



supporting blind and
partially sighted people



Glasgow Eye Health Community Engagement Project

Eye Health Equity Profile

December 2010

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1. Acknowledgements

Special thanks to the following contributors:

Gozie Joe Adigwe, RNIB, for invaluable signposting to people and information crucial to the compilation of this report.

Paula Barton, NHSGGC, for preparing the maps featured in the report.

Merav Kliner, NHS Bradford and Airedale, for providing text on UK vision policy and risk factors.

Anna Matthews, NHSGGC, for writing the literature review section (section 6).

David Sawers, NHSGGC, for providing data on the diabetic retinopathy screening service.

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2. Executive Summary

Aim

This report aimed to provide information currently known about the prevalence of the four main eye conditions, the availability and uptake of services, and the felt needs of the adult black and minority ethnic community in Glasgow. The profile also highlights gaps in information and makes recommendations for addressing these gaps.

Method

Following a literature scan, routinely-collected data on the population of Glasgow and the use of eye health care services were explored for their utility for the Equity Profile.

Key Findings

- Glasgow has a diverse population experiencing extreme relative deprivation but also areas of extreme affluence.
- Glasgow has ten neighbourhoods with minority ethnic populations of at least 12% of the total population. The most densely populous area for minority ethnic residents is in the South East of Glasgow.
- There are no GPs with a Special Interest (GPwSI) in ophthalmology in Glasgow City.
- Eye examinations take place in community optometry practices across the city, with the highest frequency of activity clustered around the main shopping precincts. The data do not allow exploration according to residence of patient.
- The Diabetic Retinopathy Screening service provides almost 57,000 appointments per year. Data validation checks are required before further exploration is possible.
- Requests for language support (interpreting) from optometry services are very few (89 for 2008/9) given the size of the minority ethnic population.
- There are no good prevalence data for the main eye conditions in the minority ethnic population for Glasgow. There are limitations to the estimates provided by the National Eye Health Epidemiology Model (NEHEM).
- 5,743 residents of Glasgow City are registered as having a visual impairment. This represents 9.8 per 1000 of the population, compared to 6.6 per 1000 for the whole of Scotland.
- Quality and Outcomes Framework (QOF) data from general practitioners gives some indication of the prevalence of risk factors (coronary heart

disease, diabetes, hypertension and smoking), but there are limitations in the application of these data.

- Examination of Scottish Morbidity Record (SMR) data suggests an increase in inpatient admissions for cataract and glaucoma, and a decreased likelihood to fail to attend outpatient appointments with relative socioeconomic deprivation. The influence of ethnicity could not be examined due to poor completion rates.
- There have been no significant service audits or qualitative research projects to date that could inform the equity profile.

Recommendations

1. Literature on patterns of uptake of services in minority ethnic groups. There is a paucity of locally-relevant literature on eye health in minority ethnic groups. Any projects that could contribute to knowledge regarding the prevalence of eye health problems and the uptake of eye health services by members of the population from minority ethnic backgrounds should be written up for publication and disseminated as widely as possible to the community of interest.
2. Population of Greater Glasgow and Clyde. Whilst we have good data on relative social deprivation, it is difficult to robustly describe our population in terms of ethnicity due to the lack of regular data monitoring. Given the relatively rapid pace of change in our population in recent years, data projections such as those carried out at Glasgow City Council should continue to be updated.
3. Uptake of community services – eye examinations. If GOS(S)1 forms are to serve the dual purposes of eliciting payment for services and allowing population monitoring, centralised data systems need to be modified and protocols put in place to ensure uniformity of practitioner approach to form completion.
4. Uptake of community services – language support provision. Qualitative work should be conducted to better understand the low use of interpreting services and alternative strategies that non-English speaking residents employ.
5. Eye epidemiology - NEHEM. The National Eye Health Epidemiology Model (NEHEM) should be developed to its full potential employing ongoing user feedback.
6. Registration of sight impairment. A range of useful demographic characteristics, primarily ethnicity, should be included in visual impairment registration.
7. Risk factor data. The potential to use the Quality and Outcomes Framework (QOF) as a true population surveillance tool should be explored.

8. Uptake of acute services. The potential in SMR data should be fully exploited ensuring that relevant demographic characteristics including ethnicity, are always collected and available for analysis.
9. Eye epidemiology & service use. There is a lack of useful prevalence data or service use data that may provide indications of prevalence. For the purposes of the Community Engagement Project, a bespoke data collection exercise should be undertaken to allow a robust estimate of prevalence of the main eye conditions in the minority ethnic population.
10. Service audit. The advisory group should seek to compile knowledge of all small-scale pieces of service audit work which are current and relevant to the CEP. The advisory group should act as a catalyst to bring together small projects with common goals in the interest of the CEP.
11. Qualitative research. A robust piece of qualitative research should be commissioned to fully explore the felt needs of the minority ethnic population in Glasgow and these findings fed into planning and policy decision-making.
12. Conclusion. This equity profile should be regularly reviewed by the Advisory Group and refreshed if and when recommendations for improvements in the available data are implemented.

Next steps

The Advisory Group for the Glasgow Ethnic Minority Eye Health project will take forward two pieces of work:

- An interrogation of GP data systems to ascertain more accurate prevalence rates of the four main eye conditions;
- A bespoke prospective data collection exercise in optometrist practices in key areas of Glasgow to help ascertain prevalence of the four main conditions and service use by people with minority ethnic backgrounds.

These data will enhance the information provided in this report and directly inform the Community Engagement Project.

3. Introduction

Eye health is an issue that receives little direct attention in public health policy in Scotland. But the major public health problems which are the focus of national policy, such as diabetes, obesity, and mental health problems, are inextricably linked to eye health. Furthermore, these problems are only likely to increase in coming years as the population ages. The RNIB has worked with the Scottish Government to develop a strategy around prevention of avoidable sight loss, and like broader public health policy, there is an emphasis on addressing health inequality. Whilst recent years have seen Scotland's health improving overall, there is also an increasing gap between the health of the most advantaged people and the most disadvantaged. This is most apparent in the Greater Glasgow and Clyde area, which includes 46% of Scotland's most socioeconomically deprived areas and its most extreme health problems. It also has the only significant minority ethnic population in Scotland, which in some areas (intermediate datazones) of the city reaches almost 50% of the total population.

This report focuses on our current knowledge of prevalence of eye health problems and provision / uptake of services in Black and Minority Ethnic groups in Greater Glasgow and Clyde.

3.1 Aim and objectives

The eye health equity profile aims to provide information currently known about the prevalence of the four main eye conditions, the availability and uptake of services, and the felt needs of the adult black and minority ethnic community in Glasgow. The profile will also highlight gaps in information and make recommendations for addressing these gaps.

Specific objectives of the profile are:

- To profile the eye health needs of adults in the black and minority ethnic (BME) community of Glasgow in terms of:
 - a) Prevalence of four main conditions – age-related macular degeneration (AMD), diabetic retinopathy (DR), cataract and glaucoma (normative need);
 - b) Uptake of optometry and ophthalmology services (including DR screening) (expressed need).
- To describe the availability of optometry and ophthalmology services (including DR screening), and to compare this to assessed need;

- To review the outcomes of local qualitative research studies to ascertain the views of members of the community on their need (felt need) and their perception of services;
- To make recommendations for:
 - a) further research to augment the above information;
 - b) amendments to routine data collection to enhance available information;
 - c) local action to be developed as part of the Community Engagement Project;
 - d) influencing local commissioning and care pathways.

4. Methods

4.1 Background literature

Given the availability of a number of published and RNIB reviews of the literature on this subject, it was agreed by the advisory group that a new review would not be included in this report. Instead, existing reviews were used to establish key background information with primary sources being accessed wherever possible. Key points from relevant policy have also been included.

4.2 Data

Most of the data presented below is extracted from routine information systems that exist within NHS Greater Glasgow and Clyde, the Information and Statistics Division (ISD) of NHS Scotland, or other public bodies (including the General Registry Office). These sources are acknowledged where relevant throughout the report. Information on diabetic retinopathy screening was supplemented with data from the screening coordinator on location of clinics and numbers of assessments.

4.3 Other research

In order to establish the existence of any local work relevant to the objectives of this report, contact was made with local partners, such as NHS GGC Clinical Effectiveness teams, and other key personnel known to the advisory group. A brief literature search was conducted to ascertain the presence of any relevant qualitative research projects.

Further detail on all methods are given in sections below, where relevant.

5. Policy Background

Whilst public health policy in Scotland does not directly address prevention of avoidable sight loss, its priorities are closely related to eye health.

5.1 Better Health, Better Care (2007)

“We want to help people to sustain and improve their health, especially in disadvantaged communities, ensuring better, local and faster access to health care” (Scottish Executive, Aug 2007^a).

This is the opening statement of the ‘Better Health, Better Care’ discussion document which was followed three months later by a detailed action plan. It focuses on three components: health improvement, tackling health inequality and improving the quality of health care, and it emphasises patient experience, the need for best value, and the need to be realistic and responsive to the changes in our population and trends in health and wellbeing.

Among the priorities for action highlighted in this key policy document are: Mental health and wellbeing; smoking; diet, physical activity and healthy weight. ‘The case for strategic investment in eye health services’ (RNIB, 2009), makes a clear link between each of these areas and eye health. Further, of the fifteen national outcomes agreed following the development of ‘Better Health, Better Care’, three demonstrate how specific attention to eye health is necessary.

- We live longer, healthier lives
- We realise our full economic potential and increase employment opportunities
- We tackle inequalities in Scottish society

5.2 Equally Well (2008)

“Scotland’s health is improving. But there are big differences between rich and poor. In 2006, men could on average expect 67.9 years of healthy life and women 69 years. In the most deprived 15% of areas in Scotland, though, men could only expect 57.3 years of healthy life and women 59 years” (Scottish Executive, 2008^b).

^a <http://www.scotland.gov.uk/Publications/2007/08/13165824/2>

^b <http://www.scotland.gov.uk/Publications/2008/06/25104032/0>

Subsequent to the publication of 'Better Health, Better Care', the Ministerial task force on health inequalities produced their report 'Equally Well' focusing on tackling both the causes and consequences of health inequalities in Scotland. Its priorities include the area of mental health and the 'big killer' diseases of cancer and coronary heart disease – again the link to eye health is clearly set out by the RNIB⁹.

Equally Well makes little comment on the role of ethnicity in health inequalities, and acknowledges that this is largely due to lack of good information. A 'stocktake' exercise of the cultural competence of NHS services led to the publication of the Fair for All (2002) action plan, providing guidance to NHS organisations across five major strands of policy so that "whatever the individual circumstances of people's lives, including age, gender, ethnicity, disability, religion, sexual orientation, mental health, economic or other circumstances, they have access to the right health services for their needs" (Scottish Executive, 2003^c). However, as the Equally Well paper points out, it is too soon to assess the success of developments that have occurred since Fair for All was published. Our routine data systems don't provide sufficient information on health inequalities, and one of the recommendations of the Task Force is:

"The Government should commission a review of health data needs which covers gender, ethnicity, age, disability, religion and belief, sexual orientation and transgender. The review should be published and include a plan of action with milestones to fill information gaps identified."

This work is being carried out by Health Scotland and is due to report early in 2011.

5.3 UK Vision Strategy

The UK Vision Strategy (Vision 2020 UK, 2009^d) was launched in 2008. It was developed in line with the World Health Assembly VISION 2020 resolution to reduce avoidable blindness by the year 2020 and improve support and services for blind and partially sighted people. In keeping with the UK Vision Strategy, RNIB have adopted a new five-year strategy in part addressing the prevention of unnecessary sight loss. In particular, this strategy looks to reduce the rates of avoidable sight loss for people who are

^c <http://www.scotland.gov.uk/Publications/2003/02/16476/18734>

^d <http://www.vision2020uk.org.uk/UKVisionstrategy/>

most at risk, those from Caribbean, African or South Asian origin, and people on low income, in addition to improving access to treatment for those diagnosed with sight-threatening conditions^e.

5.4 Review of Community Eye Care Services (Scotland)

The Review of Community Eyecare Services was commissioned in March 2004 to consider the full range of community services available. The Interim Report published in 2005 make several key recommendations with regard to the redesign of community eyecare services which led to major change in the General Ophthalmic Services (GOS) Regulations to uniformly improve the quality of care within optometric practices across Scotland. Other key recommendations included the establishment of eyecare networks across Scotland and the implementation of new Ophthalmology Care Pathways. A particular emphasis was given to blind and partially sighted people in Scotland and to make recommendations for modernising the system to ensure that it meets individual needs. The Final Report was published in December 2006 and included detailed recommendations with the emphasis on the delivery of integrated services, provided locally.

In December 2007, The Scottish Government committed to the implementation of the Review of Community Eyecare Services through the investment of £2.6 million 'pump prime' funding to help establish local Low Vision Networks. The pilot projects that resulted, combined with the significant investment in optometry services, led to some important achievements:

- Systematic development of Integrated Low Vision Networks throughout Scotland with partnership structures and leadership well established;
- Improved referral pathway and access to local services;
- Reduced waiting lists for low vision aids through sharing of budgets and improved coordination;
- Involvement of multidisciplinary professionals and service users in the planning and development of services;
- Audit and benchmarking activity in place to support continuous improvement.

A number of areas were identified however where further work is required. These include:

^e Content provided by Merav Kliner, NHS Bradford & Airdale.

- Promotion of effective low vision schemes;
- Emotional and practical support, at the point of diagnosis;
- Workforce planning;
- Sharing of best practice models in Transition Services;
- Service Development within Ethnic Minority communities;
- Improved referral pathways.

The principles within the Review have now been embedded within the Scottish Vision Strategy (RNIB Scotland, Eye Care Scotland and Optometry Scotland, 2008) and partnership arrangements are in place offering local leadership and governance.

5.5 Scottish Vision Strategy

In 2008, RNIB Scotland, Optometry Scotland and Eye Care Scotland (representing professional ophthalmologists, orthoptists and optometrists working in acute care) launched the Scottish Vision Strategy document with wide ranging support from across the statutory and voluntary sector. The Strategy signalled a step change aimed at making a real and lasting difference to the eye care of the people of Scotland and to improving the lives of those who have lost some or all of their sight.

The three strategic objectives are:

- To improve the eye health of the people of Scotland.
- To eliminate avoidable sight loss and deliver excellent support to those with a visual impairment.
- To enhance the inclusion, participation and independence of blind and partially sighted people.

These are naturally broad and aspirational objectives, and considerably more detail on specific deliverable improvements is provided in the accompanying action plan^f. Ethnicity is not a major theme: references to health inequality tend to refer to the disability of visual impairment. One of the priorities for action is given as:

“Removing cultural, geographical and financial barriers to eye health and sight loss services. This should prioritise disadvantaged groups

^fhttp://www.vision2020uk.org.uk/ukvisionstrategy/core/core_picker/download.asp?id=47&filetitle=Scotland+Implementation+Plan+%2D+Pdf

whose take up of services is low and who may be at higher risk of sight loss. This includes people with complex needs, those from Black and Minority Ethnic groups, people with disabilities, and older people (p8).”

This perhaps emphasises the scale of the task regarding health inequality in Scotland. The policies outlined here demonstrate a commitment of the Scottish Government, the NHS, the RNIB and partners to focus attention on the inequality in service provision and outcome for minority ethnic populations. But the minority ethnic population of Scotland is only 2% of the total population and it is easy for these goals to be overshadowed by the significant health problems and larger disadvantaged groups. But as ‘The case for strategic investment in Eye Care Services Scotland’ points out, to overlook avoidable sight loss is to create greater health inequality and a much bigger public health problem than already exists. Whilst the minority ethnic population of Scotland is relatively small, we have a statutory obligation to ensure our services are accessible to all as made clear in the Fair for All / Equally Well agenda.

6 Literature on current patterns of preventable eye health conditions in the UK

This report focuses on the four most prevalent eye conditions in adults in the UK. This section will outline what is known about each condition, including prevalence in the minority ethnic population.

6.1 Age Related Macular Degeneration

Age related macular degeneration (AMD) refers to the breakdown of retinal membranes¹. Vision loss is associated with the late forms of AMD of which there are two types. Dry AMD is when thinning of the macula occurs and results in blurring of the vision; unfortunately there is currently no cure for this¹. Wet AMD, which can follow on from dry AMD, is when new fragile blood vessels which are susceptible to haemorrhage are formed. This can result in the loss of central vision. Treatments which aim to preserve the retina, such as intra-ocular injection and laser treatment, are available for Wet AMD¹. Treatment, however, is appropriate for few and, at best, halts the progression of the disease².

Cigarette smoking, age and some genetic elements are well-established risk factors. It is also thought that alcohol, obesity, hypertension, myopia, iris colour and white European ethnicity may be risk factors and antioxidant

nutrients and omega-3 fatty acids may be protective (The Royal College of Ophthalmology, 2009)^g.

AMD is the most common cause of adult blind registration in many developed countries, including the United Kingdom². In 2003 it was estimated that there were 172,000 people registered with Dry AMD in the UK and 245,000 registered with Wet AMD². AMD is by far the leading cause of all-ages certifications for blindness in the UK, in 1999/2000 it accounted for 57.2% of blind registrations in England and Wales³.

6.2 Diabetic Retinopathy

Diabetic Retinopathy (DR), a specific microvascular complication of diabetes⁴, can occur in both insulin dependent and non-insulin-dependent diabetics⁵. It is the leading cause of blindness in the working age group in the UK. The prevalence of DR increases with duration of diabetes, and nearly all persons with type 1 diabetes and more than 60% of those with type 2 have some retinopathy after 20 years⁴. It has a rapid progression and if left untreated, of those progressing to the late stages of the disease 50% will be blind within 2 years⁶.

Type 1 diabetes is genetic whilst type 2 depends of lifestyle factors. Risk factors for type 2 diabetes are low socioeconomic status, ethnic minority, increasing age, family history, obesity and hypertension (Diabetes UK, 2010). The prevalence of DR at diagnosis of diabetes is 0-3% for type 1 and 6.7-30.2% for type 2 (The Royal College of Ophthalmologists, 2005)^h.

Glycaemic control is the most effective strategy for preventing and delaying the progression of diabetic retinopathy. Glycaemic control is associated with a 76% and 54% reduction in the incidence and progression of diabetic retinopathy respectively. This strategy, together with blood pressure control remains the only proven effective primary intervention for diabetic retinopathy⁷.

Early detection of diabetic retinopathy and laser treatment can halve the risk of sight loss, hence the importance of screening programmes¹. However, a 2009 Tower Hamlets PCT report showed that 30-40% of patients invited for screening failed to attend⁸.

^g Content provided by Merav Kliner, NHS Bradford & Airdale.

^h Content provided by Merav Kliner, NHS Bradford & Airdale.

Scotland has a well structured and effective national diabetic retinopathy screening collaborative developed over the past 5 years⁹. A single program with a common published standardⁱ using single national software and image grading performed by the trained and accredited graders, who are quality assured both internally and externally, is in place⁹. During 2008-09 83% of eligible individuals were successfully screened⁹.

6.3 Cataract

Cataracts are cloudy formations which occur in the lens of the eye. This occurs through the break down of the proteins found in the lens. If left untreated they can result in sight loss. Treatment involves surgical intervention to remove the affected lens and replace with a substitute lens, which can be done as a day case¹.

Cataract development is the leading cause of blindness worldwide.¹⁰

Risk factors for cataracts include: increased age, South Asian ethnicity, and diabetes mellitus. There is weak evidence to suggest that UV-B, antioxidants, Vitamin C and E, smoking and alcohol may lead to cataract formation (Thompson, 2004). There are no diets or medical treatments that prevent the development of cataracts (The College of Optometrists, 2010; Thompson, 2004)^j.

6.4 Glaucoma

The glaucomas are a range of disorders that are characterised by optic disc cupping, visual field loss and an intraocular hypertension sufficient to damage the eye³. There are a number of glaucomas, however, two main categories distinguish different aspects of the condition: 1) Primary Open Angle Glaucoma (POAG); and 2) Primary Closed Angle Glaucoma (PCAG)¹.

POAG is the most common condition which is chronic and difficult to detect, but progression of the condition will result in permanent loss of vision¹.

Conversely PCAG is much less common but more acute and can cause severe and rapid permanent loss of vision¹. Therefore, left untreated Glaucoma progresses until irreversible blindness occurs. Hence, outcome is largely dependent on the stage of Glaucoma at presentation.

ⁱ <http://www.nhshealthquality.org/nhsqis/1287.html>

^j Content provided by Merav Kliner, NHS Bradford & Airedale.

Risk factors include ocular hypertension, increasing age, positive family history, myopia and Afro-Caribbean and South Asian ethnicity (College of Optometrists, 2009)⁶.

Glaucoma accounts for approximately 10% of sight registrations in the UK¹¹. It is estimated that in the UK about 2% of people older than 40 have chronic open angle glaucoma, and this rises to almost 10% in people older than 75¹⁰. The management of POAG and ocular hypertension accounts for approximately 25% of general ophthalmologists follow up attendances and 15% of new referrals, and cases require long-term follow up.¹²

6.5 What do we know about current patterns of these conditions in minority ethnic groups?

The current literature on minority ethnic groups is not established enough to provide an agreed, comprehensive and reliable source of information on the prevalence of partial sight and blindness⁹. However, there is a growing body of literature which highlights the greater risk of selected eye diseases due to ethnicity.

The risk of Glaucoma increases with age and is consistently higher in the black population^{10,13}. The presence of Glaucoma in the white population is estimated at 1-2% of those over 40, and approximately 4% of the over 80's¹⁴. Chronic Glaucoma is approximately 4 times more common, is more severe, and also develops at an earlier age in individuals of Black African or Black Caribbean descent^{15,16}. Asian populations, including South Asians, are another high risk group¹⁷.

The Asian population has a significantly higher prevalence of age-related cataract¹⁸. A rate of 30% aged under 60 years, compared to 3% in the Caucasian population. In the age group greater than 60 years there is a rate of 78% in the Asian population compared to 54%. The age of onset of cataract seems to be earlier in the Asian population¹⁸.

The higher risk rates for diabetes among populations of South Asian origin may be expected to be associated with higher rates of diabetic retinopathy¹⁹. There is an increased prevalence of non-insulin-dependent diabetes in people with South Asian (three-fold) and Afro-Caribbean origin (10-fold) in Britain compared with the Caucasian population¹⁹. A study in Bradford compared the rates of Diabetic Retinopathy in South Asians versus a sample of Caucasians²⁰. Higher rates of retinopathy were reported in all age ranges in South Asians relative to Caucasians²⁰.

In 1994 a small pilot study was carried out in Southall to determine the prevalence of ophthalmic conditions within the Indian population¹⁷. This study found that the prevalence of blindness in this Indian community was 2.7%. When compared to the UK registration figure of 0.2% for the prevalence of blindness, this suggests a prevalence of blindness in the Indian population six to seven times higher than the European population in the U.K. A unocular blindness prevalence of 9.8% was found which was similar to studies carried out in developing countries, and the same could be said for the prevalence levels of trachoma within this population study group, at that time.

6.6 Literature on prevalence for Scottish/Glaswegian minority ethnic populations

As shown above a number of studies have demonstrated the prevalence data for the four main eye conditions in different areas and minority ethnic groups within in the UK. While it can be assumed that the prevalence data will be similar within these groups in Scotland and specifically in Glasgow, there is a lack of prevalence data to confirm this assumption.

7 Literature on patterns of uptake of services in minority ethnic groups

There is relative under-use of services for visual impairment among ethnic minorities, particularly among Asians and Afro-Caribbeans. The low uptake of services by ethnic minorities might be associated with low cultural relevance or sensitivity¹⁰.

A Glaucoma equity profile produced by Leeds PCT in 2008 found that in Leeds the three main risk factors for Glaucoma development were age, black ethnic group and living in an area of deprivation²¹. It was noted in census data from 2001 that people of black ethnicity were more likely to live in a deprived area. However, due to poor recording of ethnicity in clinic data, this link was not able to be analysed further, neither was stage of presentation by ethnicity.

Two qualitative studies looking at the barriers to the uptake of services in the older African-Caribbean population of Leeds have been undertaken.^{22,23}

These identify a number of major barriers including lack of awareness of risk, cost of eye tests, distance to optometry and associated transport difficulties, traditional folk practices and poor communication. A qualitative study in Birmingham found similar results²⁴.

As with estimates of prevalence, there is a lack of Glasgow specific data regarding the uptake of eye services in minority ethnic groups.

This section has demonstrated an established literature base regarding the need for improvement of access to eye health services for people from minority ethnic backgrounds in the UK. Data on Glasgow or even Scotland are limited or not available in the published literature. It is likely that small-scale projects are completed on an area or health board level, but are not advanced to peer-reviewed publication.

Recommendation 1: There is a paucity of locally-relevant literature on eye health in minority ethnic groups. Any projects that could contribute to knowledge regarding the prevalence of eye health problems and the uptake of eye health services by members of the population from minority ethnic backgrounds should be written up for publication and disseminated as widely as possible to the community of interest.

8 What can the available data tell us about eye health in minority ethnic groups in Glasgow?

8.1 Population of Greater Glasgow and Clyde

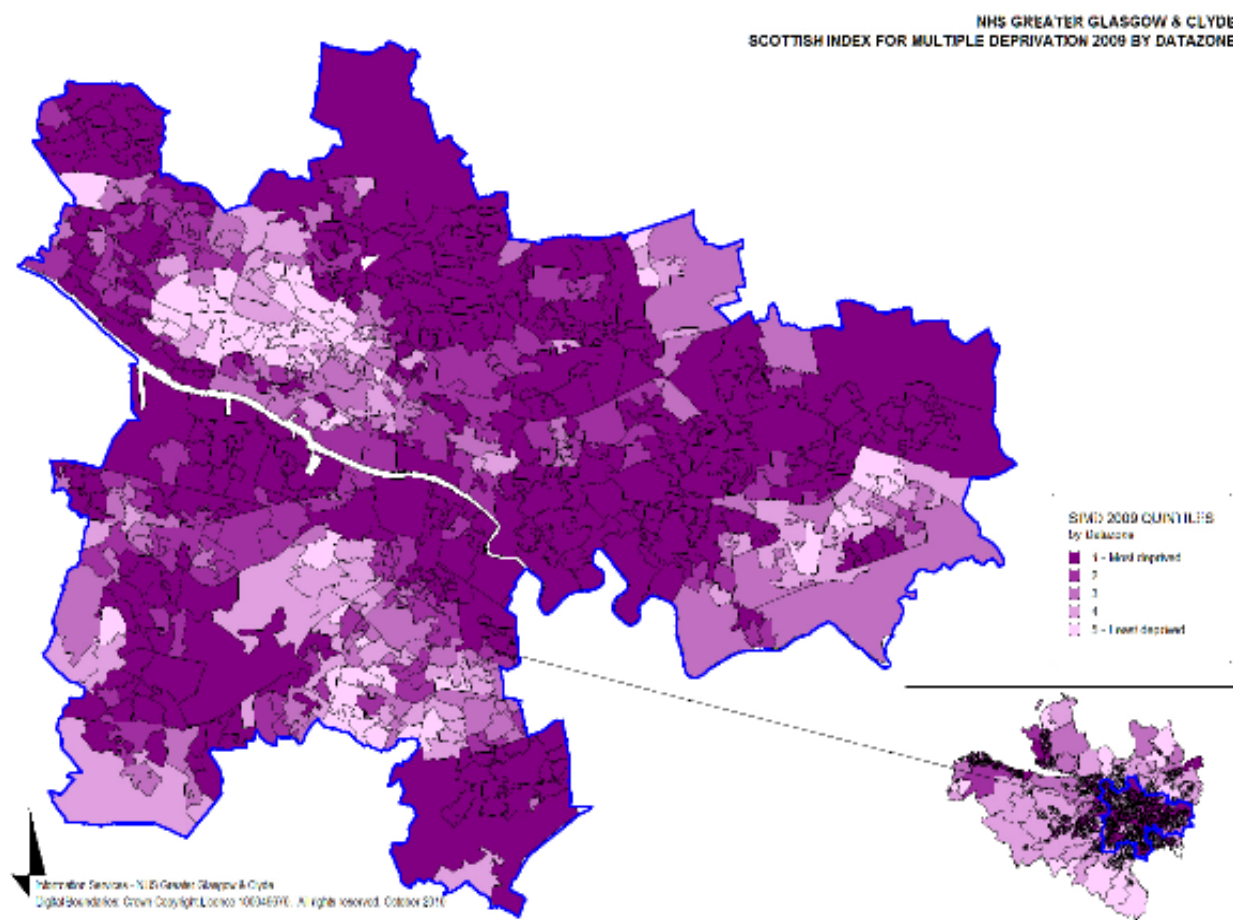
Greater Glasgow and Clyde has a population of 1,199,026. It is the largest health authority region in the UK (23% of the Scottish population) and incorporates a diverse population. Table 1 below shows the age and gender distribution of the population of the full health board area. Glasgow City has a relatively high proportion of young adults in its population, reflecting in part a high student population. In contrast, there are relatively fewer children (0-15 years) and older persons (aged 65 and over) (see Understanding Glasgow website).

Age	Males	Females	All
0 - 4	34,585	32,902	67,487
5 - 9	31,142	30,072	61,214
10 - 14	33,704	31,901	65,605
15 - 19	38,819	36,697	75,516
20 - 24	47,114	45,455	92,569
25 - 29	47,533	45,966	93,499
30 - 34	39,118	38,307	77,425
35 - 39	38,952	42,012	80,964
40 - 44	42,600	47,839	90,439
45 - 49	43,715	48,919	92,634
50 - 54	39,568	42,717	82,285
55 - 59	33,527	35,365	68,892
60 - 64	31,227	33,507	64,734
65 - 69	23,638	27,972	51,610
70 - 74	20,353	26,865	47,218
75 - 79	15,158	23,478	38,636
80 - 84	9,475	16,933	26,408
85 - 89	4,649	10,647	15,296
90+	1,512	5,083	6,595
Total	576,389	622,637	1,199,026

Table 1: 2009 Mid-Year Estimate of NHSGGC Population by age and gender (Source: GROS)

Map 1 below shows the distribution of the population by SIMD (2009). The darkest colours indicate the areas of greatest relative deprivation. Greater

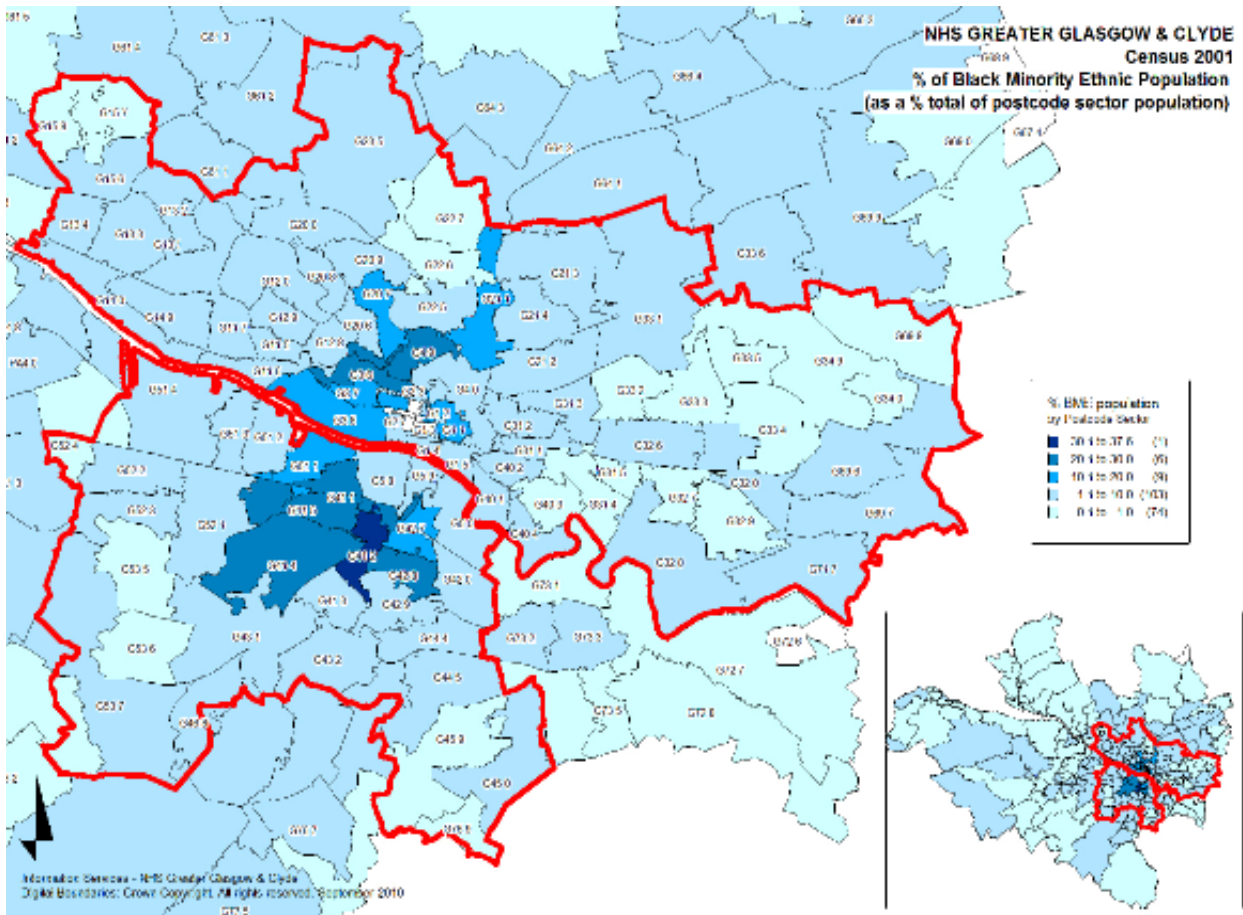
Glasgow and Clyde has 46% of the most deprived households in Scotland, but also has a significant degree of affluence.



Map 1: NHS Greater Glasgow and Clyde by SIMD 2009

Map 2 below shows the distribution of the population according to density of black and minority ethnic groups, as indicated in the 2001 census. It can be seen that there is a particular concentration of minority ethnic groups residing in the south east of the city, with relatively small concentrations in outlying areas.

Data at intermediate zone level (larger than postcode sectors and composed around natural neighbourhoods) show that there are two broad areas in the city with a relatively higher density of minority ethnic groups. The first area in the South East includes Pollokshields East (47.8%), Pollokshields West (30.2%) and Govanhill (19%). The second area is west of the city centre, and includes Hillhead and Woodlands (15.1%) and Yorkhill and Anderston (12%).



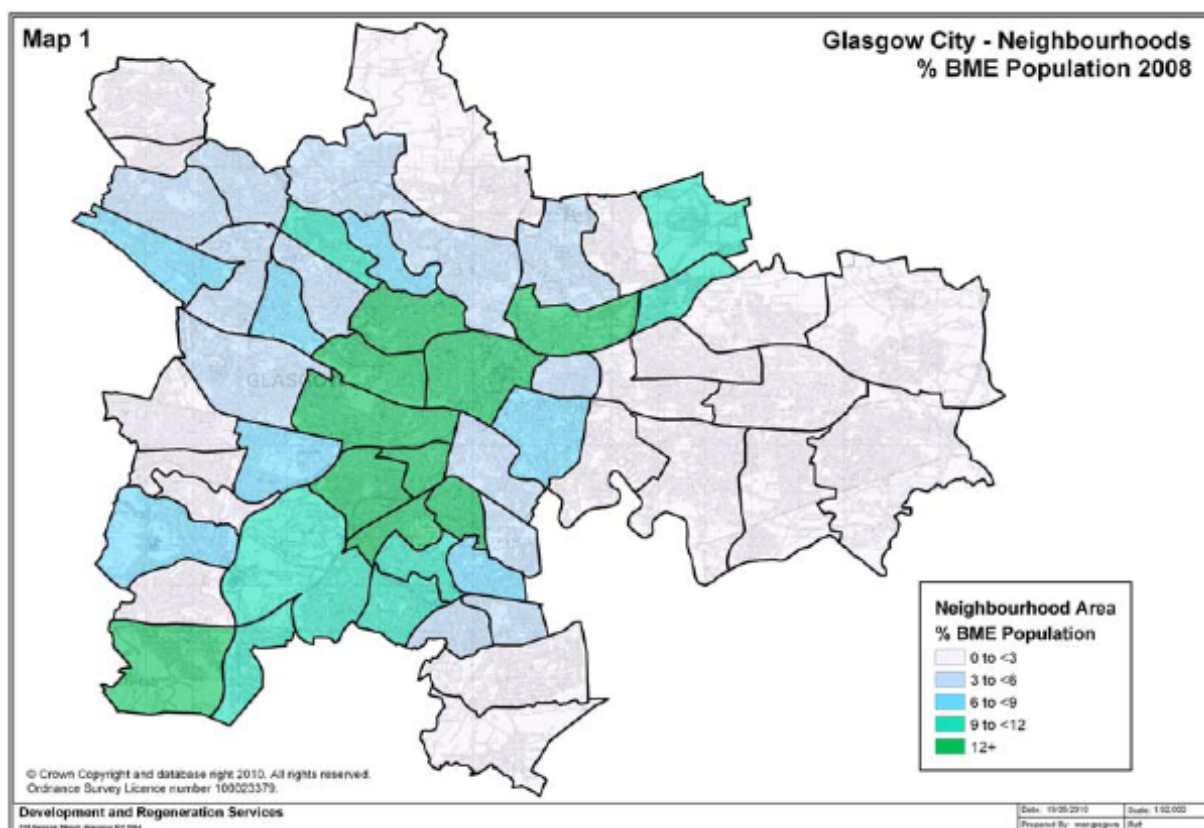
Map 2: NHS Greater Glasgow and Clyde by density of minority ethnic population (Source: Census 2001)

Whilst these two areas of the city remain fairly stable in having the greatest density of minority ethnic residents, there have been changes in the population since the last census that are worthy of note. Recent updated figures suggest there have been significant increases in the non-white populations in each of these areas. The number of areas with more than 12% minority ethnic population density has doubled to ten. Table 2 below shows the areas experiencing the largest rise.

It is clear that the areas of Pollokshields East, Pollokshields West and Govanhill are still significantly more (BME) populous than other areas. But given the rapid rate of change across the city it will be important to continue to monitor other areas. Map 3 below shows the new distribution graphically.

Intermediate Zone	Census 2001	Estimate 2008
Pollokshields East	47.8%	52%
Pollokshields West	30.2%	38%
Govanhill	19%	29%
Nitshill and Darnley	9%	18%
Ibrox and Kingston	11%	18%
Sighthill	11%	17%
Hillhead and Woodlands	15.1%	17%
Yorkhill and Anderston	12%	15%
Arden and Carnwadric	5%	10%

Table 2: Estimated BME population density in Glasgow City areas (source: Glasgow City Council)



Map 3: Estimated distribution of minority ethnic population in Glasgow 2008 (Source: Glasgow City Council)

In summary, the population of Greater Glasgow and Clyde, and specifically Glasgow City, is diverse including high levels of relative deprivation and significant density of people from minority ethnic groups in certain areas.

However, these data are not always collected uniformly within measures (e.g., the options for ethnic minority have been revised for the 2011 census) or across populations: elsewhere the black and minority ethnic grouping may include anyone not identified as white Scottish or white British (therefore including people from countries such as Ireland, Poland or Australia).

Recommendation 2: Whilst we have good data on relative social deprivation, it is difficult to robustly describe our population in terms of ethnicity due to the lack of regular data monitoring. Given the relatively rapid pace of change in our population in recent years, data projections such as those carried out at Glasgow City Council should continue to be updated.

8.2 Eye health services in Glasgow and Clyde

Scottish context – GOS contract

In Scotland a new General Ophthalmic Services (GOS) contract was introduced on the 1st April 2006. Under this contract, optometrists are able to offer a more comprehensive eye examination according to a patient's needs. They are also able to refer directly to hospital eye services if required or manage the eye disorder within the community if appropriate. Under this contract, eye examinations are freely available to all UK residents and is essentially needs driven, working within a regulatory framework. The introduction of the new GOS contract led to a significant increase in the uptake of NHS eye examinations across the country (prior to April 2006 a significant section of the population would have been examined privately).

According to RNIB Scotland⁹:

“The number of [NHS] eye examinations conducted during the year ending 31 March 2007 increased by 64%. This included patients who paid for the eye examination prior to free NHS eye examinations being introduced. Since this initial escalation, the number of free NHS eye examinations has continued to increase year on year, but at a more steady rate; an increase of 3.4% from the year ending 31 March 07 to the year ending 31 March 08 and then a further increase of 6.4% by year ending 31 March 09” (p25).

Statistics specific to Glasgow are difficult to review as 2006 also saw NHS Greater Glasgow merge with part of the old NHS Argyll and Clyde to form NHS Greater Glasgow and Clyde.

General Practitioners with a Special Interest (GPWSI) in ophthalmology

There are only two GPs registered with a special interest in ophthalmology in Greater Glasgow and Clyde. Neither practice is based in an area of high density minority ethnic population. Both are in regions where there is a significant elderly population.

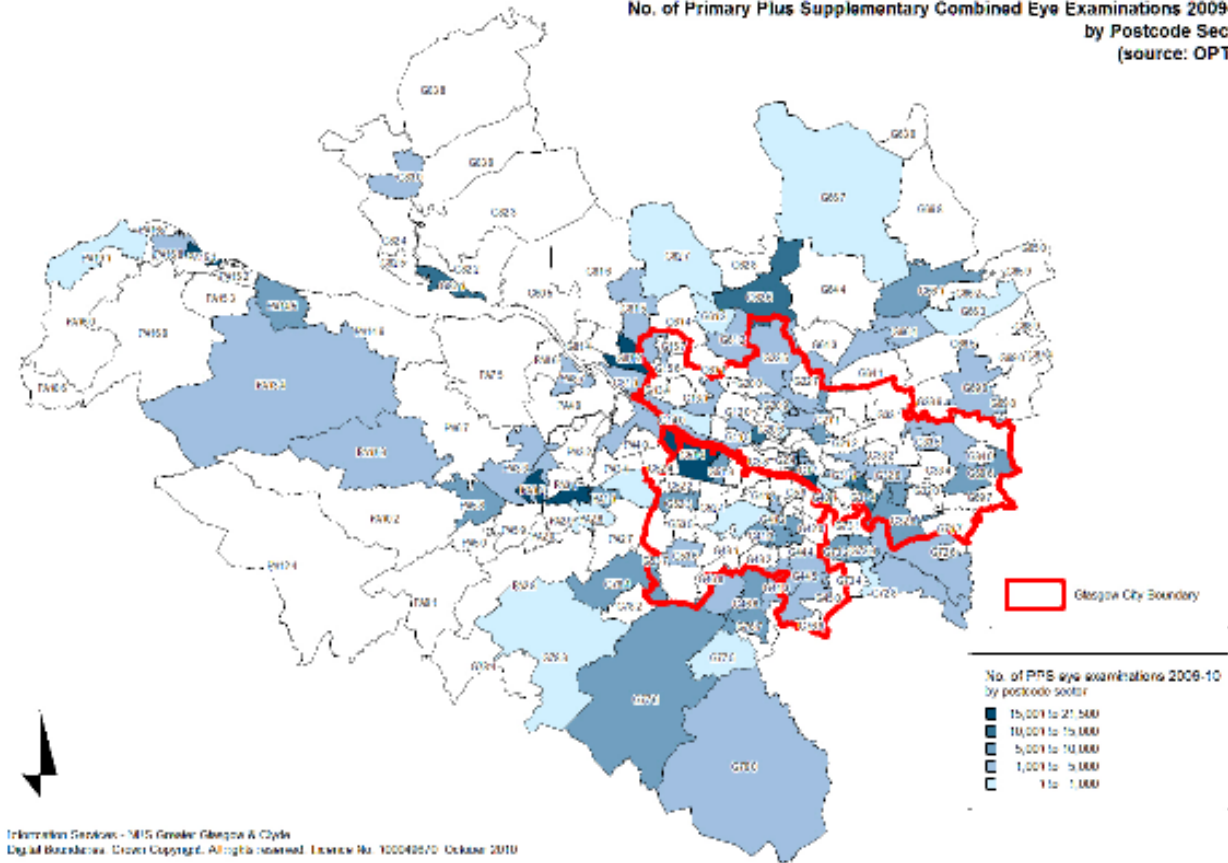
It is felt, however, that the GPWSI scheme has yet to develop in Scotland and that the early seeds of this are now being seen with more young trainees opting to join the scheme.

8.3 Uptake of community services

a. Eye examinations

Interrogating the OPTIX system, the Information Services Division (ISD) of NHS National Services Scotland supplied a list of optometrists and the NHSGGC postcodes associated with each practicing optometrist (an optometrist may practice at multiple postcodes) and in a separate list, the number of (primary & supplementary) eye examinations associated with each NHSGGC postcode. These two lists did not merge completely, e.g., a particular postcode could have associated practicing optometrists but no examinations; and vice versa. This is understandable, as ISD have explained that the OPTIX system was developed for the payment of optometrists and not for this type of data extraction.

For these reasons, the distribution of optometrists across NHSGGC has not been presented and instead Map 4 presents the total (primary plus supplementary) examinations performed during 2009 by postcode of the examination (i.e. not the patient). As might be expected, relatively higher densities are associated with the city and town centres and shopping precincts.



Map 4: Number of Primary Plus Supplementary eye examinations in Glasgow 2009-10 by postcode sector

General Ophthalmic Service (GOS) forms are completed by the optician for services rendered; GOS(S)1 forms are completed for eye examinations. One section of the GOS(S)1 form records the type of patient and these figures are published by ISD and are presented for NHSGGC between 2006-10 (see Table 3).

It should be noted that more than one option can be selected and recorded, accounting for the disparity seen between total options selected and total number of examinations. Any interpretation should also consider that this section of the GOS(S)1 form is not formally audited and that specific options only account for approximately 30% of the returns (the majority having been recorded as ‘none of the above’).

Type of Patient	2006/7	2007/8	2008/9	2009/10
Visually impaired	3120	3307	3359	146
Cataracts	40762	47603	52260	63433
Diabetic	20960	21800	22319	24129
Over 40 glaucoma sufferer/relative	15755	16745	16207	18736
External eye disease	8278	12190	12990	17593
AMD	14866	16832	16979	653
Glaucoma or ocular hypertension	7043	7888	7518	9237
Has BVA, CRE, RPM	-	-	-	27552
Has Macula Problems	-	-	-	26487
Has Neurological Disorder	-	-	-	3090
Has Vitreo-Retinal Problems	-	-	-	7904
None of the above	291605	293802	288014	265833
Total number of options selected	402389	420167	419646	464793
Total number of examinations	384169	402783	425184	427337

Table 3. Numbers of NHSGG&C patient types associated with NHS Eye Examinations 2006-10 (Source: OPTIX).

% NHSGGC Eye Examinations* 2006-10 By Type of Patient
(Source: OPTIX)

* Free NHS eye examinations were extended to all on 1st April 2006

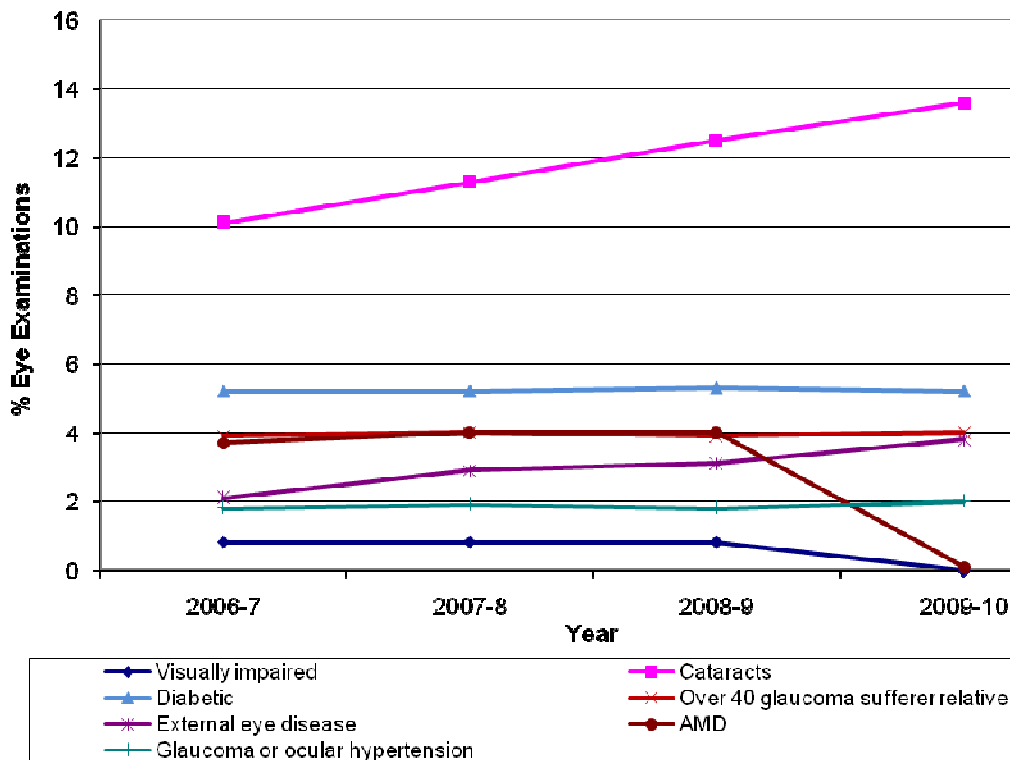


Figure 1: Numbers NHSGG&C Eye Examinations 2007-10 (Source: OPTIX)

The frequency distribution for the options common to the years 2006-10 are presented in Figure 1, which demonstrates an apparent increasing trend for ‘cataracts’ being recorded. The addition during 2009/10 of the options ‘Has BVA, CRE, RPM’, ‘Has Macula Problems’ and ‘Has Vitreo-Retinal Problems’ to the form would appear to have absorbed some of the ‘visually impaired’ and ‘AMD’ patient types.

In summary, the GOS(S)1 forms are potentially useful as a source of routine data. However, they are designed for the purpose of eliciting payment for services, not for epidemiological purposes. There are parts of the form which are not compiled centrally (i.e., individual patient postcode) which limits the extent of meaningful analysis possible. Further, without formal audit it is impossible to say how reliably completed the data fields are.

Recommendation 3: If GOS(S)1 forms are to serve the dual purposes of eliciting payment for services and allowing population monitoring, centralised data systems need to be modified and protocols put in place to ensure uniformity of practitioner approach to form completion.

b. Specialist services

Diabetic retinopathy screening is the only relevant specialist service within the community setting. Table 4 below shows the frequency and size of DRS clinics in Greater Glasgow and Clyde for 2009.

Clinic location	# Weeks	# Days	# Sessions	# Appointments
Glasgow Royal Infirmary	102	400	675	11500
Gartnavel General	102	250	500	8500
Victoria Infirmary	102	250	500	5800
New Sneddon Street, Paisley	97	245	490	6750
Southern General	97	170	295	5150
Greenock Health Centre	46	130	250	3570
Vale of Leven Hospital	12	60	120	1740
Dumbarton Health	24	72	132	1596
Cambuslang Clinic	17	68	125	2000
Clydebank Health	14	70	140	1500
Johnstone Surgeries	13	60	120	1900
Kirkintilloch Health	10	45	85	1500
Barrhead Health Centre	6	27	54	900
Renfrew Health Centre	5	20	40	650
Easterhouse Health	5	20	40	650
Baillieston Health Centre	5	20	40	650
Drumchapel Health	5	25	50	525
Castlemilk Health	5	23	45	650
Milngavie Clinic	5	25	50	525
Jamieson Medical	4	16	30	500
Clarkston Medical	2	7	14	250
Lennoxton Clinic	1	5	10	120
Total	679	2008	3805	56926

Table 4: NHSGG&C DRS clinic activity during 2009 (Source: DRS Service)

Further analyses of DRS data have been suspended while further data validation checks are undertaken.

c. Language support provision

Data compiled by NHS Greater Glasgow and Clyde Corporate Inequalities Team shows how many requests for interpreting services were made in a given time period. These data are compiled in the interests of determining cost to the NHS, so applying these data to all eye health services is difficult as data are not organised according to specialism of clinics in acute sites (major hospitals). We are able to present data on requests for interpreting services made from optometry services in Glasgow and Clyde.

In the year 2008/9 11 optometrists made 89 requests for interpreting services. There were 79 assignments as a result of these requests. Given the density of minority ethnic groups within Glasgow this is highly unlikely to represent the true need for language support in optometry services. The four most commonly requested languages for interpretation from optometrists were Mandarin, Turkish, Sinhalese and Arabic. There was only one request for Punjabi and one for Urdu, despite these being very common first languages for people of South Asian origin in Glasgow. It is likely that family members are used to interpret, or that some optometrists are themselves bilingual. In an established South Asian community such as that in the South of Glasgow there are recognised optometry practices to go to where a bilingual service is available. However, we have no formal record of the extent to which such services exist nor of the proportion of non-English speaking members of the population who use the services.

Recommendation 4: Qualitative work should be conducted to better understand the low use of interpreting services and alternative strategies that non-English speaking residents employ.

8.4 Eye epidemiology

As noted above, there are no reliable prevalence data for eye health problems in the minority ethnic population for NHSGGC. However, the National Eye Health Epidemiological Model (NEHEM) provides estimates of prevalence based on currently understood prevalence rates from the research literature (systematic review) and currently known population composition of stated geographical areas. The prevalence rates are obtained from combinations of research studies (those most relevant to the UK population) applied to age/sex population estimates in local areas (2001 Census resident populations). Appropriate adjustments were made where prevalence rate estimates were significantly different between sub-groups such as the black or Asian populations. Where age groupings were

incompatible or not quoted, statistical regression techniques were used to estimate prevalence (also where open-ended age ranges e.g. 80+).

The accuracy of the NEHEM estimates has been necessarily constrained by using the 2001 Census resident populations in order to ensure consistency across the UK. Perhaps more accurate estimates can be generated once the 2011 Census resident populations are available, but until then Tables 5a-d present the figures generated using the NEHEM for the populations in each of the local authority areas in NHSGG&C.

Local Authority	AMD	%	NV-AMD	%	Geog. Atrophy	%	Drusen	%
East Dunbartonshire	775	2.07	547	1.4	269	0.72	3913	10.46
East Renfrewshire	693	2.31	489	1.63	243	0.81	3269	10.89
Glasgow City	4491	2.54	3161	1.79	1585	0.90	20366	11.51
Inverclyde	692	2.36	487	1.66	243	0.83	3235	11.04
North Lanarkshire	2045	2.04	1441	1.44	713	0.71	10410	10.39
Renfrewshire	1274	2.19	899	1.54	445	0.76	6199	10.66
South Lanarkshire	2174	2.17	1532	1.53	760	0.76	10688	10.67
West Dunbartonshire	727	2.36	512	1.66	256	0.83	3401	11.04

Table 5a: The NEHEM estimates for prevalence of age-related macular degeneration in NHSGGC local authorities

The NEHEM quotes no confidence intervals for age-related macular degeneration prevalence due to the alleged robustness of the EUREYE Study²⁵ which provided the source data. This was a large (>5000 participants), multi-centre, population-based cross-sectional study with retrospective and current exposure measurements. It included seven study centres from Norway, Estonia, Northern Ireland, United Kingdom, France, Italy, Greece and Spain. However, it only provides prevalence figures for those aged ≥ 65 , so back projections were needed to provide estimates for those aged 50-65. Acceptable confidence intervals for these back projections would have helped reassure end users. Still of concern (response from NEHEM outstanding) is why the wet and dry figures do not sum to the total (this could be explained by rounding errors but then why do the wet and dry percentages quoted not sum to the total percentages).

Applying the NEHEM, identifies the highest age-related macular degeneration prevalence in Glasgow City, Inverclyde and West Dunbartonshire (see Table 5a).

Local Authority	Impaired Vision	%	Low Vision	%	Severe Sight Impairment	%
East Dunbartonshire	1299	3.47	1114	2.98	182	0.49
East Renfrewshire	1148	3.82	979	3.26	165	0.55
Glasgow City	7415	4.19	6312	3.57	1072	0.61
Inverclyde	1146	3.91	977	3.33	165	0.56
North Lanarkshire	3422	3.42	2936	2.93	475	0.47
Renfrewshire	2119	3.64	1812	3.12	301	0.52
South Lanarkshire	3623	3.62	3100	3.09	511	0.51
West Dunbartonshire	1203	3.91	1026	3.33	173	0.56

Table 5b: The NEHEM estimates for prevalence of impaired vision, low vision and severe sight impairment in NHSGG&C local authorities

Low vision was defined as best corrected binocular visual acuity of <6/18. The NEHEM quotes no confidence intervals for low vision prevalence due to the alleged robustness of the source data²⁶. The Evans study²⁶ did not have estimates for ages <75 and so an exponential trend was fitted to the data in order to estimate the prevalence in five year age bands from 50 to 74. Acceptable confidence intervals for these back projections would have helped reassure end users.

Applying the NEHEM, identifies the highest low vision prevalence in Glasgow City, Inverclyde and West Dunbartonshire (see Table 5b).

Extrapolating from source data²⁷, confidence intervals for the glaucoma estimates have been provided but would appear to be extremely wide.

Applying the NEHEM, identifies the highest glaucoma prevalence in Glasgow City, Inverclyde and West Dunbartonshire (see Table 5c).

Local Authority	Glaucoma	%
East Dunbartonshire	916 (95% CI 556 - 1288)	1.32 (95% CI 0.80 - 1.85)
East Renfrewshire	773 (95% CI 472 - 1092)	1.35 (95% CI 0.82 - 1.91)
Glasgow City	4829 (95% CI 2997 - 6916)	1.38 (95% CI 0.86 - 1.98)
Inverclyde	755 (95% CI 462 - 1069)	1.4 (95% CI 0.86 - 1.98)
North Lanarkshire	2448 (95% CI 1479 - 3451)	1.24 (95% CI 0.75 - 1.75)
Renfrewshire	1456 (95% CI 884 - 2055)	1.31 (95% CI 0.80 - 1.85)
South Lanarkshire	2509 (95% CI 1525 - 3541)	1.31 (95% CI 0.79 - 1.84)
West Dunbartonshire	797 (95% CI 487 - 1129)	1.36 (95% CI 0.83 - 1.92)

Table 5c: The NEHEM estimates for prevalence of glaucoma in NHSGG&C local authorities

Local Authority	Cataract (High)	%	Cataract (Low)	%
East Dunbartonshire	3297	6.09	849	1.57
East Renfrewshire	2776	6.29	744	1.69
Glasgow City	17326	6.83	4774	1.88
Inverclyde	2733	6.62	740	1.79
North Lanarkshire	8744	6.02	2226	1.53
Renfrewshire	5227	6.29	1375	1.65
South Lanarkshire	9023	6.22	2357	1.62
West Dunbartonshire	2875	6.50	775	1.75

Table 5d: The NEHEM estimates for prevalence of cataracts in NHSGG&C local authorities

The NEHEM distinguishes between two definitions of cataracts providing high and low estimates. The upper estimate uses a study²⁸ based on 3,271 residents in Melbourne, Australia; definition encompassing ‘presence of cataract’ in one or both eyes and ‘dissatisfaction with vision’; anyone who had had cataract surgery in both eyes was excluded. The lower estimate uses a study²⁹ based on 2,783 residents in Somerset and Avon, England; definition encompassing visual acuity, vision related quality of life and whether the patients complained of poor vision in conjunction with five lens opacity types.

The lower estimates are perhaps preferred here as they are based on a UK study, stricter case definitions of cataract, vision, and degree of cataract, and

take into account co-morbidity (other ocular disease which may account for 'dissatisfaction with vision' as reported in the higher prevalence study) and probably fit better into the figures for surgically treated cataracts in NHSGG&C.

Both studies adopted different age categories and age ranges; Frost et al included patients >55 whereas McCarty et al included >40. The NEHEM fitted curves to both series and used these estimates on which to base prevalence rates. However, the NEHEM acknowledges that the number of data points were limited (only three in the case of the lower estimates) and the extrapolations to older ages are subject to uncertainty as open ended upper age brackets were used (Frost et al 75+ and McCarty et al 90+).

As before, acceptable confidence intervals for these estimates would have helped reassure end users. Again, applying the NEHEM, identifies the highest low vision prevalence in Glasgow City, Inverclyde and West Dunbartonshire (see Table 5c).

In summary, the NEHEM model is potentially a useful resource for regions where there are no good prevalence estimates of the main eye conditions. Estimates applied to the Glasgow population may not be as reliable as one would hope, given the different parameters used in the source literature, the relatively limited data points, and the lack of acceptable confidence intervals.

Recommendation 5: The NEHEM model should be developed to its full potential employing ongoing user feedback.

Local authority register data for certification of sight impairment

		Under 65		Over 65			per 1000 pop ⁿ
		male	female	male	female	Total	
Glasgow	Visually impaired	723	610	1488	2922	5743	9.8
	<i>Blind</i>	395	350	949	1852	3546	6.0
	<i>Partially sighted</i>	328	260	539	1070	2197	3.7
Scotland	Visually impaired	4809	4074	8508	17101	34492	6.6
	<i>Blind</i>	2648	2190	4801	9303	18942	3.6
	<i>Partially sighted</i>	2161	1884	3707	7798	15550	3.0

Table 6: Registered visually impaired in Glasgow City

According to figures issued by the Scottish Government in October 2010, there are 5,743 people living in Glasgow City who are registered as visually impaired, of whom 3546 are blind and 2197 partially sighted (see Table 6). The vast majority of those registered as visually impaired are over 65 years of age, and in the over-65s women are almost twice as likely to be registered.

The final column in Table 6 shows that Glasgow has 9.8 people per 1000 population who are registered as visually impaired compared to 6.6 per 1000 of the Scottish population as a whole. This may be related to the level of deprivation within Glasgow, and possibly to the high density of minority ethnic populations. Ethnicity is not recorded as part of the visual impairment registration system, so it is not possible to report any further breakdown of these figures.

Recommendation 6: A range of useful demographic characteristics, primarily ethnicity, should be included in visual impairment registration.

Data on related chronic health conditions

The Quality and Outcomes Framework (QOF) represents one of the main sources of potential income for general practices across the UK.

Area/Local Authority	Raw prevalence rate (per 100 patients)			
	CHD	Diabetes	Hypertension	Smoking
Scotland	4.38	4.10	13.35	23.65
NHS Greater Glasgow	4.31	3.95	12.61	22.88
East Dunbartonshire	4.28	3.63	14.36	24.15
East Glasgow	5.05	4.19	12.53	23.14
East Renfrewshire	3.79	3.52	12.23	21.40
Inverclyde	5.44	4.12	13.60	25.89
North Glasgow	4.62	4.07	12.37	23.13
North Lanarkshire	4.74	4.42	13.32	23.78
Renfrewshire	4.63	4.18	13.63	24.10
South East Glasgow	3.70	4.00	11.76	21.37
South Lanarkshire	4.41	4.27	13.51	24.35
South West Glasgow	4.38	4.28	12.02	23.36
West Dunbartonshire	4.57	4.32	14.18	24.68
West Glasgow	3.24	3.27	10.46	19.45

Table 7: NHSGG&C 2009/10 raw prevalence rates for Coronary Heart Disease, Diabetes, Hypertension and Smoking. (Source: QOF, ISD).

Although, participation is voluntary, it is a fundamental part of the new General Medical Services (GMS) contract (introduced on 1st April 2004) and measures achievement against a range of evidence-based indicators.

Although these figures only represent the reported and known prevalence, it is still worth noting that:

- The CHD prevalence rates for East Glasgow, Inverclyde, North Glasgow, North & South Lanarkshire, Renfrewshire, South West Glasgow & West Dunbartonshire are higher than the national rate;
- The diabetes prevalence rate for East Glasgow, Inverclyde, North & South Lanarkshire, Renfrewshire, South West Glasgow & West Dunbartonshire are higher than the national rate;
- The hypertension prevalence rate for East Dunbartonshire, Inverclyde, South Lanarkshire, Renfrewshire & West Dunbartonshire are higher than the national rate;
- The smoking prevalence rate for East Dunbartonshire, Inverclyde, North & South Lanarkshire, Renfrewshire & West Dunbartonshire are higher than the national rate;
- For Inverclyde, Renfrewshire, South Lanarkshire & West Dunbartonshire, the CHD, diabetes, hypertension and smoking prevalence rates are all higher than the national rates.
- Despite, these local differences, the overall NHSGGC raw prevalence rates are lower than the national figures for all four risk factors.

In summary, the QOF data should provide an estimate of prevalence based on GP-held data, but are limited by the fact that the system is voluntary and is primarily designed for eliciting payment rather than for population surveillance.

Recommendation 7: The potential to use the QOF as a true population surveillance tool should be explored.

8.5 Uptake of acute services

Ophthalmology Scottish Morbidity Record (SMR) data

SMR01 (General / Acute Inpatient and Day Case) data have been interrogated for admissions during 2009, where diagnoses of glaucoma, age-related macular degeneration or cataracts have been recorded as any one of six possible diagnoses associated with each admission.

The Small Area Population Estimates (SAPE) produced by the General Registry Office for Scotland (GROS), employs a cohort-component method, whereby the 'baseline population is modified by ageing it and adjusting it with information on births, deaths and migration'. These estimates have been applied to SMR01 (General / Acute Inpatient and Day Case) data in order to estimate mean admission rates (per 100 head of population) for the three conditions (see Table 8).

Standardising the mean admission rates for relative distributions of age and sex across five quintiles of deprivation (SIMD), reveals a weak relationship with deprivation for two of the three conditions. For glaucoma or cataracts, there would appear to be a slightly greater likelihood of admission for residents of the more deprived areas. For age-related macular degeneration, there would appear to be no greater likelihood of admission for residents of the more deprived areas. The influence of ethnicity cannot be investigated due to universally poor completion rates for the ethnicity variable (NHSGGC 40.9% 2009-10).

Condition	SIMD Q1 (most deprived)	SIMD Q2	SIMD Q3	SIMD Q4	SIMD Q5 (least deprived)
Glaucoma	1.5	1.7	1.4	1.2	1.0
Cataracts	1.3	1.3	1.0	1.0	1.0
AMD	1.1	1.2	0.8	1.1	1.0

Table 8: Relative ratios for mean admission rates standardised for age and sex 2007-9 (Source: SMR01, 2010)

SMR00 (Outpatient Attendance) data have been interrogated for appointments during 2009 in the specialty of Ophthalmology. For patients *not* attending their outpatient appointment during 2009, there would appear to be a decreasing trend associated with increasing age; and a decreasing trend associated with increasing deprivation (see Table 9).

Standardising the non-attendance rates for relative distributions of age and sex across the SIMD quintiles, reveals that the likelihood of patients from the most deprived quintiles not attending their appointment is at least twice that seen for the least deprived (see Table 10). The influence of ethnicity cannot be investigated due to universally poor completion rates for the ethnicity variable (NHSGGC 35.1% 2009-10).

Age Range	Appoint-ments	DNA	DNA Rate
<50	6935	1584	22.84%
50-54	1331	235	17.66%
55-59	1297	158	12.18%
60-64	1582	190	12.01%
65-69	1717	167	9.73%
70-74	2067	178	8.61%
75-79	2190	192	8.77%
80+	3067	254	8.28%
Total	20186	2958	14.65%

SIMD quintile	Appoint-ments	DNA	DNA Rate
1 (most)	8267	1536	18.58%
2	3536	534	15.10%
3	2427	329	13.56%
4	2313	269	11.63%
5 (least)	3643	290	7.96%
Total	20186	2958	14.65%

Table 9: Non-attendance rates by age category and quintile for NHSGGC appointments (Source: SMR00, 2010)

	SIMD Q1 (most deprived)	SIMD Q2	SIMD Q3	SIMD Q4	SIMD Q5 (least deprived)
Relative Ratio	2.16	1.79	1.53	1.36	1.0

Table 10: Relative ratios for mean non-attendance rates standardised for age and sex 2009 (Source: SMR00, 2010)

In summary, SMR data are useful for providing estimates of service use, but as with other data sources referred to in this report, individual characteristics of patients are not reliably collected in such a way as to allow us a better understanding of the service using population.

Recommendation 8: The potential in SMR data should be fully exploited ensuring that relevant demographic characteristics including ethnicity, are always collected and available for analysis.

Recommendation 9: There is a lack of useful prevalence data or service use data that may provide indications of prevalence. For the purposes of the Community Engagement Project, a bespoke data collection exercise should be undertaken to allow a robust estimate of prevalence of the main eye conditions in the minority ethnic population.

8.6 Service audits

An enquiry was made to a local Clinical Effectiveness coordinator – there were no known audits of ophthalmology services in recent years. Enquiry within the CEP advisory group brought to light some small localised pieces of work. For example, prior to the new General Ophthalmic Services (GOS) contract coming into place in 2006 (see page 20), Glasgow Integrated Eye Services (GIES) was developed to provide better continuity between primary care and ophthalmology services in the South of Glasgow. The service was audited and a report produced in 2005 (unpublished report). There is no specific reference to the minority ethnic community (which is largest in South Glasgow) in this audit report.

A further example from 2009 is from the NHS Greater Glasgow and Clyde Eye Care Services group who conducted a pilot to improve the quality of referrals from optometry to ophthalmology in East and West Dunbartonshire. Although ethnicity was a field given on the referral form, the data are not reported as part of the audit.

In general, there is a paucity of systematic auditing work within eye health services, and we know of none other than that detailed above that pertain specifically to the black and minority ethnic community.

Recommendation 10: The advisory group should seek to compile knowledge of all small-scale pieces of service audit work which are current and relevant to the CEP. The advisory group should act as a catalyst to bring together small projects with common goals in the interest of the CEP.

8.7 Qualitative work

RNIB recently conducted a qualitative study of the experiences of people with sight loss from BME communities in Glasgow city. Through 11 interviews and 2 (large) focus groups (n=24) with adults from a range of non-white ethnic backgrounds and a range of eye health conditions, they found that feelings about services could be grouped under the following themes:

- Knowledge of disease management
- Knowledge of social care services / low vision aids / technology
- Knowledge of optometry services
- Language, communication and cultural needs

A brief search of the published literature using the search terms in the figure below produced no papers. It is unlikely that no qualitative research of this type has been conducted, but probable that such work tends to be written up to an internal report and not disseminated widely.

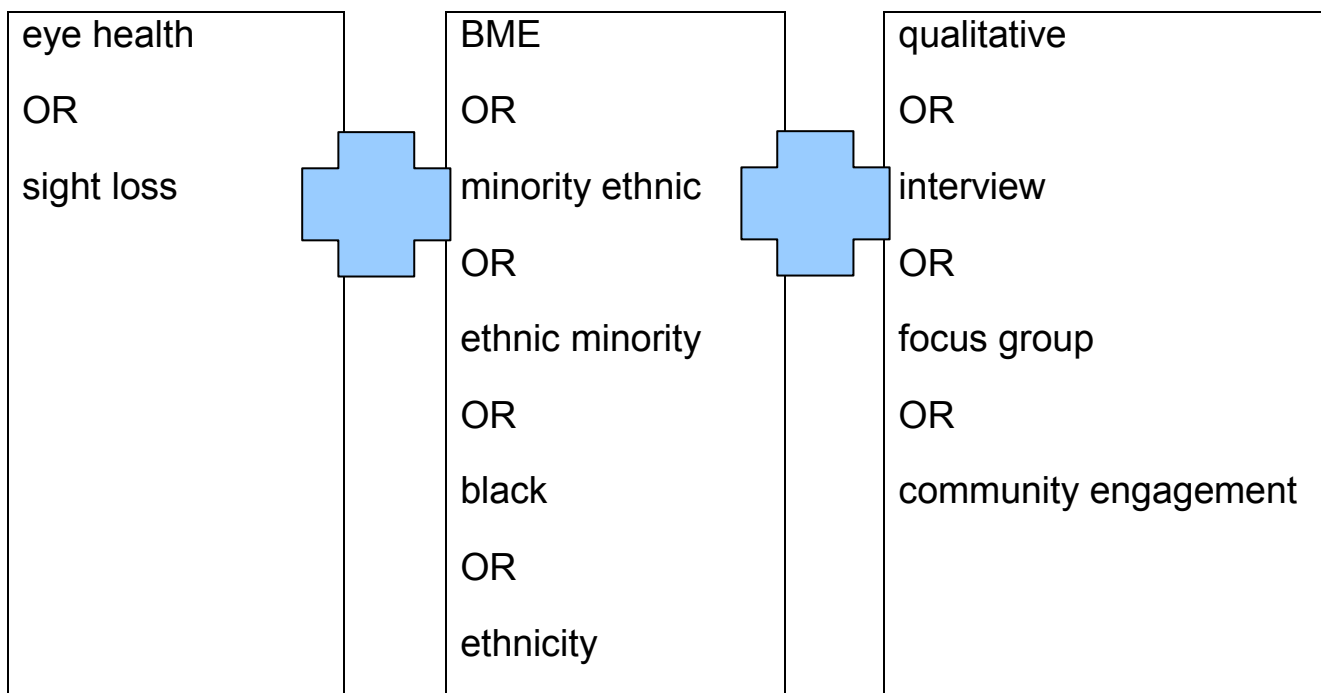


Figure 2: Literature search terms used in broad range of health-related databases

A good programme of qualitative research is clearly essential to the CEP. The only way to understand the felt needs of the community is to go out and ask the residents themselves.

Recommendation 11: A robust piece of qualitative research should be commissioned to fully explore the felt needs of the minority ethnic population in Glasgow and these findings fed into planning and policy decision-making.

9 Conclusion

The present report set out to provide an equity profile for eye health in the black and minority ethnic population of Greater Glasgow and Clyde.

However, the lack of reliable information available on the health of minority ethnic groups in Greater Glasgow and Clyde, and specifically on eye health, has left this aim unfulfilled. Without more complete and reliable information it will be very difficult to make robust recommendations for community engagement work. There are a range of developments in place that should see improvements in the quality of data in the future, but not in time to inform the current Community Engagement project.

We therefore recommend a research programme to enhance the data presented above:

- An interrogation of GP data systems to ascertain more accurate prevalence rates of the four main eye conditions;
- A bespoke prospective data collection exercise in optometrist practices in key areas of Glasgow to help ascertain prevalence of the four main conditions and service use by people with minority ethnic backgrounds;
- Qualitative work to explore the felt need of minority ethnic people living in Glasgow – both those with existing eye health problems and those without.

This programme of work will provide a better basis for making recommendations for next steps in developing the Community Engagement Project in Glasgow.

Recommendation 12: This equity profile should be regularly reviewed by the Advisory Group and refreshed if and when recommendations for improvements in the available data are implemented.

10. Glossary

AMD / ARMD	Age-related Macular Degeneration
BME	Black and Minority Ethnic
CEP	Community Engagement Project
DNA	Did Not Attend
DR / DRS	Diabetic Retinopathy / Diabetic Retinopathy Screening
GOS	General Ophthalmic Services
GRO(S)	General Register Office (Scotland)
ISD	Information Services Division (of NHS National Services Scotland)
NHSGGC	NHS Greater Glasgow and Clyde
OPTIX	Database used by General Ophthalmic Services
PCAG	Primary Closed Angle Glaucoma
POAG	Primary Open Angle Glaucoma
SAPE	Small Area Population Estimates
SIMD	Scottish Index of Multiple Deprivation. Every three years, the Scottish Index of Multiple Deprivation (SIMD) assigns deprivation status to the geographical units of datazones (median population size of 769) which are ranked from most deprived (1) to least deprived (6,505) on the overall SIMD (http://www.scotland.gov.uk/Topics/Statistics/SIMD).
SMR	Scottish Morbidity Record
SMR00	Scottish Morbidity Record 00 – outpatient attendance
SMR01	Scottish Morbidity Record 01 – hospital admissions for general / acute inpatient and day case

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