

**Greater Glasgow and Clyde NHS Board**

**Board Meeting**

18 February 2014

Board Paper No: 14/03

**Director of Public Health**

**Public Health Screening Programmes Annual Report 1 April 2012 to  
31 March 2013**

**RECOMMENDATION**

Members are asked to **note** the attached *Public Health Screening Programmes Annual Report from 1 April 2012 to 31 March 2013*

**INTRODUCTION**

This annual report presents information about the following screening programmes offered to residents across NHS Greater Glasgow and Clyde (NHSGGC) for the period 2012/13:

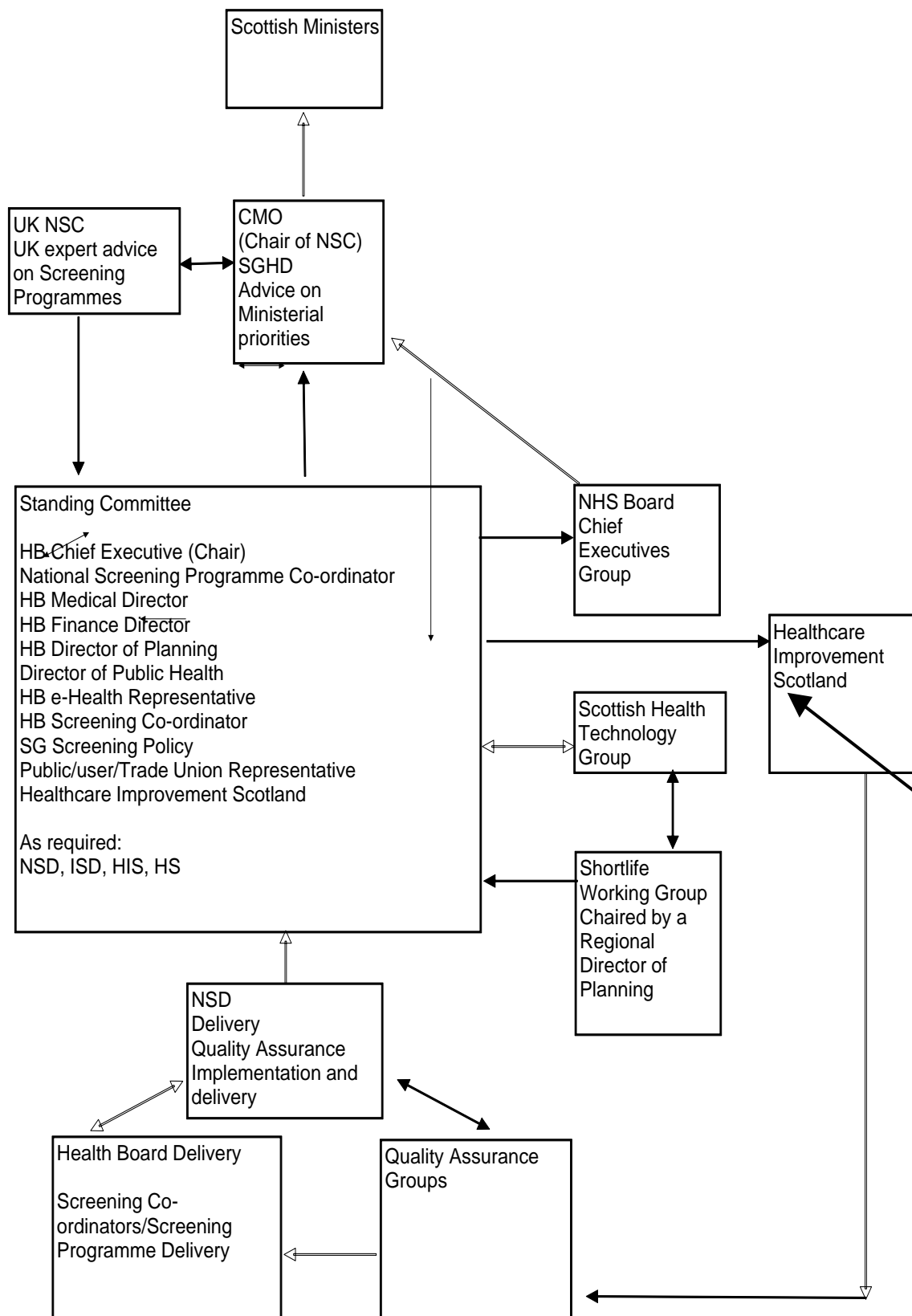
1. Cervical Screening
2. Breast Screening
3. Bowel Screening
4. Pregnancy Screening:
  - Communicable Diseases in Pregnancy
  - Haemoglobinopathies screening
  - Down's syndrome and other congenital anomalies
5. Newborn Screening:
  - Newborn Bloodspot
  - Universal Newborn Hearing
6. Diabetic Retinopathy Screening
7. Pre-School Vision Screening
8. Interim report on Aortic Abdominal Aneurysm Screening

Screening is a public health service offered to specific population groups to detect potential health conditions before symptoms appear. Screening has the potential to save lives and improve quality of life through early diagnosis of serious conditions.

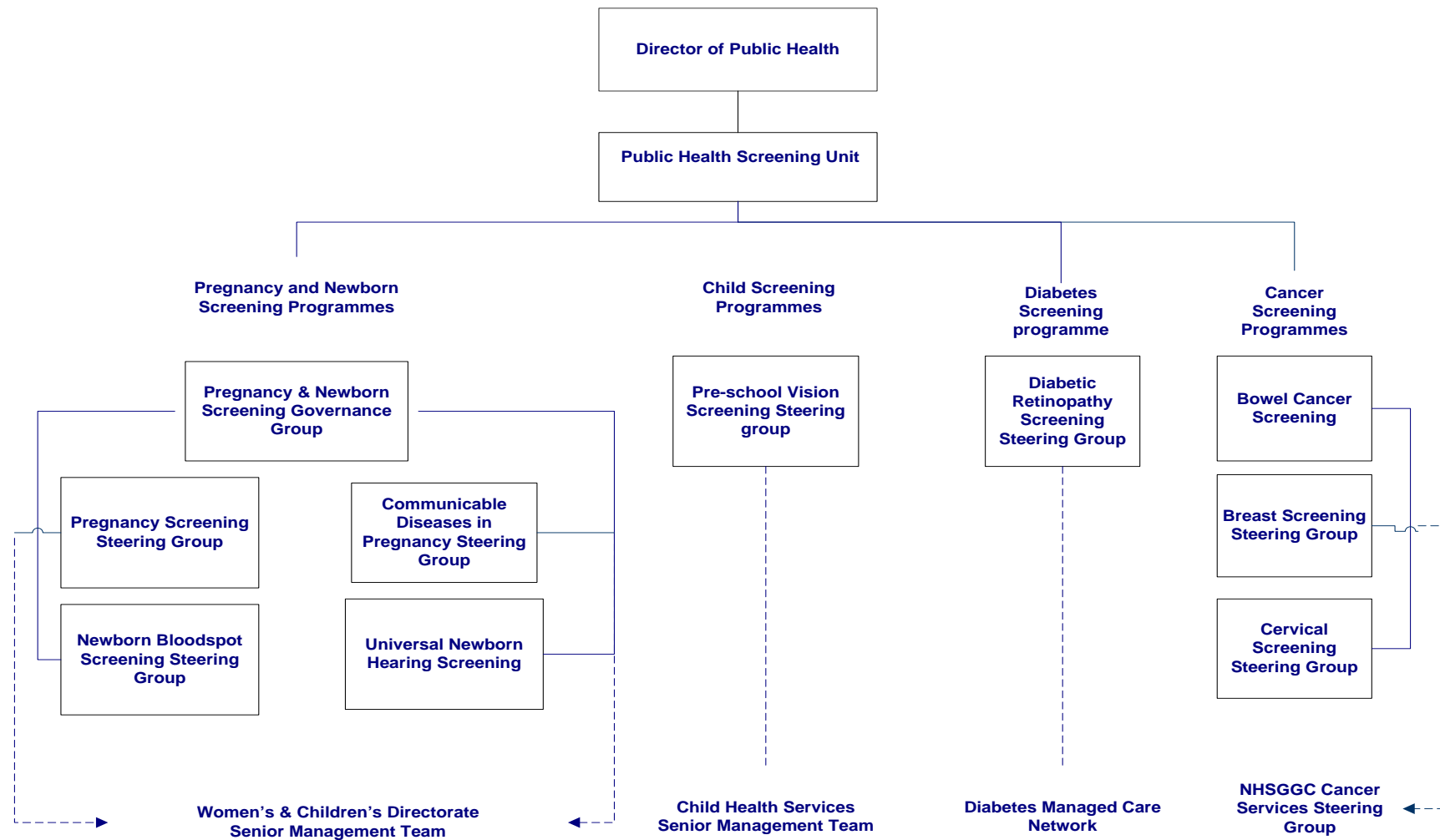
In NHS Greater Glasgow and Clyde, the co-ordination of all screening programmes is the responsibility of the Public Health Screening Unit led by a Consultant in Public Health Medicine. Multidisciplinary Steering Groups for the programmes are in place and their remit is to monitor performance, uptake and quality assurance.

Reporting structures for Scottish public health screening programmes is currently under review. The proposed governance structure is illustrated in **Figure A**. Current governance arrangements for NHS Greater Glasgow and Clyde public health screening programmes is illustrated in **Figure B**.

**Figure A: Proposed Scottish national reporting structures – National Public Health Screening Programmes**



**Figure A: Governance arrangements for the NHS Greater Glasgow and Clyde public health screening programmes**



As the screening programmes stretch across the whole organisation, successful delivery relies on a large number of individuals working in a co-ordinated manner towards common goals in a quality assured environment. It is essential that good information management systems are in place to monitor and evaluate each component and the overall performance of every screening programme offered to our residents. All the screening programmes, with the exception of Pre-school Vision Screening, have clinical standards set by Health Improvement Scotland which we strive to meet.

NHS Greater Glasgow and Clyde Public Health Screening Unit is committed to working in partnership with voluntary and statutory services to identify innovative ways to tackle inequalities in health and encourage uptake of screening programmes.

For the second year, this report will also include analysis on uptake among people with learning disabilities.

We cannot provide screening activity by ethnicity as the data is not available.

Table A shows the number of people eligible in NHS Greater Glasgow and Clyde in 2012/13 that were offered screening tests, the number of people who had taken up the offer of screening and the uptake rates for each of the screening programmes.

**Table A: NHSGGC screening programmes uptake rates for the period 1 April 2012 to 31 March 2013**

Screening programme	Total eligible population	Total number Screened	HIS Target	2011/12 % Uptake
Cervical screening <sup>1</sup>	347,841	261,243	80%	75.1%
Breast screening <sup>2</sup>	152,447	105,294	70%	69.1%
Bowel screening <sup>3</sup>	374,907	185,932	60%	49.6%
Pregnancy screening: • Communicable diseases in pregnancy <sup>4</sup>	14,074	13,384	No target	95.1%
• Down's syndrome	13,960	10,531	No target	75.1%
• Haemoglobinopathies	14,074	13,390	No target	95.1%
Newborn bloodspot Screening	13,915	13,680	No target	98.3%
Universal newborn hearing screening	14,903	14,475	No target	97.1%
Pre-school vision screening	13,795	12,010	No target	87.1%
Diabetic retinopathy Screening	63,094	53,502	80%	87.8%

Sources: NHSGGC bowel Screening IT system; West of Scotland Breast Screening; Scottish Cervical Call Recall System; PNBS; National Newborn Screening Laboratory; West of Scotland Prenatal Screening Laboratory; eSP; Visionworks, AAA

**Notes:**

1. Target population – number of women screened within 5.5 years
2. Target population – number of people screened within 3 years
3. Target population – number of people screened within 2 years
4. Percentage uptake of each of the tests has been calculated by dividing the number requesting tests by the total number of samples.
5. Screening activity covers the period 1 April 2012 to 31 March 2013

## CHAPTER 1: CERVICAL SCREENING

- Women aged 20 to 60 who live in Greater Glasgow and Clyde areas are invited to have a smear test taken every three years.
- 347,841 women were eligible to be invited to participate in the programme over three years.
- The 5.5 year uptake rate calculated for NHS Greater Glasgow and Clyde residents for 2012/13 was 75.1%. This was below the Scotland wide rate of 78.2% reported by ISD (2013) and the NHS HIS target of 80%.
- This represents an overall 0.9% decrease in uptake since 2011/2012. The lowest uptake of 65.7% was in Glasgow North West sector. East Dunbartonshire, East Renfrewshire, South Lanarkshire and North and South Lanarkshire exceeded the minimum standard of 80%.
- 64,414 (19.2%) did not take up the invite to have a smear despite a prompt letter and two reminders being sent and were classified as defaulters.
- The lowest 5.5 year uptake in 2012/13 was among the 21 to 24 year olds at 57% when only no cervix exclusion was applied. This represents a 2.8% decrease on previous year's uptake of 59.8%.
- The lowest 5.5 year uptake rate in 2012/13 was among women resident in the most deprived neighbourhoods at 73.6% when the no cervix exclusion was applied. Among women residents in the least deprived areas, uptake was higher at 79.6%.
- The uptake of cervical screening among women residents in the most deprived areas has decreased by 0.8% from 74.4% in 2011/12 to 73.6% in 2012/13. Uptake for women resident in the most affluent areas has decreased by 1.5% from 81.1% to 79.6% over the same period.
- 104,507 smear tests were processed and reported in laboratories in NHS Glasgow and Clyde. This represents an increase of 9.1% from the 95,874 smears processed in 2011/12.
- The overall percentage of unsatisfactory smears was 2.9% and above the Scottish average of 2.5%.
- 13.3% of smears were reported as abnormal after excluding unsatisfactory smears in 2012/13.
- 86.7% of smears processed were reported to be negative; 8.1% were borderline squamous; 3.4% mild dyskaryosis and 1.6% to have moderate to severe dyskaryosis

- Of the 6,408 patients referred to colposcopy for treatment, 4,728 (89.5%) were seen within 8 weeks.
- The performance of colposcopy units against benchmarking standards is now reviewed annually at the NHS Greater Glasgow & Clyde Colposcopy User Group. Where standards are not within the interquartile range, measures are identified and action plans introduced to improve performance.
- In 2012, we reviewed the case notes of all women who developed invasive cervical cancer.
- The largest number of cervical cancers occurred in women aged between 30 and 49 years.
- 39 cases of the 79 cases were screen detected.
- Over the five years audited, 51 (14.1%) women out of the 361 that developed cancer had never had a smear; 144 (39.8%) had complete smear histories and 161 (44.5%) of women had incomplete smear histories.
- In 2011, the most recent year for which completed data is available, the number of new cervical cancers registered among NHS Greater Glasgow and Clyde residents was 62. This gives a standardised incidence rate of 8.9 per 100,000 per population compared to that for Scotland at 10.7.
- In 2012, 32 women with a diagnosis of cervical cancer died in NHS Greater Glasgow and Clyde. This gives a standardised rate of 4.2 per 100,000 population compared to the Scotland rate of 4.1 per 100,000.
- Since 2008, all girls aged 12 to 13 years in their second year of secondary school are routinely offered vaccinations to protect them against the Human Papilloma Virus (HPV).
- Overall uptake across NHSGGC for the first dose of the HPV vaccination was 94.6% and 93.1% for the second dose. This was above the Scottish averages of 93.5% and 91.8% respectively. Uptake for the third dose was 78.8% which was below the Scottish average of 82%.



- Research was carried out in 2012 to identify the barriers to uptake in cervical screening among young women aged 21 - 35. Focus group findings were used to plan a social media campaign to address the three major issues that affect women taking up screening which are fear, pain and embarrassment. Three social media films will be developed and launched in early 2014.
- A training video for smear takers will be developed to improve and maintain professional skills as well as offering tips on addressing the barriers to low uptake in cervical screening. The video will be available for the Smear Taker training programme in May 2013.

## **CHAPTER 2: BREAST SCREENING**

- This report represents interim screening round data from 1 April 2012 to 31 March 2013.
- 152,447 women registered with a practice in NHS Greater Glasgow and Clyde area were invited to attend breast screening. These included women living in other NHS board areas as data cannot be excluded from analysis.
- 105,294 (69.1%) women attended breast screening during the previous three years. This represents a decrease of 0.7% since 2011/12 when uptake was 69.8%. The minimum standard is 70%.
- There were 737 (0.7%) women who were diagnosed with breast cancer following screening.
- In 2011, the number of new breast cancers registered in NHS Greater Glasgow and Clyde was 974. This gives a standardised incidence rate of 126.7 per 100,000 per population which is lower than that for Scotland (130.1).
- In 2012, there were 237 deaths from breast cancer, giving a standardised rate of 26.6 per 100,000 population. This is slightly higher than that for Scotland (25.8).
- For the period 2009 to 2012, a total number of 4,145 breast cancers were detected. 507 (12.2%) were potential interval cancers; 1,250 (30.2%) were screen detected and 2,388 (57.6%) were symptomatic (Table 2.4). There has been a year on year increase in the number of cancers detected since 2009 to 2012.
- To capitalise on the planned national Detect Cancer Early social marketing campaign of 2013, NHS Greater Glasgow & Clyde has developed a local social marketing campaign to reinforce the DCE breast cancer messages and encourage women to take up breast screening. This will include direct marketing, public relations and health improvement initiatives.

### CHAPTER 3: BOWEL SCREENING PROGRAMME

- The programme invites all men and women between the ages of 50 – 74 years registered with a General Practice every two years. This chapter presents the full two year screening round report.
- 374,907 residents in NHS Greater Glasgow and Clyde were invited to participate in the Bowel Screening programme over two years between April 2011 and March 2013.
- 185,932 screening kits were completed and returned to the Bowel Screening laboratory for analysis. This gives an estimated uptake of 49.6%, representing a slight decrease of 0.1% reported in 2011/2012 when uptake was 49.7%.
- Overall, the lowest uptake was among the most deprived areas at 40.7%. The lowest uptake for bowel screening was among the residents living in the most deprived areas in Glasgow CHP sectors North East (39.6%); North West (39.9%) and South (39.5%).

Highest uptake was among residents living in the more affluent areas of West Dunbartonshire; East Dunbartonshire; East Renfrewshire and Renfrewshire where uptake exceeded 60%.

- The percentage uptake among females at 52.3% was higher than the male population at 46.8%. The lowest uptake of 38.4% was among the 50-54 year old male population group.
- Of the 5,866 patients screened positive, 5,380 patients were pre-assessed prior to colonoscopy. 208 patients did not respond to the offer of a colonoscopy pre-assessment.
- A letter is sent to patients and their GP who refuse or do not turn up for colonoscopy asking them to get in touch within 6 months if they change their mind. Otherwise they will be removed from the waiting list. We also inform the Bowel Screening Centre so that the patient is invited to take part in bowel screening in two years.
- The overall positivity rate was higher among men at 3.9% compared to women at 2.5%. Compared to all other groups, the male population age group of 70 to 74 had the highest positivity rate of 5.7%.
- 4,653 (86.4%) patients completed colonoscopy investigations by 31 March 2013.

- In collaboration with the University of Glasgow, a research project investigated the efficacy of a population based colorectal cancer screening programme and analysed the outcomes in screen detected and non screen detected tumours. The findings concluded that screen detected patients had a more favourable outcome compared to individuals with non screen detected tumours. It was recommended that further studies are needed to improve the response rate to the screening invitation and also the sensitivity of the current test (Mansouri et al, 2013).
- Of the 2,025 people with learning disability that were invited to take part in the bowel screening programme, 27.6% (561) completed the bowel screening test. 17 patients received positive results representing a positivity rate of 3.8%.
- Of the total eligible population invited to take part in bowel screening, 280 cancers were detected.
- In 2011, the most recent year for which completed data is available, the number of new colorectal cancers registered in NHS Greater Glasgow and Clyde was 522 for men and 398 for females. This gives a standardised incidence rate of 78.0 and 43.0 respectively per 100,000 populations.
- In 2012, the number of deaths from colorectal cancer in NHS Greater Glasgow and Clyde was 165 for male population and 191 in the female population. This gives a standardised rate of 22.7 and 18.1 respectively per 100,000 populations.
- Of the 3,410 of colorectal cancers diagnosed between 2009 and 2012, 2,948 were symptomatic and 625 were detected through the bowel screening programme. 263 were potential interval cancers.
- As part of the national Detect Cancer Early marketing campaign, Health Improvement Teams will develop localised programmes of work to increase participation of bowel screening programme.
- Two local pilot studies are also planned for 2013 to explore whether uptake of the bowel cancer screening test in men in the most socio-economically deprived areas in North West sector and Renfrewshire can be increased by a short intervention and encouragement to participate in the programme.

#### **CHAPTER 4: PREGNANCY SCREENING**

- There were 15,857 women booked to attend antenatal clinics across NHS Greater Glasgow and Clyde. 14,074 women were from NHS Greater Glasgow and Clyde residents and 1,783 women lived outwith the Board area. The pregnancy screening activity is recorded in the PNBS IT application.

- 63.3% (8,909) of first antenatal booking appointments were offered within 12 weeks gestational age and 24.4% (3,433) between 13 to 16 weeks gestational age.
- 14,074 women booked for their first antenatal screening, 93% (13,086) had taken up haemoglobinopathies screening.
- Data on the number of carriers and fetuses at risk of sickle cell disease and thalassaemia through screening is not available for 2012/13.
- An estimate of the percentage uptake of each of the communicable diseases screening tests has been calculated by dividing the number requesting the test by the total number of samples.
- Uptake across NHS Greater Glasgow and Clyde is greater than 99% for all four of the screening tests (HIV, Hepatitis B, Rubella and Syphilis).
- In 2012/13, the overall uptake for Down Syndrome was 70.4%. 3,765 (37.9%) samples were taken from women in their first trimester, and 6,146 (70.6%) samples were taken from women in the second trimester. The uptake of first trimester tests was lower in the Glasgow based hospitals due to the delayed implementation of the first trimester screening that started in November 2012.
- 77.1% of pregnant women had taken up congenital anomalies screening
- 2.2% of women were assigned to the 'higher chance' of Down Syndrome group. Following the second trimester Down Syndrome screening, 3.7% of women were assigned to the 'higher chance' of Down Syndrome group, and 2.4% of women had an elevated AFP giving a 'higher chance' of a neural tube defect.
- 10,847 fetal anomaly scans performed, 149 anomalies were identified and of that number 44 were considered to be of clinical relevance once the baby was born. The outcomes for 25 anomalies are not known.
- 309 amniocentesis samples were analysed by the Cytogenetics Laboratory. 35 abnormalities were detected (11.3% of samples) and 20 of those (6.5% of total tests) had a diagnosis of Down Syndrome.
- 103 chorionic villus biopsies were analysed by the Cytogenetics Laboratory in 2012/13. 38 abnormalities were detected (36.9% of tests) and 25 of those (24.2% of tests) had a diagnosis of trisomy (Down Syndrome).

- An audit was undertaken for the period 1 April 2011 to 31 March 2012 to identify why less than half of children resident in NHS Greater Glasgow and Clyde with Down Syndrome were not detected antenatally.
- All women who had a subsequent Down Syndrome affected pregnancy who were eligible for pregnancy screening were offered it.
- 48.8% of the 43 children affected with Down Syndrome during 1 April 2011 – 31 March 2012 were diagnosed antenatally as women declined either the screening test or the diagnostic test following a high chance result.

## **CHAPTER 5: NEWBORN SCREENING**

- 13,915 babies were eligible for newborn bloodspot screening in NHS Greater Glasgow and Clyde. 13,680 were screened, that is 98.3% of the total eligible population.
- Results were not available for the 235 (1.7%) babies that moved into the NHSGGC Board area.
- In 2012/13, of the 14,424 bloodspot samples received, 14,410 were normal. 176 (1.2%) bloodspot specimens could not be analysed due to insufficient amounts of blood on the bloodspot card and had to be repeated.
- There were eight babies with congenital hypothyroidism, five babies with cystic fibrosis. There were four positive cases of sickle cell and 88 babies identified as potential carriers for haemoglobinopathies.
- 74% of babies had white UK ancestry, 6.7% had South Asian ancestry and 3.8% had mixed background ancestry.
- 172 (1.2%) samples received had taken more than seven days to arrive at the laboratory.
- 98% of cards received with a CHI number in 2012/13 compared to 24% in 2007/08.
- 14,903 babies were eligible for newborn hearing screening. 14,475 babies in NHS Greater Glasgow and Clyde were screened for hearing loss giving an uptake of 97%.
- 403 (3%) babies did not complete the screening programme. These included babies who did not attend for screening or moved away from their current home address or transferred to another Board area.

- 1,163 (8%) babies required a second stage follow up and, of these, 216 (1.5%) babies were referred to audiology.
- 31 babies were confirmed with a hearing loss (0.2% of the screened population).

## **CHAPTER 6: PRE-SCHOOL VISION SCREENING**

- In 2012/13, 13,795 children aged between four to five years old were identified using the Community Health Index System as being eligible for pre-school vision screening. This represents a 4.6% decrease from previous year 2011/12.
- 40% (5,519) of children live in the most deprived areas, with the largest proportion living in the Glasgow area.
- 75.2% (10,378) of children were registered with a nursery. 3,417 (24%) children were not registered with a nursery, 1,950 (57%) were from the Glasgow area.
- Of the 13,795 eligible children, 12,010 were screened for a visual abnormality, giving an overall uptake of 87.1%.
- 12,010 children screened, 8,919 (74.3%) had a normal result. . Of the 2,270 (18.9%) children referred for further assessment, 1,069 (23%) were from the most deprived areas.
- Uptake rate for the programme across the CH(C)P areas varied from 82.8% in Glasgow North West to 92.1% in East Renfrewshire. Glasgow North East uptake improved significantly from 74.8% in 2011/12 to 83.2% in 2012/2013.
- The highest proportion of children screened that were referred for further investigation was in Glasgow North East (26%) and Glasgow North West (23.3%) and the lowest was 11.9% in East Renfrewshire.

## **CHAPTER 7: DIABETIC RETINOPATHY SCREENING**

- There were 63,094 NHS Greater Glasgow and Clyde residents with a diagnosis of diabetes in 2012/13, representing an increase of 4.1% from 2011/12.
- The prevalence of diabetes among NHS Greater Glasgow and Clyde adult residents has gradually increased from 4.3% in 2007/08 to 5.5% in 2012/13.

- 53,502 (84.8%) were eligible for screening. Of those, 87.8% (46,988) were screened. This means that 74.4% of total diabetic population in NHS GGC were screened in 2012/13.
- Of the total number of residents screened (46,988), 1,223 were referred to Ophthalmology for further investigation.
- 25,965 (40.7%) are known to be resident in the most deprived areas compared to 8,956 (14.1%) who live in the least deprived areas. The largest proportion of people with diabetes was among the 50 – 79 year olds. This represents 69.4% (43,768) of the total population with diabetes.

## **CHAPTER 8: ABDOMINAL AORTIC ANEURYSM SCREENING**

- Abdominal Aortic Aneurysm screening was implemented in February 2013.
- From 1 February 2013 to 31 March 2013, 124 male residents aged 65 in NHS Greater Glasgow and Clyde were invited to participate in the AAA Screening programme. Of the total invited, 89 (71.8%%) took up screening.
- 8,396 men will be ready for screening over 2013/14. This represents a variance of 27% (2,286) on the previous business case estimate of 6,110. Increasing clinic capacity to ensure all eligible residents are offered screening will be the main challenge.