotland; 2011. <http://www.healthscotland.com/uploads/documents/17053-researchUpdateSHERSSmembers5Oct2011.pdf>.
- (12) Fischbacher CM, Cezard G, Bhopal RS, Pearce J, Bansal N. Measures of socioeconomic position are not consistently associated with ethnic differences in cardiovascular disease in Scotland: methods from the Scottish Health and Ethnicity Linkage Study (SHELS).

International Journal of Epidemiology 2013 Dec 19;43(1):129-39.  
<http://ije.oxfordjournals.org/content/43/1/129>.

- (13) Bhui K, Harding S. Ethnic inequalities in mental health status and care: unravelling the determinants and consequences. Editors' foreword. *Ethnicity & Health* 2012;17(1-2):1-2.
- (14) Bhui KS, Lenguerrand E, Maynard MJ, Stansfeld SA, Harding S. Does cultural integration explain a mental health advantage for adolescents? *International Journal of Epidemiology* 2012 Feb 25. <http://ije.oxfordjournals.org/content/early/2012/04/11/ije.dys007.abstract>.
- (15) Maynard M, Harding S. Ethnic differences in psychological well-being in adolescence in the context of time spent in family activities. *Soc Psychiat Epidemiol* 2010;45(1):115-23. <http://dx.doi.org/10.1007/s00127-009-0047-z>.
- (16) Bansal N, Bhopal R, Netto G, Lyons D, Steiner MFC, Sashidharan SP. Disparate patterns of hospitalisation reflect unmet needs and persistent ethnic inequalities in mental health care: the Scottish health and ethnicity linkage study. *Ethnicity & Health* 2013 Jul 11;1-23. <http://dx.doi.org/10.1080/13557858.2013.814764>.
- (17) Davidson EM, Liu JJ, Bhopal RS, White M, Johnson MRD, Netto G, et al. Consideration of ethnicity in guidelines and systematic reviews promoting lifestyle interventions: a thematic analysis. *The European Journal of Public Health* 2013 Jul 26. <http://eurpub.oxfordjournals.org/content/early/2013/07/26/eurpub.ckt093.abstract>.
- (18) Netto G, Bhopal R, Lederle N, Khatoon J, Jackson A. How can health promotion interventions be adapted for minority ethnic communities? Five principles for guiding the development of behavioural interventions. [Review] [31 refs]. *Health Promotion International* 2010 Jun;25(2):248-57.
- (19) Liu J, Davidson E, Bhopal R, White M, Johnson M, Netto G, et al. Adapting health promotion interventions to meet the needs of ethnic minority groups: mixed-methods evidence synthesis. *Health Technology Assessment* 2012;16(44):1-469. [www.hta.ac.uk/execsumm/summ1644.htm](http://www.hta.ac.uk/execsumm/summ1644.htm).
- (20) Scottish Government. Mental Health Strategy for Scotland: 2012-2015. Internet 2012; Accessed: 2013 Jul 19; Available from: URL: <http://www.scotland.gov.uk/Publications/2012/08/9714/downloads#res398762>
- (21) Scottish Refugee Council. New Scots: Integrating Refugees in Scotland's Communities. Scottish Government; 2013. <http://www.scotland.gov.uk/Publications/2013/12/4581>.
- (22) Douglas A, Bhopal R, Ruby Bhopal R, Forbes JF, Gill JMR, McKnight J, et al. Design and baseline characteristics of the PODOSA (Prevention of Diabetes & Obesity in South Asians) trial: a cluster, randomised lifestyle intervention in Indian and Pakistani adults with impaired glycaemia at high risk of developing type 2 diabetes. *BMJ Open* 2013; Available from: URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3586081/>
- (23) Bhopal RS, Douglas A, Wallia S, Forbes JF, Lean MEJ, Gill JMR, et al. Effect of a lifestyle intervention on weight change in south Asian individuals in the UK at high risk of type 2 diabetes: a family-cluster randomised controlled trial. *The Lancet Diabetes & Endocrinology* . 23-12-2013. <http://linkinghub.elsevier.com/retrieve/pii/S2213858713702043>. Abstract
- (24) Begh R, Aveyard P, Upton P, Bhopal R, White M, Amos A, et al. Promoting smoking cessation in Pakistani and Bangladeshi men in the UK: a cluster randomised controlled trial



of trained community outreach workers. *Trials* [Electronic Resource] 2011;(12):197.  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3177779/pdf/1745-6215-12-197.pdf>.

- (25) Douglas A, Bhopal RS, Bhopal R, Forbes JF, Gill JM, Lawton J, et al. Recruiting South Asians to a lifestyle intervention trial: experiences and lessons from PODOSA (Prevention of Diabetes & Obesity in South Asians). *Trials* [Electronic Resource] 2011;12:220.  
<http://www.trialsjournal.com/content/12/1/220#B22>.
- (26) Gill JM, Bhopal R, Douglas A, Wallia S, Bhopal R, Sheikh A, et al. Sitting time and waist circumference are associated with glycemia in U.K. South Asians: data from 1,228 adults screened for the PODOSA trial. *Diabetes Care* 2011 May;34(5):1214-8.
- (27) Samsudeen BS, Douglas A, Bhopal RS. Challenges in recruiting South Asians into prevention trials: health professional and community recruiters' perceptions on the PODOSA trial. *Public Health* 2011 Apr;125(4):201-9.  
<http://www.sciencedirect.com/science/article/pii/S0033350611000333>.
- (28) The Scottish Ethnicity and Health Research Strategy Working Group. Health in our Multi-ethnic Scotland: Future Research Priorities. Internet 2008; Available from: URL:  
<http://www.healthscotland.com/documents/3768.aspx>
- (29) Bhopal RS, Bansal N, Fischbacher C, Brown H, Capewell S. Ethnic variations in chest pain and angina in men and women: Scottish Ethnicity and Health Linkage Study of 4.65 million people. *European Journal of Cardiovascular Prevention & Rehabilitation* 2011 Oct 5.  
<http://cpr.sagepub.com/content/early/2011/10/05/1741826711425775.abstract>.
- (30) Bansal N, Fischbacher CM, Bhopal RS, Brown H, Steiner MF, Capewell S, et al. Myocardial infarction incidence and survival by ethnic group: Scottish Health and Ethnicity Linkage retrospective cohort study. *BMJ Open* 2013 Sep 1;3(9).  
<http://bmjopen.bmj.com/content/3/9/e003415.abstract>.
- (31) Bansal N, Bhopal RS, Steiner MFC, Brewster DH. Major ethnic group differences in breast cancer screening uptake in Scotland are not extinguished by adjustment for indices of geographical residence, area deprivation, long-term illness and education. *Br J Cancer* 2012 Apr 10;106(8):1361-6. <http://dx.doi.org/10.1038/bjc.2012.83>.
- (32) Bhopal RS, Bansal N, Steiner M, Brewster DH, on behalf of the Scottish Health and Ethnicity Linkage Study. Does the Scottish effect apply to all ethnic groups? All-cancer, lung, colorectal, breast and prostate cancer in the Scottish Health and Ethnicity Linkage Cohort Study. *BMJ Open* 2012 Jan 1;2(5). <http://bmjopen.bmj.com/content/2/5/e001957.abstract>.
- (33) Bhopal RS, Bansal N, Fischbacher CM, Brown H, Capewell S. Ethnic variations in the incidence and mortality of stroke in the Scottish Health and Ethnicity Linkage Study of 4.65 million people. *European Journal of Cardiovascular Prevention & Rehabilitation* 2011 Sep 20. <http://cpr.sagepub.com/content/early/2011/09/14/1741826711423217.abstract>.
- (34) Bhopal RS, Bansal N, Fischbacher CM, Brown H, Capewell S, Scottish Health and Ethnicity Linkage Study. Ethnic variations in heart failure: Scottish Health and Ethnicity Linkage Study (SHELS). *Heart* 2012 March; Accessed: 2013 Jul 30;98(6):468-473. Available from: URL:  
<http://heart.bmj.com/content/early/2012/01/26/heartjnl-2011-301191.short>
- (35) Bhopal RS, Rafnsson SB, Agyemang C, Fagot-Campagna A, Giampaoli S, Hammar N, et al. Mortality from circulatory diseases by specific country of birth across six European countries: test of concept. *European Journal of Public Health* 2012 Jun;22(3):353-9.

- (36) Scottish Government. Scottish Health Survey Topic Report: Equality Groups. 2012. <http://www.scotland.gov.uk/Publications/2012/10/8988/4>.
- (37) Maynard MJ, Harding S. Perceived parenting and psychological well-being in UK ethnic minority adolescents. *Child: Care, Health and Development* 2010 Sep 1;36(5):630-8. <http://dx.doi.org/10.1111/j.1365-2214.2010.01115.x>.
- (38) Quinn N, Knifton L. Positive Mental Attitudes: how community development principles have shaped a ten-year mental health inequalities programme in Scotland. *Community Development Journal* 2012 Oct 1;47(4):588-603. <http://cdj.oxfordjournals.org/content/47/4/588.abstract>.
- (39) Quinn N. Participatory action research with asylum seekers and refugees experiencing stigma and discrimination: the experience from Scotland. *Disability & Society* 2013 Mar 25;29(1):58-70. <http://dx.doi.org/10.1080/09687599.2013.769863>.
- (40) Quinn N, Shulman A, Knifton L, Byrne P. The impact of a national mental health arts and film festival on stigma and recovery. *Acta Psychiatrica Scandinavica* 2011 Jan 1;123(1):71-81. <http://dx.doi.org/10.1111/j.1600-0447.2010.01573.x>.
- (41) Ntuk UE, Mackay DF, Gill JMR, Sattar S, Pell JP. Ethnic specific obesity cut-offs for diabetes risk: Cross-sectional study of 489,690 UK Biobank participants.: University of Glasgow; 2013.
- (42) Macdonald HM, Mavroei A, Fraser WD, Darling AL, Black AJ, Aucott L, et al. Sunlight and dietary contributions to the seasonal vitamin D status of cohorts of healthy postmenopausal women living at northerly latitudes: a major cause for concern?.[Erratum appears in *Osteoporos Int.* 2011 Sep;22(9):2473-4]. *Osteoporosis International* 2011 Sep;22(9):2461-72. <http://web.ebscohost.com/ehost/detail?sid=a9acef78-06e5-47ad-abe8-c229c2420782%40sessionmgr198&vid=1&hid=118&bdata=JnNpdGU9ZWZw3QtbGI2ZQ%3d%3d#db=mnh&AN=21085934>.
- (43) Maynard M, Baker G, Rawlins E, Anderson A, Harding S. Developing obesity prevention interventions among minority ethnic children in schools and places of worship: The DEAL (DiEt and Active Living) study. *BMC Public Health* 2009;9(1):480. <http://www.biomedcentral.com/1471-2458/9/480>.
- (44) Harding S, Maynard MJ, Adamson A, Anderson AA, Mutrie N, Petticrew M, et al. Final report: obesity in ethnic minority children and adolescents - developing acceptable parent and child-based interventions in schools and places of worship. Public Health Research Consortium; 2011. Report No.: PHRC Short Report 15. [http://phrc.lshtm.ac.uk/project\\_2005-2011\\_b607.html](http://phrc.lshtm.ac.uk/project_2005-2011_b607.html). [http://phrc.lshtm.ac.uk/papers/PHRC\\_B6-07\\_Short\\_Report.pdf](http://phrc.lshtm.ac.uk/papers/PHRC_B6-07_Short_Report.pdf)  
[Reprint:](#)
- (45) Harding S, Whitrow M, Lenguerrand E, Maynard M, Teyhan A, Cruickshank JK, et al. Emergence of Ethnic Differences in Blood Pressure in Adolescence: The Determinants of Adolescent Social Well-Being and Health Study. *Hypertension* 2010 Apr 1;55(4):1063-9. <http://hyper.ahajournals.org/content/55/4/1063.abstract>.
- (46) Whitrow M, Harding S, Maynard M. The influence of parental smoking and family type on saliva cotinine in UK ethnic minority children: a cross sectional study. *BMC Public Health* 2010;10(1):262. <http://www.biomedcentral.com/1471-2458/10/262>.

- (47) Whitrow M, Harding S. Asthma in Black African, Black Caribbean and South Asian adolescents in the MRC DASH study: a cross sectional analysis. *BMC Pediatrics* 2010;10(1):18. <http://www.biomedcentral.com/1471-2431/10/18>.
- (48) BEMIS Scotland. Strengthening food work across ethnic minority communities: A focus on maternal and infant nutrition. Internet 2013; Available from: URL: <http://www.communityfoodandhealth.org.uk/wp-content/uploads/2013/02/cfhs-bemis-maternal-infant-nutrition-report.pdf>
- (49) Ajetunmobi O, Whyte B, Chalmers J, Fleming M, Stockton D, Wood R. Informing the 'early years' agenda in Scotland: understanding infant feeding patterns using linked datasets. *Journal of Epidemiology and Community Health* 2013 Oct 15. <http://jech.bmj.com/content/early/2013/10/15/jech-2013-202718.abstract>.
- (50) Ajetunmobi O, Whyte B. Deprivation and infant feeding at birth. *Archives of Disease in Childhood* 2012 May 1;97(Suppl 1):A183-A186. [http://adc.bmj.com/content/97/Suppl\\_1/A183.2.abstract](http://adc.bmj.com/content/97/Suppl_1/A183.2.abstract).
- (51) Ajetunmobi O, Whyte B. GCPH Breastfeeding Project: Investigation of breastfeeding rates in deprived areas. Literature review. Glasgow Centre for Population Health; 2012. [http://www.gcph.co.uk/assets/0000/3206/Breast\\_Feeding\\_Literature\\_review\\_vsFinal6.pdf](http://www.gcph.co.uk/assets/0000/3206/Breast_Feeding_Literature_review_vsFinal6.pdf)  
Reprint:
- (52) Skafida V. Juggling work and motherhood: the impact of employment and maternity leave on breastfeeding duration: a survival analysis on Growing Up in Scotland data. *Maternal & Child Health Journal* 2012 Feb;16(2):519-27. <http://web.ebscohost.com/ehost/detail?sid=94bb041b-b19f-4455-8970-bb428fe974e8%40sessionmgr110&vid=1&hid=117&bdata=JnNpdGU9ZWZwhvc3QtbGI2ZQ%3d%3d#db=rzh&AN=2011428076>.
- (53) Uppal V, Young SJ. Smoking and ethnic group, not epidural use, determine breast feeding outcome. *Anaesthesia* 2010 Jun;65(6):652. <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2044.2010.06358.x/pdf>.
- (54) Worth A, Irshad T, Bhopal R, Brown D, Lawton J, Grant E, et al. Vulnerability and access to care for South Asian Sikh and Muslim patients with life limiting illness in Scotland: prospective longitudinal qualitative study.[see comment]. *BMJ* 2009;338:b183. <http://www.bmj.com/content/338/bmj.b183?view=long&pmid=19190015>.
- (55) Rooney LK, Bhopal R, Halani L, Levy ML, Partridge MR, Netuveli G, et al. Promoting recruitment of minority ethnic groups into research: qualitative study exploring the views of South Asian people with asthma. *Journal of Public Health* 2011 Dec;33(4):604-15.
- (56) Mullay S, Schofield P, Clarke A, Primrose W. Cultural diversity and dementia in Scottish care homes. *British Journal of Nursing* 2011 Jun 24;20(12):716-20. <http://web.ebscohost.com/ehost/pdfviewer/pdfviewer?sid=938a7510-1f22-48b1-8e82-da8a6a386beb%40sessionmgr11&vid=2&hid=10>.
- (57) Kristiansen M, Irshad T, Worth AF, Bhopal R, Lawton JF, Sheikh A. The practice of hope: a longitudinal, multi-perspective qualitative study among South Asian Sikhs and Muslims with life-limiting illness in Scotland. *Ethnicity & Health* 2013;(1465-3419 (Electronic)). <http://www.tandfonline.com/doi/full/10.1080/13557858.2013.858108>.

- (58) Bray JK, Gorman DR, Dundas K, Sim J. Obstetric care of new European migrants in Scotland: an audit of antenatal care, obstetric outcomes and communication. *Scottish Medical Journal* 2010 Aug;55(3):26-31.
- (59) Libby G, Bray J, Champion J, Brownlee LA, Birrell J, Gorman DR, et al. Pre-notification increases uptake of colorectal cancer screening in all demographic groups: a randomized controlled trial. *Journal of Medical Screening* 2011;18(1):24-9.  
<http://msc.sagepub.com/content/18/1/24.full.pdf+html>.
- (60) Grant S. Diabetes Minority Ethnic Group (DMEG) Progress Report. DMEG sub-group of the Scottish Diabetes Group (SDG) 2012; Accessed: 2013 May 15; Available from: URL: <http://www.diabetesinscotland.org.uk/Publications/DMEG%20summary%20report%20Nov%202012.pdf>
- (61) Miller C. Multi-Ethnic Recovery Equality Project Aberdeen (MEREP) Final Report. Aberdeen:Drugs Action; 2011.  
<http://www.drugsaction.co.uk/~docs/MEREP%20Final%20Report%20March%202011.pdf>.
- (62) Reetoo N, Shirjeel S. My story with addictions: An insight in to the road to recovery: South Glasgow minority ethnic community and problematic drug use. Internet 2012; Accessed: 2013 Aug 1; Available from: URL: <http://www.crer.org.uk/publications/my-story-with-addictions>
- (63) Fischbacher CM, Bhopal R, Steiner M, Morris AD, Chalmers J. Is there equity of service delivery and intermediate outcomes in South Asians with type 2 diabetes? Analysis of DARTS database and summary of UK publications. *Journal of Public Health* 2009 Jun;31(2):239-49. <http://www.ncbi.nlm.nih.gov/pubmed/19196794>.
- (64) Boyd G, David S, Hodgkiss F. Scottish Patient Experience Survey of GP and Local NHS Services 2011/12 Volume 3: Variation in the Experiences of Primary Care Patients. Internet 2013; Accessed: 2013 Aug 1; Available from: URL: <http://www.scotland.gov.uk/Publications/2013/03/2822/0>
- (65) Boyd G, Hodgkiss F. Scottish Inpatient Patient Experience Survey 2010, Variations in the Experiences of Inpatients in Scotland: Analysis of the 2010 Scottish Inpatient Survey. Edinburgh. Internet 2011; Available from: URL: [www.scotland.gov.uk/Publications/2011/08/29131615/0](http://www.scotland.gov.uk/Publications/2011/08/29131615/0)
- (66) Douglas A, Bhopal R, Glover J, Robinson J. Improving levels of patient ethnicity monitoring in Lothian, Scotland: is 90% valid coding a feasible target? Internet 2012; Available from: URL: <http://www.healthscotland.com/documents/21006.aspx>
- (67) Anandan C, Gupta R, Simpson CR, Fischbacher C, Sheikh A. Epidemiology and disease burden from allergic disease in Scotland: analyses of national databases. *Journal of the Royal Society of Medicine* 2009 Oct;102(10):431-42.  
<http://web.ebscohost.com/ehost/pdfviewer/pdfviewer?sid=2e9a60aa-f1bd-4f00-9097-352bfb3f8612%40sessionmgr114&vid=2&hid=10>.
- (68) Lakha F, Gorman DR, Mateos P. Name analysis to classify populations by ethnicity in public health: validation of Onomap in Scotland. *Public Health* 2011 Oct;125(10):688-96.  
<http://www.sciencedirect.com/science/article/pii/S0033350611001508#>.
- (69) National Records of Scotland. 2011 Census: Key Results on Population, Ethnicity, Identity, Language, Religion, Health, Housing and Accommodation in Scotland - Release 2A. Internet

2013; Accessed: 13 A.D. Oct 14; Available from: URL:  
<http://www.scotlandscensus.gov.uk/documents/censusresults/release2a/StatsBulletin2A.pdf>

