
# *Child and Maternal Health Screening Programme*

# *Annual Report*

# 1st April 2024 to 31st March 2025

**Health Services**
**Public Health Directorate**
**December 2025**

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# Chapter 1 - Pregnancy Screening

## Summary

There are four screening programmes in pregnancy:

- haemoglobinopathies screening
- infectious diseases screening
- Down's syndrome, Edwards' syndrome and Patau's syndrome screening
- congenital anomalies screening

These programmes allow parents to make reproductive choices, manage illness and infection during and after the pregnancy and manage risk to the baby during pregnancy and after birth.

Pregnancy screening programmes are offered universally to all pregnant women during antenatal visits. In 2024/25, 11,933 NHSGGC resident women booked to attend antenatal clinics and 10,599 (88.8%) of first antenatal booking appointments were offered by 12 weeks and 6 days gestation (first trimester). Timing of screening is crucial to ensure optimum testing and time for parents to consider next steps.

| **Haemoglobinopathies screening** | |
|---|---|
| Why? | Early identification of inherited blood disorders<br>Reduces infant morbidity and mortality<br>Provides time for reproductive choices and preparation for birth |
| Intervention | Screening for haemoglobin variants (abnormal forms of haemoglobin such as sickle cell disease) and thalassaemias (which result in an abnormal amount of haemoglobin)<br>Testing blood sample taken from pregnant woman ideally taken by week 10 of pregnancy, in conjunction with information about ethnic origin collected in the Family Origin Questionnaire<br>Rapid referral into counselling services for discussion about next steps as needed |
| Activity in 2024/25 | 99.8% screening uptake (11,911 women screened) |
| Outcomes | Screening identified:<br>20 foetus at risk<br>25 pregnancies where partner testing should be offered |

| Infectious diseases screening | |
|---|---|
| Why? | Early identification of infectious diseases that can be passed from mother to baby and cause harm<br>Reduces maternal and infant morbidity and mortality<br>Provides time for treatment and birth planning |
| Intervention | Screening for hepatitis B, syphilis and HIV<br>Testing blood sample taken from pregnant woman ideally taken by week 10 of pregnancy<br>Rapid referral into services for management and birth planning as needed |
| Activity in 2024/25 | Over 99.0% screening uptake for Hepatitis B syphilis and HIV with ≤ 5 pregnant women declining test. |
| Outcomes | ≤5 women diagnosed with HIV, some of whom were previously diagnosed<br>45 women diagnosed with hepatitis B infection (including 21 who had not previously been diagnosed)<br>23 women diagnosed with syphilis (not all of whom required treatment as this includes current and previously treated infections) |

| Down's syndrome, Edwards' syndrome and Patau's syndrome screening | |
|---|---|
| Why? | Early detection of congenital abnormalities<br>Reduces infant morbidity and mortality<br>Provides time for reproductive choices and preparation for birth |
| Intervention | First-line screening for Down's, Edwards' and Patau's syndromes by blood test and nuchal scan in first trimester or blood test in second trimester<br>If high chance result obtained from first-line screening, second-line screening for Down's, Edwards' and Patau's syndromes by NIPT blood test<br>Scan at 18-21 weeks to check for foetal abnormalities<br>If high chance results obtained from scan or second-line screening, rapid referral into services for diagnostic testing (including amniocentesis and chorionic villus sampling) |
| Activity in 2024/25 | 11,328 women screened) for first-line screening<br>90.4% uptake of 18-21 week scan |
| Outcomes | 463 women with high chance results from first-line screen |

| Foetal Anomaly Screening | |
|---|---|
| Why? | Early detection of congenital abnormalities<br>Reduces infant morbidity and mortality<br>Provides time for reproductive choices and preparation for birth |
| Intervention | Scan at 18-21 weeks to check for foetal abnormalities, including of brain, spinal cord, heart, bowel, kidneys, arms and legs<br>If high chance results obtained from scan or second-line screening, rapid referral into services for diagnostic testing (including amniocentesis and chorionic villus sampling) |
| Activity in 2024/25 | 90.4% screening uptake of 18-21 week scan (10,791 women consented to scan) |
| Outcomes | Foetal anomaly suspected in 7.2% (774) of women scanned |

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## 1.1 Introduction

Pregnancy screening is offered to all women who attend antenatal appointments. The aim of pregnancy screening is to alert women, their partners, their midwives and clinical team, to increased risk of illness in the pregnant woman or her baby. This knowledge allows decision-making about reproductive choices, treatment or planning for the birth. Screening uptake is high.

Within pregnancy screening there are four main screening pathways. Screening tests are offered at certain time windows in pregnancy, to allow for timely decisions about next steps. See Appendix 1.1 for the timelines for testing during pregnancy. The screening pathways are:

- Haemoglobinopathies screening for sickle cell and thalassaemia
- Infectious diseases screening for hepatitis B, syphilis and HIV
- Down's syndrome, Edward's syndrome and Patau's syndrome screening
- and other fetal anomalies screening.

This report is organised into five sections:

- Demographics of pregnant women and timing of attendance at antenatal services
- Haemoglobinopathies screening;
- Infectious diseases screening
- Down's syndrome, Edward's syndrome and Patau's syndrome screening;
- Fetal anomaly screening.

## 1.2 Information systems and programme performance

Pregnancy screening follows national standards as laid out in the Healthcare Improvement Scotland (HIS) standards. Key Performance Indicators are also developed for pregnancy screening. However, at this time implementation of screening is undertaken by each NHS board separately, using information systems of local choice, and with limited performance data available.

Public Health Scotland is currently undertaking a programme of work to develop national statistics for pregnancy and newborn screening. At this time, the only available statistics are for chromosomal conditions Down's syndrome, Edward's syndrome and Patau's syndrome. In the next two years we expect the first publications of pregnancy infectious diseases screening and pregnancy haemoglobinopathies screening.

Local monitoring data sourced from the maternity services patient management system BadgerNet, is presented in this report to provide uptake and outcome data for period 1st April 2024 to 31st March 2025. As a result of differences in data extract dates, numbers in local data analysis may differ from those presented in published national programme reports.

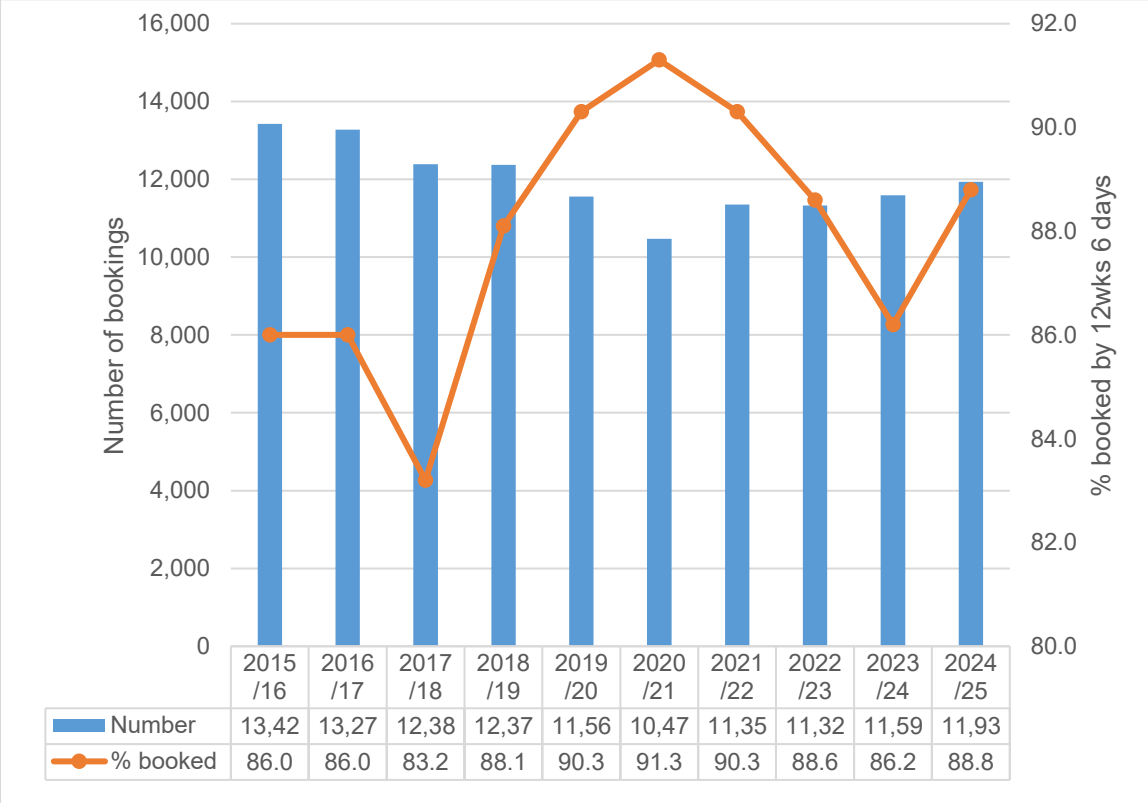
## 1.3 Pregnant women attending NHSGGC maternity services in 2024/25

Screening in pregnancy is offered universally to all pregnant women during antenatal visits. Data presented in this report reflects individual pregnancy bookings rather than individual women, as some women may experience more than once pregnancy within the 12 month reporting period.

In NHSGGC between April 2024 and March 2025, 11,993 pregnant women booked to attend an antenatal appointment. **Figure 1.1** shows the number of first antenatal appointments, and percentage of women attended by 12 weeks and 6 days

From 2015/16 to 2024/25, there has been an overall decline in the number of antenatal clinic attendances from 13,427 in 2015/16 to 11,933 in 2024/25. However, the number of bookings into maternity services in the current year 2024/25 shows an increase from the previous five years (**Figure 1.1**).

**Figure 1.1. Trend in number first antenatal appointment, and percentage of women that attended by 12 weeks and 6 days, NHSGGC residents, 2015/16 to 2024/25**




| | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2024/25 |
|---|---|---|---|---|---|---|---|---|---|---|
| Number | 13,42 | 13,27 | 12,38 | 12,37 | 11,56 | 10,47 | 11,35 | 11,32 | 11,59 | 11,93 |
| % booked | 86.0 | 86.0 | 83.2 | 88.1 | 90.3 | 91.3 | 90.3 | 88.6 | 86.2 | 88.8 |

Source: BadgerNet, July 2025

Timing of the first antenatal appointment is important to ensure best care and time to consider options about the pregnancy. In 2024/25, overall 88.8% (10,599) pregnant women attended their first antenatal appointment (often referred to the booking appointment) before 12 weeks 6 days or 3 months gestation. This proportion is higher than the last two years, see Figure 1.1

The proportion of pregnant women who attended their first antenatal appointment before 12 weeks 6 days or 3 months was highest at the Royal Alexandria Hospital maternity unit (91.1%) and lowest at the Princess Royal Maternity Hospital (85.6%). The gestation age at booking for 28 women was unknown (Table 1.1).

**Table 1.1. Number of women booked for their first antenatal appointment in NHSGGC April 2024 to March 2025, by maternity unit and by gestation age.**

| Maternity Unit | | ≤12Wks 6Days | 13Wks 0Days - 16Wks 6Days | 17Wks 0Days - 20Wks 6Days | 21Wks 0Days - 24Wks 6Days | 25Wks 0Days - 30Wks 6Days | ≥31Wks 0Days | Unknown | Total |
|---|---|---|---|---|---|---|---|---|---|
| **Princess Royal Maternity Hospital (PRM)** | Number | 3,214 | 295 | 75 | 58 | 42 | 64 | 7 | **3,755** |
| | *%* | *85.6* | *7.9* | *2.0* | *1.5* | *1.1* | *1.7* | *0.2* | |
| **Queen Elizabeth University Hospital (QEUH)** | Number | 4,617 | 245 | 74 | 51 | 66 | 75 | 13 | **5,141** |
| | *%* | *89.8* | *4.8* | *1.4* | *1.0* | *1.3* | *1.5* | *0.3* | |
| **Royal Alexandra Hospital (RAH)** | Number | 2,768 | 158 | 38 | 21 | 22 | 22 | 8 | **3,037** |
| | *%* | *91.1* | *5.2* | *1.3* | *0.7* | *0.7* | *0.7* | *0.3* | |
| **Total** | **Number** | **10,599** | **698** | **187** | **130** | **130** | **161** | **28** | **11,933** |
| | ***%*** | ***88.8*** | ***5.8*** | ***1.6*** | ***1.1*** | ***1.1*** | ***1.3*** | ***0.2*** | |

Badgernet, July 2025

Gestational age at first antenatal booking appointment varied by Scottish Index of Multiple Deprivation (SIMD). Among pregnant women residing in the most deprived areas, 84.1% (4,051) women booked into maternity services by 12 weeks and 6 days gestation, compared to 93.3% (1,830) pregnant women residing in the least deprived areas. See **Table 1.2**.

**Table 1.2. Gestational age at first antenatal booking appointment by deprivation categories for period 1 April 2024 to 31 March 2025**

| SIMD Quintile | ≤12Wks 6Days | 13Wks 0Days - 16Wks 6Days | 17Wks 0Days - 20Wks 6Days | 21Wks 0Days - 24Wks 6Days | 25Wks 0Days - 30Wks 6Days | ≥31 Wks 0Days | Unkn | Total | % ≤12 Wks 6Dys |
|---|---|---|---|---|---|---|---|---|---|
| **1 (Most Deprived)** | 4,051 | 384 | 129 | 78 | 61 | 100 | 13 | 4,816 | ***84.1*** |
| **2** | 2,017 | 109 | 26 | 19 | 19 | 23 | 7 | 2,220 | ***90.9*** |
| **3** | 1,300 | 68 | 15 | 15 | 13 | 13 | * | 1,428 | ***91.0*** |
| **4** | 1,401 | 62 | 6 | 7 | 15 | 14 | * | 1,507 | ***93.0*** |
| **5 (Least Deprived)** | 1,830 | 75 | 11 | 11 | 22 | 11 | * | 1,962 | ***93.3*** |
| **Total** | **10,599** | **698** | **187** | **130** | **130** | **161** | **28** | **11,933** | ***88.8*** |

Source: Badgernet, July 2025
* numbers ≤5, or identifiable as ≤5 redacted as per ISD Statistical Disclosure Control Protocol

The majority of pregnant women 36.5% (4,351) were 20-24 years of age at booking. 3.1% (364) were under 20 years of age and 4.8% (576) were over 35 years of age (**Table 1.3**).

**Table 1.3. Age at first antenatal booking appointment by HSCP areas for period April 2024 to March 2025**

| Age At Booking | | <20 | 20-24 | 25-29 | 30-34 | 35+ | Total |
|---|---|---|---|---|---|---|---|
| **East Dunbartonshire** | **Number** | 16 | 204 | 368 | 252 | 54 | 894 |
| | *%* | *1.8* | *22.8* | *41.2* | *28.2* | *6.0* | |
| **East Renfrewshire** | **Number** | 12 | 200 | 351 | 234 | 49 | 846 |
| | *%* | *1.4* | *23.6* | *41.5* | *27.7* | *5.8* | |
| **Glasgow North East** | **Number** | 58 | 857 | 698 | 337 | 92 | 2,042 |
| | *%* | *2.8* | *42.0* | *34.2* | *16.5* | *4.5* | |
| **Glasgow North West** | **Number** | 48 | 716 | 685 | 419 | 94 | 1,962 |
| | *%* | *2.4* | *36.5* | *34.9* | *21.4* | *4.8* | |
| **Glasgow South** | **Number** | 107 | 1,069 | 969 | 511 | 144 | 2,800 |
| | *%* | *3.8* | *38.2* | *34.6* | *18.3* | *5.1* | |
| **Inverclyde** | **Number** | 34 | 284 | 213 | 84 | 25 | 640 |
| | *%* | *5.3* | *44.4* | *33.3* | *13.1* | *3.9* | |
| **Renfrewshire** | **Number** | 45 | 679 | 734 | 377 | 83 | 1,918 |
| | *%* | *2.3* | *35.4* | *38.3* | *19.7* | *4.3* | |
| **West Dunbartonshire** | **Number** | 44 | 342 | 280 | 130 | 35 | 831 |
| | *%* | *5.3* | *41.2* | *33.7* | *15.6* | *4.2* | |
| **Total** | | **364** | **4,351** | **4,298** | **2,344** | **576** | **11,933** |

Source: Badgernet, July 2025

The ethnic origin of pregnant women is shown in **Table 1.4**. The largest population groups were White: Scottish (59.0%): Asian: Pakistani, Pakistani Scottish, Pakistani British (8.0%); and African, African Scottish, African British (8.0%).

**Table 1.4. Number of NHSGGC residents booked for their first antenatal appointment by ethnic origin during 1 April 2024 to 31 March 2025**

| Ethnicity | Number | % of total |
|---|---|---|
| African, African Scottish, African British | 959 | 8.0 |
| Asian: Bangladeshi, Bangladeshi Scottish, Bangladeshi British | 32 | 0.3 |
| Asian: Chinese, Chinese Scottish, Chinese British | 104 | 0.9 |
| Asian: Indian, Indian Scottish, Indian British | 458 | 3.8 |
| Asian: Other Asian, Asian Scottish, Asian British | 233 | 2.0 |
| Asian: Pakistani, Pakistani Scottish, Pakistani British | 958 | 8.0 |
| Caribbean or Black | 28 | 0.2 |
| Any mixed or multiple ethnic groups | 168 | 1.4 |
| White: Gypsy / Traveller | * | 0.0 |
| White: Irish | 89 | 0.7 |
| White: Other British | 504 | 4.2 |
| White: Other white ethnic group | 518 | 4.3 |
| White: Polish | 125 | 1.0 |
| White: Roma | 79 | 0.7 |
| White: Showman/Showwoman | * | 0.0 |
| White: Scottish | 7,038 | 59.0 |
| Other: Arab, Arab Scottish, Arab British | 355 | 3.0 |
| Other: Other ethnic group | 166 | 1.4 |
| Refused/Not Known/ Null | 113 | 0.9 |
| Total | 11,927 | |

Source: BADGERNET, July 2025

* numbers ≤5, or identifiable as ≤5 redacted as per ISD Statistical Disclosure Control Protocol

## 1.4 Haemoglobinopathies Screening

### 1.4.1 What are haemoglobinopathies?

The haemoglobinopathies are a large group of inherited blood disorders which affect the haemoglobin (oxygen carrying) component of blood. They fall into two main groups:

- haemoglobin variants (such as sickle cell disorders) which are associated with the production of abnormal forms of haemoglobin; and
- thalassaemias - in which there is an abnormality in the amount of haemoglobin produced.

Haemoglobinopathies are inherited blood disorders and for a baby to be affected, an abnormal copy of the haemoglobin gene needs to be inherited from both parents. If one copy of abnormal haemoglobin and one copy of normal haemoglobin are inherited, the baby will be a carrier and not affected. Carrier status for haemoglobinopathies will not affect the carrier, they will have normal functioning haemoglobin, but becomes important later in life, for example, when they choose to have children. Newborn bloodspot screening also includes a test for haemoglobinopathies and will identify babies who are affected or who are carriers.

Information about haemoglobinopathies screening in pregnancy is available on NHS Inform.

### 1.4.2 Haemoglobinopathies screening test

Screening for haemoglobinopathies involves a blood test to determine the carrier status of the pregnant woman. Haemoglobinopathy carrier status can affect any population, however it is more common in people with ancestry from Africa, Caribbean, Middle East, South America, Southern European, South and South-East Asia. As part of the screening test, information about ethnic and geographical ancestry is collected in a Family Origin Questionnaire and is used in the screening risk assessment.

If the screening test result for the pregnant woman is high risk (is a carrier or affected by a haemoglobinopathy), a blood test is offered to the father.

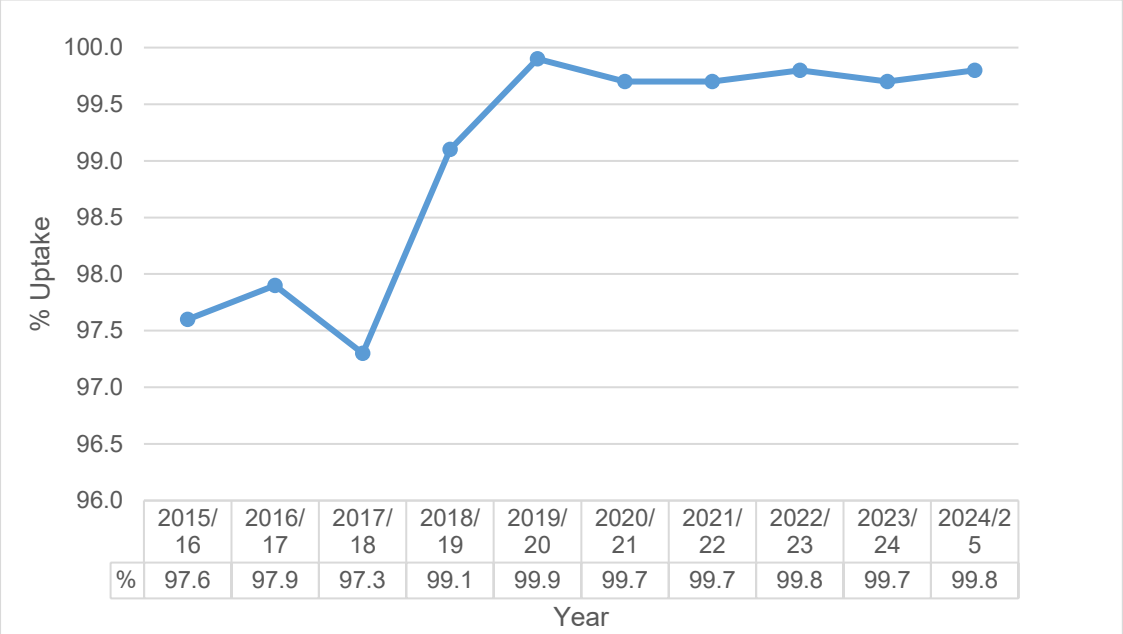
High risk pregnancies are ones where both parents are affected or are carriers for haemoglobinopathies. In this situation, parents are referred for further diagnostic testing and/or to discuss the risks with a genetic councillor.

Screening is offered to all women as early as possible in pregnancy, and ideally by ten weeks gestation, to give parents time to make an informed decision on whether to continue with the pregnancy.

### 1.4.3 Haemoglobinopathies screening uptake and outcomes

Haemoglobinopathies screening uptake has been high at >99% in NHSGGC for the last six years, see **Figure 1.2**.

**Figure 1.2 Uptake of haemoglobinopathies testing amongst pregnant women, NHSGGC, 2015/16 to 2024/25**




| | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2024/25 |
|---|---|---|---|---|---|---|---|---|---|---|
| % | 97.6 | 97.9 | 97.3 | 99.1 | 99.9 | 99.7 | 99.7 | 99.8 | 99.7 | 99.8 |

Source: BADGERNET, July 2025

In 2024/25, of the 11,933 women booked for their first antenatal appointment, 11,911 (99.8%) women had haemoglobinopathies screening tests **(Table 1.5).** Six women refused consent and for 25, consent was not recorded.

In NHSGGC in 2024/25, 10,483 (87.8%) blood samples for haemoglobinopathies (HBO) testing had a completed Family Origin Questionnaire (FOQ). This varied across sites with the Princess Royal Maternity completing the FOQ for 84.3% of pregnant women and the Royal Alexandra Hospital maternity unit completing FOQ for 90.6% of pregnant women. Blood samples are screened even if the FOQ was missing.

**Table 1.5. NHSGGC haemoglobinopathies (HBO) screening in pregnancy from 1 April 2024 to 31 March 2025**

| Maternity Unit | Total | HBO Test Performed | FOQ Completed | FOQ Not Completed | % FOQ Completed |
|---|---|---|---|---|---|
| **Princess Royal Maternity Hospital (PRM)** | 3,755 | 3,748 | 3,166 | 589 | ***84.3*** |
| **Queen Elizabeth University Hospital (QEUH)** | 5,141 | 5,132 | 4,564 | 577 | ***88.8*** |
| **Royal Alexandra Hospital (RAH)** | 3,037 | 3,031 | 2,753 | 284 | ***90.6*** |
| **Total** | **11,933** | **11,911** | **10,483** | **1,450** | ***87.8*** |

Source: BadgerNet, July 2025

Of the 11,911 maternal samples screened for haemoglobinopathies, results identified 20 foetus at risk and 25 cases where partner testing should be offered. **(Table 1.6).**

**Table 1.6 NHSGGC haemoglobinopathies screening outcome, 1 April 2024 to 31 March 2025**

| | Maternity Unit | | | |
|---|---|---|---|---|
| **Screening Outcome** | **Glasgow Princess Royal Maternity** | **Queen Elizabeth University Hospital** | **Royal Alexandra Maternity Hospital** | **Total** |
| **Fetal At Risk** | 11 | * | * | **20** |
| **Fetal Not At Risk** | 84 | 87 | 41 | **212** |
| **Positive** | * | * | * | * |
| **Carrier** | 338 | 521 | 166 | **1025** |
| **Possible Carrier** | 0 | 0 | 0 | **0** |
| **Known Carrier** | 0 | 0 | 0 | **0** |
| **Partner Testing Should Be Offered** | 15 | * | * | **25** |
| **Negative** | 3,231 | 4394 | 2719 | **10344** |
| **Partner Testing Not Required** | * | * | * | * |
| **FOQNO** | 11 | 54 | 54 | **119** |
| **Unknown** | 52 | 63 | 43 | **158** |
| **Grand Total** | **3,748** | **5,132** | **3,031** | **11,911** |

Source: BADGERNET, July 2025

*numbers ≤5, or identifiable as ≤5 redacted as per PHS Statistical Disclosure Control Protocol

### 1.4.4 Key Performance Indicators

Haemoglobinopathies screening in pregnancy is monitored through key performance indicators (KPIs) as for every screening programme. These are described in **Table 1.7**. We currently are not able to ascribe data to some of these KPIs. We await development of national data to support reporting against these indicators.

Completion of FOQ has been below the essential level for a number of years in NHSGGC. There is an ongoing improvement project to establish electronic submission of this form to the lab, rather than the current process which is to complete then print out the form for submission with the sample.

**Table 1.7 KPIs for Haemoglobinopathies screening in pregnancy, 2024-25**

| KPI | Performance threshold | NHSGGC 2024-25 |
|---|---|---|
| 1.1 Coverage | Essential: ≥95%<br>Desirable: ≥ 99% | 99.8% |
| 1.2 Timeliness of pregnancy screen (proportion of women tested by 10+0) | Essential: ≥ 50.0%<br>Desirable: ≥ 75.0% | Data not available |
| 1.3 Completion of FOQ | Essential: ≥ 95%<br>Desirable: ≥99% | 87.8% |
| 1.4 Turnaround (results reported within 3 working days) | Essential: ≥ 90.0%<br>Desirable: ≥ 95.0% | Data not available |
| 1.5 Timely offer of prenatal diagnosis (PND) (proportion of women offered PND by 12+0) | none set | Data not available |
| 1.6 Timely reporting of newborn screen positive results (parents given results by 28 days of age) | Essential: ≥ 90.0 %<br>Desirable: ≥ 95.0% | Data not available |
| 1.7 Timeliness to information and support (newborn with screen positive by 90 days of age) | Essential: ≥ 90.0 %<br>Desirable: ≥ 95.0% | Data not available |

## 1.5 Infectious diseases in pregnancy screening

### 1.5.1 Why screen for infectious diseases in pregnancy?

The infections that are screened for in pregnancy are hepatitis B (HBV), syphilis and Human Immunodeficiency Virus (HIV). All three have the potential to be passed on from mother to baby during or after childbirth, and to harm the health of both the mother and her baby. Effective measures are available to prevent all three from being transmitted and from causing health problems.

- **Hepatitis B** is a virus that affects the liver. Babies can be immunised at birth to prevent them from being infected.
- **Syphilis** is an infection that can be treated with antibiotics.
- **Human Immunodeficiency Virus (HIV)** can be treated effectively in the mother and transmission of HIV from an infected mother to her baby can be prevented.

Screening allows undiagnosed infections to be identified.

Information about infectious diseases screening in pregnancy is available on NHS Inform.

### 1.5.2 Infectious diseases screening tests

Infectious diseases screening is undertaken on blood samples taken from the pregnant women at their first antenatal appointment.

For women who test positive, there is immediate referral into the appropriate clinical care pathway. Clinical management protocols are also in place for diagnosis late in pregnancy or during birth.

### 1.5.3 Infectious disease screening uptake and outcomes

Of the 11,933 women who were booked for a first antenatal appointment in 2024-2025, 11,920 (99.9%) were recorded as having been offered testing for Hep B, HIV and Syphilis almost all women who were offered infectious disease screening took up this offer, (see **Table 1.8)**

Antenatal screening identified:

- ≤5 women diagnosed HIV;
- 45 women diagnosed with HBV (including 20 who were newly diagnosed); and
- 23 women diagnosed with syphilis (not all of whom needed treatment as these included both current and previously diagnosed infections).

**Table 1.8. Infectious diseases screening and results, NHSGGC, 2024/2025**

| 1 April 2023 - 31 March 2024 | | | | | Results | |
|---|---|---|---|---|---|---|
| | Total number of women booking | Number of women offered testing | Number of women declining test | Acceptance rate | Positive[1,2] | |
| | (N) | (N) | (N) | % | (N) | % |
| **HIV** | 11,933 | 11,920 (99.9%) | * | 99.3% | * | 0.05 |
| **HBV** | 11,933 | 11,920 (99.9%) | * | 99.8% | 45 | 0.4 |
| **Syphilis** | 11,933 | 11,920 (99.9%) | * | 99.2% | 23 | 0.2 |

*numbers ≤5, or identifiable as ≤5 redacted as per PHS Statistical Disclosure Control Protocol
Source: BadgerNet and West of Scotland Specialist Virology Centre

### 1.5.4 Key Performance Indicators

Infectious diseases screening in pregnancy is monitored through key performance indicators (KPIs) as for every screening programme. These are described in **Table 1.9 Hepatitis B, 1.10 Syphilis and 1.11 HIV**. We currently are not able to ascribe data to some of these KPIs. We await development of national data to support reporting against these indicators.

**Table 1.9. KPIs for Hepatitis B screening in pregnancy, NHSGGC, 2024-25**

| KPI | Performance threshold | NHSGGC 2024-25 |
|---|---|---|
| 2.1 Coverage | Essential: ≥ 95.0%<br>Desirable: ≥ 99.0% | 99.8 % |
| 2.2 Turnaround (results reported within 8 days) | Essential: ≥ 95.0%<br>Desirable: ≥ 97.0% | 100% |
| 2.3 Timeliness to information and support (proportion with appointment within 10 days) | Essential: ≥ 97.0%<br>Desirable: ≥ 99.0% | 45 women tested positive for hepatitis B, of whom:<br>• 24 were known about previously (previous test in GGC).<br>• 21 were new diagnoses (no previous diagnosis in GGC).<br>A local protocol is in place for the management of women with hepatitis B infection identified in pregnancy. This covers referral for specialist care, checking viral load at 26 weeks, actions required depending on viral load and paediatric services involvement at delivery. |

| | | |
|---|---|---|
| 2.4 Timely assessment (proportion seen by a specialist within 6 weeks of positive screening result) | Essential: ≥ 75.0%<br>Desirable: ≥ 90.0% | A per 2.3 |
| 2.5 Timely neonatal vaccination and immunoglobulin (administered within 24hours of birth) | Essential: ≥ 97.0%<br>Desirable: ≥ 99.0% | 99.7% |

**Table 1.10. KPIs for syphilis screening in pregnancy, NHSGGC, 2024-25**

| KPI | Performance threshold | NHSGGC 2024-25 |
|---|---|---|
| 3.1 Coverage | Essential: ≥ 95.0%<br>Desirable: ≥ 99.0% | 99.3% |
| 3.2 Turnaround (results reported within 8 days) | Essential: ≥ 95.0%<br>Desirable: ≥ 97.0% | 100% |
| 3.3 Timeliness to information and support (proportion with appointment within 10 days) | Essential: ≥ 97.0%<br>Desirable: ≥ 99.0% | 23 women had a reactive syphilis test. However not all of these women will have required treatment, since this figure includes women with previously treated syphilis as well as those with current infection.<br><br>Failsafe in conjunction with sexual health services ensures that all positive women are followed up promptly. |

**Table 1.11. KPIs for HIV screening in pregnancy, NHSGGC, 2024-2025**

| KPI | Performance threshold | NHSGGC 2024-25 |
|---|---|---|
| 4.1 Coverage | Essential: ≥ 90.0%<br>Desirable: ≥ 99.0% | 99.7% |
| 4.2 Turnaround (results reported within 8 days) | Essential: ≥ 95.0%<br>Desirable: ≥ 97.0% | 100% |
| 4.3 Timeliness to information and support (proportion with appointment within 10 days) | Essential: ≥ 97.0%<br>Desirable: ≥ 99.0% | ≤5 women tested positive for HIV during antenatal screening. Some of whom were women previously known (previous positive test in GGC) and new diagnoses (no previous positive test in GGC). |

| | | |
|---|---|---|
| | | Failsafe in conjunction with sexual health or other services ensures that all HIV positive women are followed up promptly |

## 1.6 Down's syndrome, Edwards' syndrome and Patau's syndrome (trisomy) screening

### 1.6.1 Why screen for Down's syndrome, Edwards' syndrome and Patau's syndrome in pregnancy?

Down's syndrome, Edwards' syndrome and Patau's syndrome screening is also known as trisomy screening. These syndromes are caused by a person having a third copy of a chromosome. For Down's syndrome this is chromosome 21; for Edwards' syndrome, chromosome 18; for Patau's syndrome, chromosome 13. Older mothers are more likely to have a baby with a chromosomal condition, although it can occur in women of any age.

The extra copy of a chromosome results in mild to significant changes and effects in a newborn, ranging from mild learning disability to significant mental and physical disability. People with Down's syndrome can lead long, active and fulfilling lives. Edwards syndrome and Patau's syndrome are seen as life-limiting.

Information about Down's syndrome, Edwards' syndrome and Patau's syndrome screening is available on NHS Inform .

The decision to accept screening for chromosomal conditions raises ethical issues for women. Uptake of chromosomal or other congenital anomalies screening depends on whether women wish further investigation or management such as decisions about continuation of pregnancy. However, screening also allows appropriate, management options (such as cardiac surgery or delivery in a specialist unit) to be offered in the antenatal period.

### 1.6.2 Down's syndrome, Edwards' syndrome and Patau's syndrome screening tests

The trisomy screening pathway is complex.

First line screening test:

- blood test and ultrasound scans together with maternal risk factors are used to derive an overall risk of having a baby with a chromosomal condition.
- different tests are available depending on whether blood and scan are taken in first or second trimester. Screening for samples taken in second trimester is only for Down's syndrome.

Second-line screening test:

- for women with a high chance result from their first-line test, non-invasive prenatal testing (NIPT) blood test is offered, or a diagnostic test.

Diagnostic testing:

- is offered following a high chance screening result (either first or second-line screening test) and is amniocentesis or chorionic villus biopsy (CVS).

### 1.6.3 Down's syndrome, Edwards' syndrome and Patau's syndrome screening uptake and outcomes

Uptake and outcome data for Down's syndrome, Edwards' syndrome and Patau's syndrome are sourced from national laboratory annual reports[1],[2], therefore figures may differ from local analysis presented earlier in this report.

***First-line screening test - screening uptake***

First line screening is undertaken in the national laboratory in NHS Lothian for samples taken in first trimester, and at the UK national laboratory in Bolton for samples taken in second trimester. In 2024/25, 11,328 samples were submitted for screening from NHSGGC. This includes women who were resident outside NHSGGC but attended NHSGGC Maternity Services. See **Table 1.12**.

The proportion of women who were screened in second trimester decreased in 2024/25 compared with previous years (19.7% compared to 23.3% in 2023/24 and 24.7% in 2022/23). First line screening is preferable in first trimester as all three trisomy syndromes are in the first trimester screen (Down's syndrome only in the second trimester screen); and the first trimester screen is more accurate.

**Table 1.12. First and second trimester Down's, Edwards' and Patau's syndromes screening for pregnant women in NHSGGC, 2019/20 to 2024/25**

| | 2024/25 | 2023/24 | 2022/23 | 2021/22 | 2020/21 | 2019/20 |
|---|---|---|---|---|---|---|
| ***First Trimester*** | | | | | | |
| **Singleton** | 8,948 | 8,153 | 7,785 | 8,037 | 7,849 | 7,801 |
| **Twin** | 146 | 110 | 130 | 121 | | |
| ***Second Trimester*** | | | | | | |
| **Tests** | 2,234 | 2,509 | 2,596 | 2,389 | 2,263 | 2,115 |
| **Total tests** | 11,328 | 10,772 | 10,511 | 10,547 | 10,112 | 9,916 |
| **% Second trimester** | *19.7%* | *23.3%* | *24.7%* | *22.7%* | *22.4%* | *21.3%* |

Source: First Trimester Trisomy Screening, Lothian Laboratory Annual Report 2024/25

[1] NHS Lothian, Antenatal Trisomy Screening Service Annual Report (2024/25)
[2] Bolton Antenatal Screening Laboratory

First Trimester samples are taken during 11 weeks +2 days to 14 weeks +1 day of pregnancy and are sent to NHS Lothian Laboratory. In 2024/25, of the 9,094 first trimester samples, 27 were late samples (0.3%) and 379 samples (4.2%) had incomplete request details.

Of the samples tested in the first trimester:

- 281 samples had increased chance of Down's syndrome; and
- 50 samples had increased chance for Edwards' syndrome or Patau's syndrome.

Overall, the screen positive rate (SPR) for increased chance results in the first trimester was 3.14% for Down's syndrome, and 0.56% for Edwards' and Patau's syndromes **(Table 1.13)**

**Table 1.13. First trimester Down's, Edwards' and Patau's syndromes singleton screening samples, NHSGGC, 2024/25**

| | Increased chance Down's syndrome | Down's syndrome SPR | Increased chance Edwards' or Patau's syndromes | Edwards' or Patau's syndromes SPR |
|---|---|---|---|---|
| **First trimester** | 281 | 3.14% | 50 | 0.56% |

Source: First Trimester Trisomy Screening, Lothian Laboratory Annual Report 2024/25

The second trimester samples are taken up to 20 weeks+0 days gestation and are sent to Bolton Laboratory for testing. During 2024/25, 2,234 samples were taken in the second trimester with 132 high chance results were reported (5.9%) **(Table 1.14).**

**Table 1.14. Second trimester Down's syndrome screening samples, NHSGGC, 2024/25**

| 2024/25 | Number of samples | Number of high chance results | % High chance results |
|---|---|---|---|
| **Second Trimester** | 2,234 | 132 | 5.9% |

Source: Bolton Labs September 2025

***Second-line screening test – NIPT screening***

In 2024/25, NHSGGC submitted 363 samples for NIPT testing which is undertaken at the national laboratory in NHS Tayside.

### 1.6.4 Key Performance Indicators

***First-line screening test Key Performance Indicators for Down's syndrome, Edwards' syndrome and Patau's syndrome screening***

The Key Performance Indicators (KPIs) for first-line screening for Down's syndrome, Edwards' syndrome and Patau's syndrome are shown in the **Table 1.15**. The data provided are from the NHS Lothian first trimester screening laboratory and reflect national screening activity. This data does not include data from the second trimester screening laboratory in Bolton. First and second trimester testing combine to provide the full picture of first-line screening.

**Table 1.15. KPIs for first-line Down's syndrome, Edwards' syndrome and Patau's syndrome screening in pregnancy**

| KPI | Performance threshold | Scotland 2024/25 |
|---|---|---|
| 5.1 Coverage | No threshold, screening is voluntary | Data not available |
| 5.2 Test turnaround time (reported within 3 working days) | Essential: ≥ 97.0%<br>Desirable: ≥ 99.5% | 99.9% |
| 5.3 Completion of laboratory request forms | Essential: ≥ 97.0% | 98% |
| 5.5 Screen positive rates (SPR) | | 3.06 % for T21<br>0.62 % for T18/13 |
| 5.6 Detection rate | | 83.6 % for T21<br>84.4 % for T18/13 |
| 5.3 Adequate samples - Proportion of samples that are correct and can be tested | Essential: ≥ 95.0% | 94.1 % |
| 5.4 Timeliness to information and support (proportion with appointment within 3 days) | Essential: ≥ 97.0%<br>Desirable: ≥ 99.0% | Data not available |

Source: First Trimester Trisomy Screening, Lothian Laboratory Annual Report 2024/25

***Second-line screening test (NIPT screening) Key Performance Indicators***

The Key Performance Indicators for second-line or NIPT screening for Down's syndrome, Edwards' syndrome and Patau's syndrome are shown in **Table 1.16**. The data provided are from the NHS Tayside NIPT Laboratory and reflect national screening activity.

**Table 1.16. KPIs for second-line Down's syndrome, Edwards' syndrome and Patau's syndrome screening (NIPT) in pregnancy**

| KPI | Performance threshold | Scotland 2024/25 |
|---|---|---|
| 6.1 Coverage | No threshold, screening is voluntary | Data not available |
| 6.2 Timely receipt of NIPT sample | Essential: ≥ 90.0%<br>Desirable: ≥ 95.0% | 96.6% |
| 6.3 Test turnaround time (reported within 7 working days of sample receipt) | Essential: ≥ 85.0%<br>Desirable: ≥ 95.0% | 96.7% |
| 6.4 Timeliness to information and support (proportion with appointment within 3 days) | Essential: ≥ 97.0%<br>Desirable: ≥ 99.0% | Data not available |

Source: NIPT Screening Laboratory Annual Report 2024/25

## 1.7 Foetal Anomaly Screening

### 1.7.1 Why screen for foetal anomalies in pregnancy?

Finding out about health conditions or chromosomal conditions before birth can help parents get support earlier and make decisions for themselves and their baby. This may include planning the birth so that treatment can be accessed quickly when the baby is born.

Foetal anomalies screening assesses the baby's health and development, including the development of their brain, spinal cord, heart, bowel, kidneys, arms and legs.

Information about foetal anomalies screening is available on NHS Inform.

### 1.7.2 Foetal anomaly screening test

The foetal anomaly screening test is a mid-pregnancy ultrasound scan between 18- and 21-weeks gestation.

### 1.7.3 Foetal anomaly screening uptake and outcomes

The number of pregnant women who gave consent for a foetal anomaly scan was 10,791 (90.4%) of all women who attended a booking appointment. Of those who consented to scanning, 10,788 (99.97%) of scans were performed **(Table 1.17).**

**Table 1.17. Uptake of screening for congenital anomalies by foetal anomaly scan (FAS) for the period March 2024 to April 2025 in NHSGGC**

| Maternity Unit | Pregnant women | FAS Consented | *% FAS Consented* | FAS Performed | *% FAS Performed* |
|---|---|---|---|---|---|
| **Princess Royal Maternity Hospital** | 3,755 | 3,375 | 89.9% | 3,375 | 100.0% |
| **Queen Elizabeth University Hospital** | 5,141 | 4,610 | 89.7% | 4,608 | 99.96% |
| **Royal Alexandra Hospital** | 3,037 | 2,806 | 92.4% | 2,805 | 99.96% |
| **Total** | **11,933** | **10,791** | **90.4%** | **10,788** | **99.97%** |

Source: Badger Net, July 2025

Of the 10,788 foetal scans performed, 774 (7.2%) foetal anomalies were suspected. **(Table 1.18)**

**Table 1.18. Outcome of foetal anomaly scans performed for the period 1 April 2024 to 31 March 2025**

| Maternity Unit | Number of Foetal Scans performed | Anomaly Not Suspected | Anomaly Suspected | *% Anomaly Suspected* |
|---|---|---|---|---|
| **Princess Royal Maternity Hospital** | 3,375 | 3,499 | 256 | *7.6%* |
| **Queen Elizabeth University Hospital** | 4,608 | 4,885 | 256 | *5.6%* |
| **Royal Alexandra Hospital** | 2,805 | 2,775 | 262 | *9.3%* |
| **Total** | **10,788** | **11,159** | **774** | ***7.2%*** |

Source: Badger Net, July 2025

### 1.7.4 Diagnostic testing for foetal anomalies including trisomy

Diagnostic testing for foetal anomaly is offered when an issue is identified at a scan or at screening. Two diagnostic tests are available: amniocentesis or chorionic villus biopsy. Both of these tests come with risk, and are only offered if there is a high chance that a baby could have a health condition or chromosomal condition because:

- an earlier antenatal screening test has suggested there may be a health condition or chromosomal condition;
- a previous pregnancy with health condition or chromosomal condition;
- a family history of a health condition, such as cystic fibrosis or muscular dystrophy.

***Diagnostic testing - Amniocentesis***

In 2024/25, 226 amniocentesis samples from NHSGGC were analysed by the Cytogenetics Laboratory. Of these samples, 19 abnormalities were detected (8.4% of samples) **(Table 1.19).**

**Table 1.19. Amniocentesis referrals and outcomes, 1 April 2024 to 31 March 2025 in NHSGGC**

| | Screening risk | Scan abnormality | NIPT | Other | Total |
|---|---|---|---|---|---|
| Number of patients (tests) | 45 | 122 | 23 | 36 | **226** |
| % total referral reasons | 19.91% | 53.98% | 10.18% | 15.93% | |
| Number with normal results | 36 | 101 | * | 34 | **193** |
| Number with diagnostic trisomy | * | 6 | * | * | **12** |
| Number abnormal (non-trisomy) | * | 6 | * | * | **7** |
| Failed analysis | * | 9 | * | * | **14** |
| Total Abnormalities | 6 | 12 | * | 0 | |

* numbers ≤5, or identifiable as ≤5 redacted as per PHS Statistical Disclosure Control Protocol
Source Cytogenetics Lab – Dec 2025
NIPT – Non-Invasive Prenatal Test

***Diagnostic testing - Chorionic Villus Biopsy***

In 2024/25, 101 chorionic villus biopsies from NHSGGC were analysed by the Cytogenetics Laboratory. Of these biopsies, 37 abnormalities were detected (36.6%) **(Table 1.20).**

**Table 1.20. Chorionic villus biopsy sample (CVS) referrals and outcomes 1 April 2023 to 31 March 2024 in NHSGGC**

| | Screening risk | Scan abnormality | NIPT | Other | Total |
|---|---|---|---|---|---|
| Number of patients (tests) | 16 | 46 | * | 35 | **101** |
| % total referral reasons | 15.84% | 45.54% | 3.96% | 34.65% | |
| Number with normal results | 8 | 18 | * | 34 | **61** |
| Number with diagnostic trisomy | 7 | 21 | * | 0 | **31** |
| Number abnormal (non-trisomy) | * | * | 0 | 0 | **6** |
| Failed analysis | * | * | 0 | * | * |
| Total Abnormalities | 7 | 27 | * | 0 | |

* numbers ≤5, or identifiable as ≤5 redacted as per PHS Statistical Disclosure Control Protocol
Source Cytogenetics Lab – Dec 2025
NIPT – Non-Invasive Prenatal Test

### 1.7.5. Key Performance Indicators

Key Performance Indicators for foetal anomaly screening in pregnancy are shown in Table 1.21. Currently no data is available.

**Table 1.21. KPIs for foetal anomaly screening in pregnancy, NHSGGC, 2024-25**

| KPI | Performance threshold | 2024/25 |
|---|---|---|
| 7.1 Coverage | Essential: ≥ 90.0%<br>Desirable: ≥ 95.0% | 90.4% |
| 7.2 Test performance (detection rate for cardiac anomalies) | Essential: ≥ 50.0% | Data not available |
| 7.3 Time to information and support (proportion with appointment within 3 days) | Essential: ≥ 97.0% | Data not available |

## 1.8 Challenges and priorities

- Work continues to ensure that there are low numbers of unavoidable repeat samples for screening.

- NHSGGC has a high proportion of second trimester first-line Down's syndrome, Edwards' syndrome and Patau's syndrome screening. In the last year we undertook a short investigative project into the reasons for this. An improvement plan based on the findings of this work is currently being developed.

- We have been investigating making submission of the Family Origin Questionnaire for haemoglobinopathies screening electronic, rather than paper based. We hope to develop this change over the next year.

- We have developed improvements in reporting of infectious diseases screening, including calculating true coverage based on testing in individuals, rather than aggregate laboratory data.

**Appendix 1.1**

# At a glance

**Before 10 weeks**
Screening for sickle cell and thalassaemia* — page 10

**Between 8 and 12 weeks**
Blood tests for full blood count, blood group and Rhesus status — page 9
Screening blood test for hepatitis B, syphilis and HIV* — page 19

* It's best if these tests are carried out in the early stages of pregnancy, but they can still be done at any point, up to and including labour.

**Between 11 and 14 weeks**
Early blood test for Down's syndrome, Edwards' syndrome and Patau's syndrome — page 34

**Between 11 and 14 weeks**
NT (nuchal translucency) ultrasound scan for Down's syndrome, Edwards' syndrome and Patau's syndrome — page 35

**Between 18 and 21 weeks**
Mid-pregnancy screening ultrasound scan — page 22

**If you think you have missed any scans or tests, or are unsure about your results, speak to your midwife.**

4

Screening involving blood test
Screening involving ultrasound scan

[your-pregnant-scans-and-tests-in-english_june-2025.pdf]

## Chapter 2 – Newborn Bloodspot Screening

### Summary

| Newborn Bloodspot Screening | |
|---|---|
| Why? | Early identification of rare inherited conditions<br>Reduce infant morbidity and mortality |
| Intervention | Blood screening for nine inherited conditions<br>Heel prick blood sample taken at day 4-5 of life by midwives<br>Rapid referral into services for diagnostic testing and treatment as needed |
| Activity in 2024/25 | 99.96% screening uptake (10,781 babies screened) |
| Outcomes | 14 babies were diagnosed with congenital hypothyroidism (CHT)<br>≤5 babies were diagnosed with cystic fibrosis<br>14 babies were diagnosed with haemoglobinopathy variants, and 181 babies were identified as haemoglobinopathy carriers<br>≤5 babies were diagnosed with isovaleric acidaemia (IVA) |

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**2.8. Challenges & Service Improvements ..... 36**

## 2.1. Newborn Bloodspot Screening

Newborn bloodspot screening identifies babies who may have rare but serious inherited conditions. Most babies screened will not have any of the conditions but for the small numbers that do, the benefits of screening are enormous. Early treatment can improve health and prevent severe disability or even death. Every baby born in Scotland is eligible for and routinely offered screening.

Newborn bloodspot screening aims to identify inherited conditions which can lead to problems with growth and development as early as possible after birth. This means that appropriate management for the condition detected can be offered as quickly as possible.

The inherited conditions screened for are:

- sickle cell disease;
- cystic fibrosis:
- congenital hypothyroidism;
- phenylketonuria (PKU);
- medium chain acyl-CoA dehydrogenase deficiency (MCADD);
- maple syrup urine disease (MSUD);
- isovaleric acidaemia (IVA);
- glutaric aciduria type 1 (GA1);
- homocystinuria (HCU).

## 2.2. Eligible Population

Newborn Bloodspot screening is offered to all newborns in Scotland.

For this reporting period, (April 2024 to March 2025), eligible babies are the total number of babies born during this period, excluding any baby who died before the age of 8 days. This report only includes babies resident in NHSGGC at day 7 after birth.

## 2.3. The Screening Test

The bloodspot sample is taken on day 4-5 of life (aged 96-120 hours old) whenever possible. There are separate protocols in place for screening babies who are ill, have had a blood transfusion or are born prematurely, and when repeat testing is required.

Newborns with a sibling diagnosed with MCADD and with the same parents, are at high risk of MCADD. In this situation, the newborn will be offered MCADD diagnostic testing at 24–48 hours of age as well as newborn bloodspot screening.

For bloodspot screening, a blood sample is taken by the community midwife from the baby’s heel using a bloodletting device and collected on a bloodspot card consisting of special filter paper. This test is also known as the ‘heel prick’ test or the Guthrie test. The sample card is then sent to the Scottish Newborn Screening Laboratory (SNSL) in Queen Elizabeth University Hospital, Glasgow, for analysis. This is the

national lab for newborn bloodspot testing and all samples from across the whole of Scotland are analysed there.

A detailed screening pathway is provided in **Appendix 2.1**

Where a screening test is positive, the lab will contact local clinicians immediately so this can be communicated to parents and diagnostic testing can be undertaken.

## 2.4. Information Systems Programme Performance and Delivery

Newborn bloodspot screening results are recorded against the individual child's record held within the national Child Health System. This system is checked daily, weekly and monthly to ensure that newborn bloodspot screening is complete for all newborns in NHSGGC. Mechanisms are in place to rapidly offer screening or rescreening where results are missing or need to be repeated.

Newborn bloodspot screening programme performance and quality is monitored via defined Key Performance Indicators (KPIs) and National Newborn Blood Spot Screening Standards[3]. KPIs are reported annually by the Scottish Newborn Screening Lab. **Appendix 2.2** summarises the most recent KPIs for 1st April 2024 to 31st March 2025 for all newborns born in NHSGGC, regardless of area of residence.

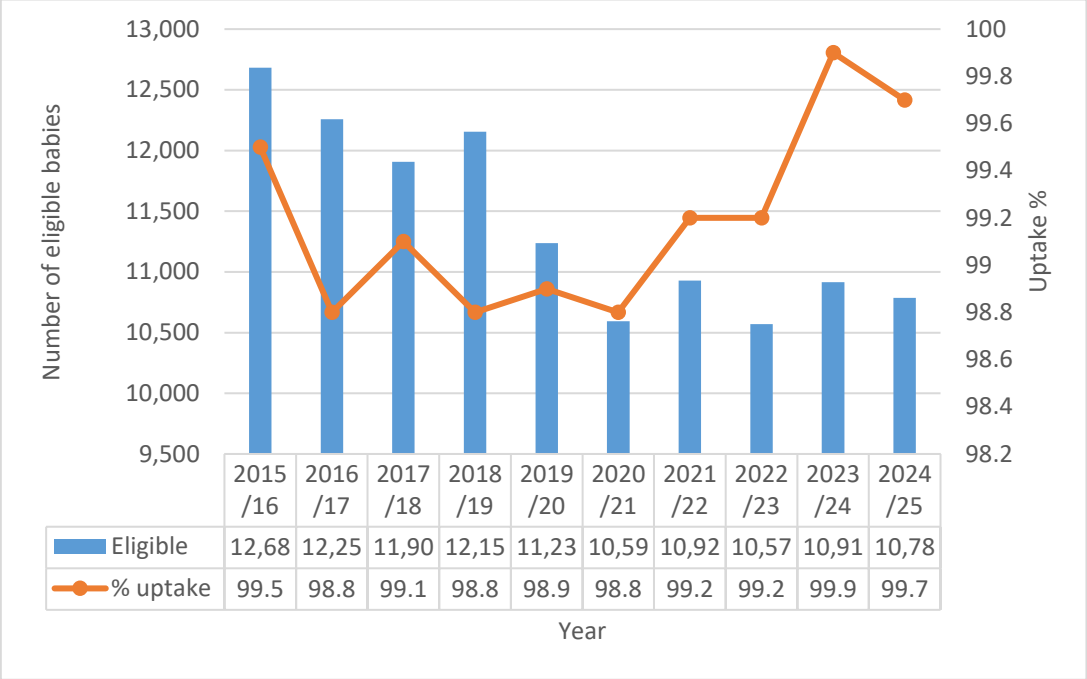
As a result of differences in data extract dates and eligible cohort definitions, numbers in local data analysis may differ from those presented in lab reports.

## 2.5. Eligibility and uptake of newborn bloodspot screening among babies in NHSGGC

The total number of babies eligible for newborn screening in NHSGGC has fallen over the last ten years, reflecting the fall in birth rate in Scotland over this period (**Figure 2.1**). Uptake of newborn bloodspot screening has been consistently high over the last ten years, with uptake of over 98.8% in all years.

[3] Newborn blood spot screening standards – Healthcare Improvement Scotland (Accessed December 2025)

**Figure 2.1 Eligibility and Uptake of Newborn Bloodspot Screening, NHSGGC Ten Year Trend, 1st April 2015 to 31st March 2025**




Source: Child Health System; Date extracted: September 2025

Of the 10,785 babies eligible for newborn bloodspot screening in 2024/2025, 10,754 (99.7%) were screened (**figure 2.1**). Fewer than five babies were not screened due to parental refusal of consent for screening.

**Table 2.1** details the distribution of eligible babies who participated in newborn bloodspot screening between April 2024 and March 2025, broken down by Health and Social Partnership (HSCP) and Scottish Index of Multiple Deprivation (SIMD) quintile. Overall uptake of newborn bloodspot screening during this period was high at 99.6% in the all HSCP areas, with small variation by SIMD, indicating almost universal participation in newborn bloodspot screening.

**Table 2.1 Number of Eligible Babies Participating in Newborn Bloodspot Screening by HSCP & SIMD quintile, April 2024 to March 2025**

| HSCP (Screened) | SIMD Quintile | | | | | Total |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | |
| **East Dunbartonshire HSCP** | 29 | 185 | 33 | 164 | 382 | **793** |
| **East Renfrewshire HSCP** | 55 | 89 | 59 | 250 | 344 | **797** |
| **Glasgow City HSCP - North East Sector** | 1,146 | 264 | 223 | 192 | 28 | **1,853** |
| **Glasgow City HSCP - North West Sector** | 910 | 192 | 165 | 150 | 293 | **1,710** |
| **Glasgow City HSCP - South Sector** | 1,111 | 622 | 322 | 315 | 170 | **2,540** |
| **Inverclyde Community HSCP** | 282 | 87 | 65 | 78 | 66 | **578** |
| **Renfrewshire HSCP** | 487 | 330 | 257 | 224 | 421 | **1,719** |
| **West Dunbartonshire HSCP** | 385 | 197 | 122 | 57 | 30 | **791** |
| **NHSGGC Total** | **4,405** | **1,966** | **1,246** | **1,430** | **1,734** | **10,781** |

Source: Child Health System, Date extracted: September 2025

**Table 2.2** shows the number of babies eligible for newborn screening by ethnicity, for the period April 2024 to March 2025. Over half of eligible babies screened (58.8%) were recorded as Scottish ethnic origin. The next largest group was Pakistani, Pakistani Scottish, or Pakistani British (12.5%), followed by African, African Scottish, or African British (5.6%). A notable proportion (6.2%) of records had ethnicity recorded as 'Not Known or Null' (not recorded), highlighting an area for potential improvement in data completeness for ethnicity.

**Table 2.2 Eligibility of Newborn Bloodspot Screening by Ethnicity, April 2024 to March 2025**

| Ethnicity | Number eligible | % of newborns screened |
|---|---|---|
| African, African Scottish, African British | 731 | 6.8 |
| Asian: Bangladeshi, Bangladeshi Scottish, Bangladeshi British | 34 | 0.3 |
| Asian: Chinese, Chinese Scottish, Chinese British | 77 | 0.7 |
| Asian: Indian, Indian Scottish, Indian British | 310 | 2.9 |
| Asian: Other Asian, Asian Scottish, Asian British | 145 | 1.3 |
| Asian: Pakistani, Pakistani Scottish, Pakistani British | 795 | 7.4 |
| Caribbean or Black | 26 | 0.2 |
| Any mixed or multiple ethnic groups | 458 | 4.2 |
| White: Gypsy / Traveller | 12 | 0.1 |
| White: Irish | 46 | 0.4 |
| White: Other British | 311 | 2.9 |
| White: Other white ethnic group | 293 | 2.7 |
| White: Polish | 81 | 0.8 |
| White: Scottish | 6,339 | 58.8 |
| Other: Arab, Arab Scottish, Arab British | 238 | 2.2 |
| Other: Other ethnic group | 215 | 2.0 |
| Not Known/ Null | 674 | 6.2 |
| **Total** | **10,785** | |

Source: Child Health System, ate extracted: September 2025

## 2.6. Outcomes of Newborn Bloodspot Screening

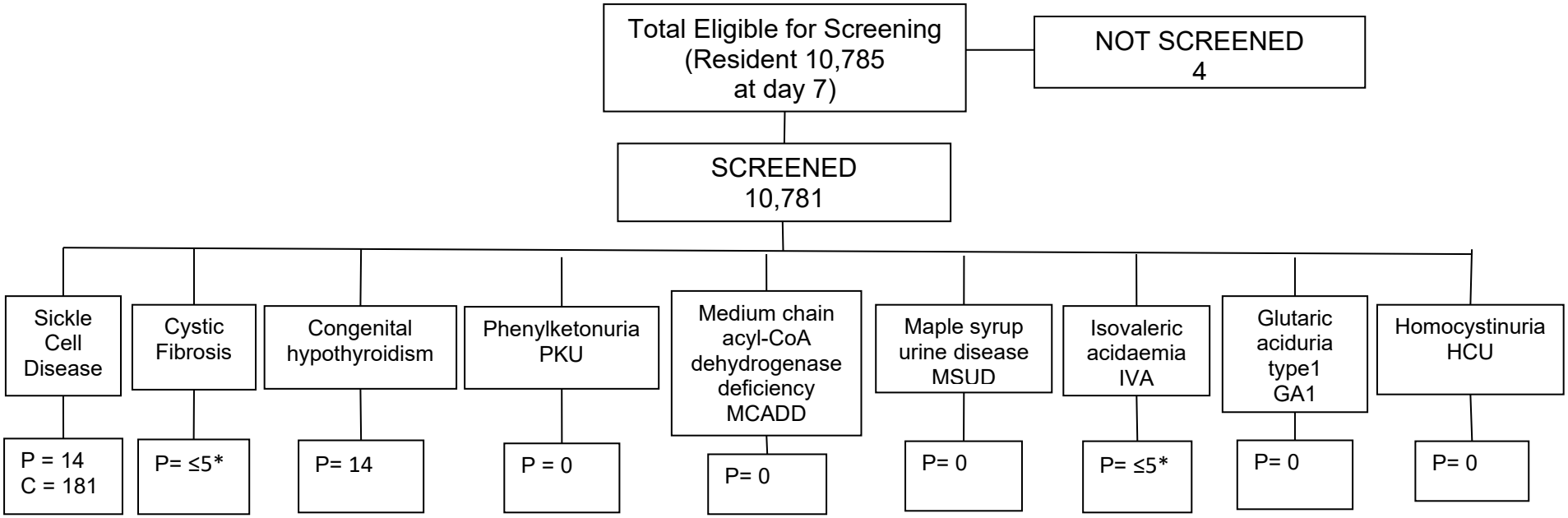
Of the 10,781 Newborn bloodspot screening samples tested, positive results were found for the following conditions (see also **Figure 2.3**):

- 14 babies were diagnosed with congenital hypothyroidism (CHT);
- ≤5* babies were diagnosed with cystic fibrosis (CF);
- 14 babies were diagnosed with haemoglobinopathy variants, and 181 babies were identified as haemoglobinopathy carriers;
- ≤5* babies were diagnosed with isovaleric acidaemia (IVA).

* Where fewer than five babies have been identified with an inherited condition, this has been summarised as ≤5, as per PHS Statistical Disclosure Control Protocol.

**Figure 2.3**

**NHS Greater Glasgow & Clyde Residents - Summary of Bloodspot Screening Uptake & Results for eligible babies 1st April 2024 to 31st March 2025**




Source: Child Health System, Date extracted: Sept 2025
P = Positive
C = Carrier
* Where fewer than five babies have been identified with an inherited condition, this has been summarised as ≤5, as per PHS Statistical Disclosure Control Protocol.

## 2.7. Repeat Bloodspot Samples in 2024/25

In 2024/225, a total of 11,718 newborn blood spot samples were received by the Scottish Newborn Screening Laboratory from newborns born in NHSGGC, (regardless of area of residence). The Scottish Newborn Screening Laboratory monitors the percentage of bloodspot that need to be repeated due to avoidable reasons. For examples see Table 2.5. These repeats create additional workload for midwives and laboratory staff and can cause distress to parents, who must consent to another heel prick test.

The avoidable repeat rate in NHSGGS was 3.8%, slightly above the essential threshold of 2.0% and below the Scottish average of 4.08%. This included bloodspot samples from babies resident in other Health Board areas who were born or received care within NHSGGC. The number and reason avoidable repeat tests are provided in **Table 2.5.**

**Table 2.5 Number & Reason for Repeat Samples (national KPI 8.3)**

| Reason | Number | Percentage % |
|---|---|---|
| Insufficient sample | 233 | 2.0 |
| Sample taken <96 hours (too early) | 25 | 0.2 |
| Incorrect blood application | 68 | 0.6 |
| Compressed /damaged sample | 28 | 0.2 |
| Blood quality of sample | 10 | 0.1 |
| Missing CHI | 81 | 0.7 |
| Expired card used | 1 | 0.0 |
| >14 days in transit | 4 | 0.0 |
| **Total** | **450** | |

Source: SNSL Report 2024-25

Bloodspot samples should be taken from babies between 4 – 5 days of life (96 – 120 hours of life). In NHSGGC, 86.4% of samples were taken within this timeframe, which is below the KPI essential threshold of ≥90%.

Samples should arrive in the laboratory as quickly as possible as, ideally no later than 3 working days after the sample is taken. In NHSGGC, 92.3% of bloodspot samples reached the laboratory within this timeframe, which is below the KPI essential threshold of ≥95%.

## 2.8. Challenges & Service Improvements

- Avoidable repeats – in 2024/25 quality improvement initiatives have included feedback from the lab on samples that are not suitable for testing, including photographs of the bloodspot card identifying the incorrect items. This work has led to improvement in quality of samples and remains ongoing.
- Timely sample collection – this may be affected by timings of home visits, family availability, staffing levels and so on. Work to address this is ongoing.
- Timely receipt of the sample in the lab – quality improvement work has been undertaken to identify reasons for delays, which includes delays in sending the samples and delays in transport. Standard processes are now in place, training has been given and improvement is being monitored.
- Ethnicity coding – continue to improve completeness of ethnicity recording.

Work is being undertaken to review information for parents about babies identified as a sickle cell disease carrier. This work is with NHSGGC genetic counselling services.

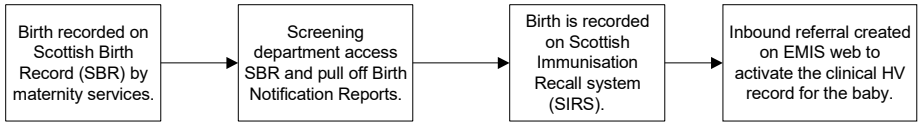
In addition, in 2026 two new inherited conditions will be screened for as part of routine newborn bloodspot screening. These are:

1. Hereditary Tyrosinaemia 1 (HT1) which will be added to the screen in January 2026;
2. Spinal Muscular Atrophy (SMA) will be added to the screen in Spring 2026 as part of a UK-wide trial to gather evidence of the effectiveness of screening for this disease.

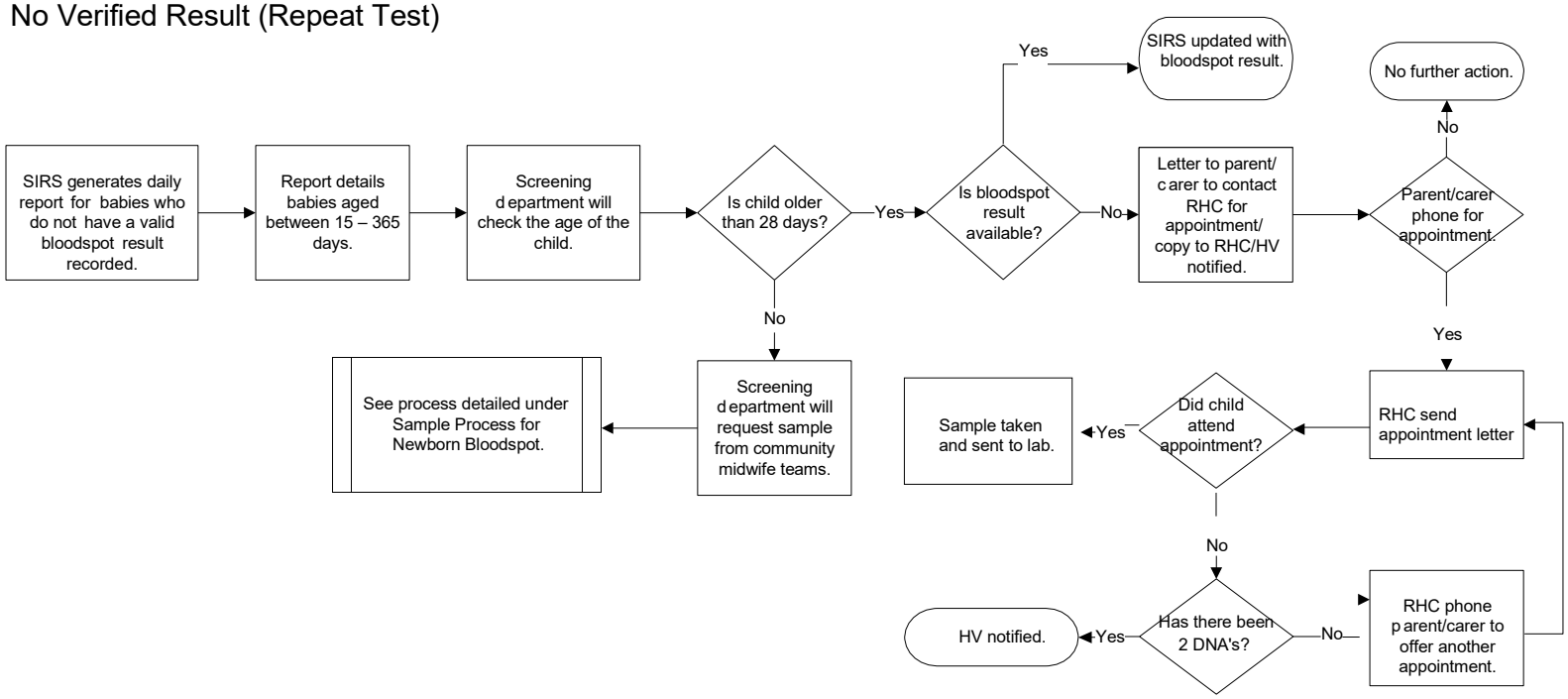
For both hereditary diseases, full information will be provided to parents to inform their consent for screening. The current blood sample taken is sufficient to allow for screening for both these conditions.

## Appendix 2.1 - NHSGGC Newborn Bloodspot Screening Pathway

Newborn Bloodspot Screening Process – Screening Department Processes – January 2025




Sample Process for Newborn Bloodspot – Overdue or No Verified Result (Repeat Test)



**APPENDIX 2.2 - Newborn Bloodspot Screening KPIs & Performance during 2024-25 for NHSGGC**

| KPI | Performance threshold | NHSGGC 2024-2025 |
|---|---|---|
| 8.1 Coverage | Essential : ≥95%<br>Desirable : ≥ 99% | 99.7% |
| 8.2 Coverage (movers in) | Essential : ≥95%<br>Desirable : ≥ 99% | Not available |
| 8.3 Avoidable repeat samples | Essential level ≤ 2.0%<br>Desirable level ≤ 1.0% | 4.2% |
| 8.4 Timely identification of babies with a null of incomplete result recorded on Child HealthSystem | Essential level: CHRD performs regular checks (ideally daily, minimum weekly) to identify babies ≥ 18 days and ≤ 364 days with a null or incomplete result.<br><br>Desirable level: CHRD performs regular checks (ideally daily, minimum weekly) to identify babies ≥ 14 days and ≤ 364 days with a null or incomplete result. | Met |
| 8.5 CHI number is included on the bloodsport card | Essential level ≥ 98%<br>Desirable level ≥ 100% | 99.3% |
| 8.6 Timely sample collection | Essential level ≥ 90% of first blood spot samples are taken between 96 and 120 hours of life<br><br>Desirable level ≥ 95% of first blood spot samples are taken between 96 and 120 hours of life | 86.4% |
| 8.7 Timely receipt of the sample in the laboratory | Essential level ≥ 95% of all samples received less than or equal to 3 working days of sample collection<br><br>Desirable level ≥ 99% of all samples received less than or equal to 3 working days of sample collection | 92.3% |
| 8.11 Timely processing of CHT and IMD (excl HCU) screen positive samples | Essential level ≥ 100% of babies with a positive CHT, PKU, MCADD, MSUD, IVA or GA1 result have a clinical referral initiated within 3 working days of sample receipt by the screening laboratory. | 100% |

Source: SNSL Report 2024-25

## Chapter 3 – Newborn Hearing Screening

### Summary

| Newborn Hearing Screening | |
|---|---|
| Why? | Early detection of permanent congenital hearing loss<br>Early detection of mild and unilateral hearing loss |
| Intervention | Non-invasive hearing screening test offered to all newborns by four weeks of corrected age (taking account of premature birth).<br>Majority of screening takes place in hospitals, on maternity wards. Outpatient and community clinic appointments are also offered.<br>For those babies who have no clear response in one or both ears after two attempts at the screening test, rapid referral into Audiology Services for further testing, diagnosis, monitoring and ongoing support. |
| Activity in 2024/25 | 99.4% of eligible babies completed screening<br>10,756 babies screened |
| Outcome in 2024/25 | 193 babies (1.8%) referred to Audiology for diagnostic testing following two failed screening tests.<br>Of these: ≤5 babies had bilateral auditory neuropathy spectrum disorder (ANSD); 13 babies had bilateral conductive loss; 15 babies had bilateral sensorineural loss; ≤5 babies had unilateral ANSD; 17 babies had unilateral conductive loss; 12 babies had unilateral sensorineural loss. |

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### 3.1. Newborn hearing screening

Universal newborn hearing screening aims to detect permanent congenital hearing impairment. In addition, babies with mild and unilateral (one-sided) hearing losses are also identified and receive ongoing review.

### 3.2. Eligible population

Universal newborn hearing screening programme is offered to all newborns by four weeks of corrected age, except a small number who are excluded due to contraindication to screening. The corrected age is the actual age in weeks minus the number of weeks the baby was pre-term. The babies excluded are those who died before screening was complete, are contraindicated for the screening test or have not reached the corrected age for screening.

### 3.3. Screening test

Hearing tests are carried out on all eligible babies born using the Automated Auditory Brainstem Response (AABR) protocol. Screening is completed prior to discharge from hospital, or if this is not possible, at an outpatient clinic.

### 3.4. Repeat screens

A second screening test may be required if the baby does not pass the initial test. This can be because the baby was unsettled during the test, there was fluid or a temporary blockage in the ear or the baby has a hearing loss. Detailed screening pathway is shown in Appendix 3.1**.**

### 3.5. Information systems, programme performance and delivery

The newborn hearing screening programme is supported by the Scottish Birth Record system to deliver hearing screening. Results are recorded on the child's record in the national Child Health System, which is used to run failsafe reports to ensure all babies are offered hearing screening.

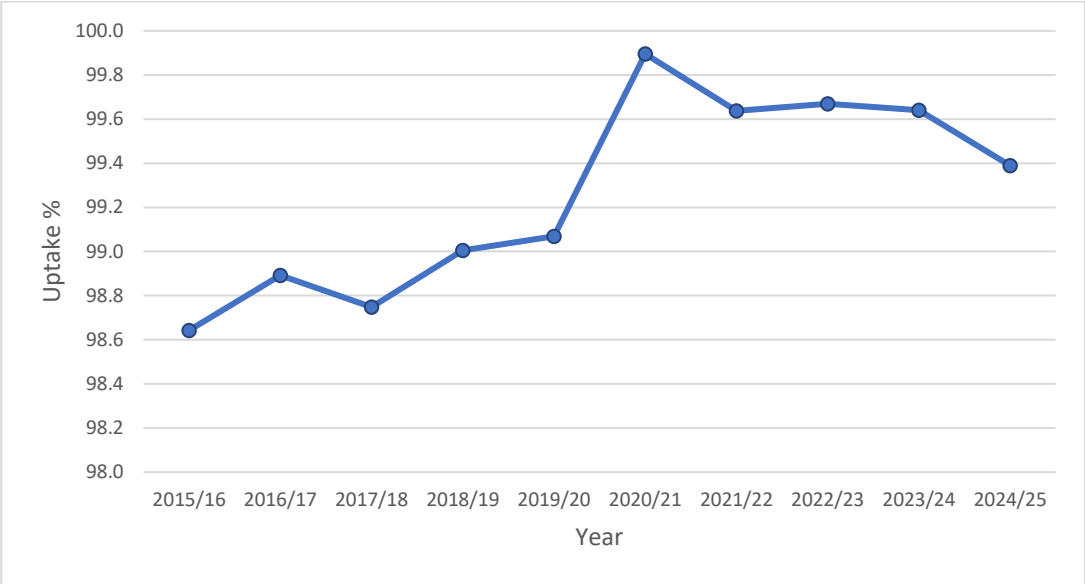
Newborn hearing screening programme performance and quality is monitored via defined Key Performance Indicators (KPIs) and the national Newborn Hearing Screening Standards[4]. A summary of KPI's for 2024/25 is provided in **Appendix 3.2.**

[4] PNBS-Newborn-Hearing-finalstandards-Jan19.pdf (Accessed December 2025)

### 3.6. Uptake of newborn hearing screening in NHSGGC

Uptake of newborn hearing screening is consistently high and has been more than 98% uptake since 2015/16. Uptake has increased in the 10-year period from 2015/16, although uptake in the current year 2024/25 fell slightly, see **Figure 3.1.**

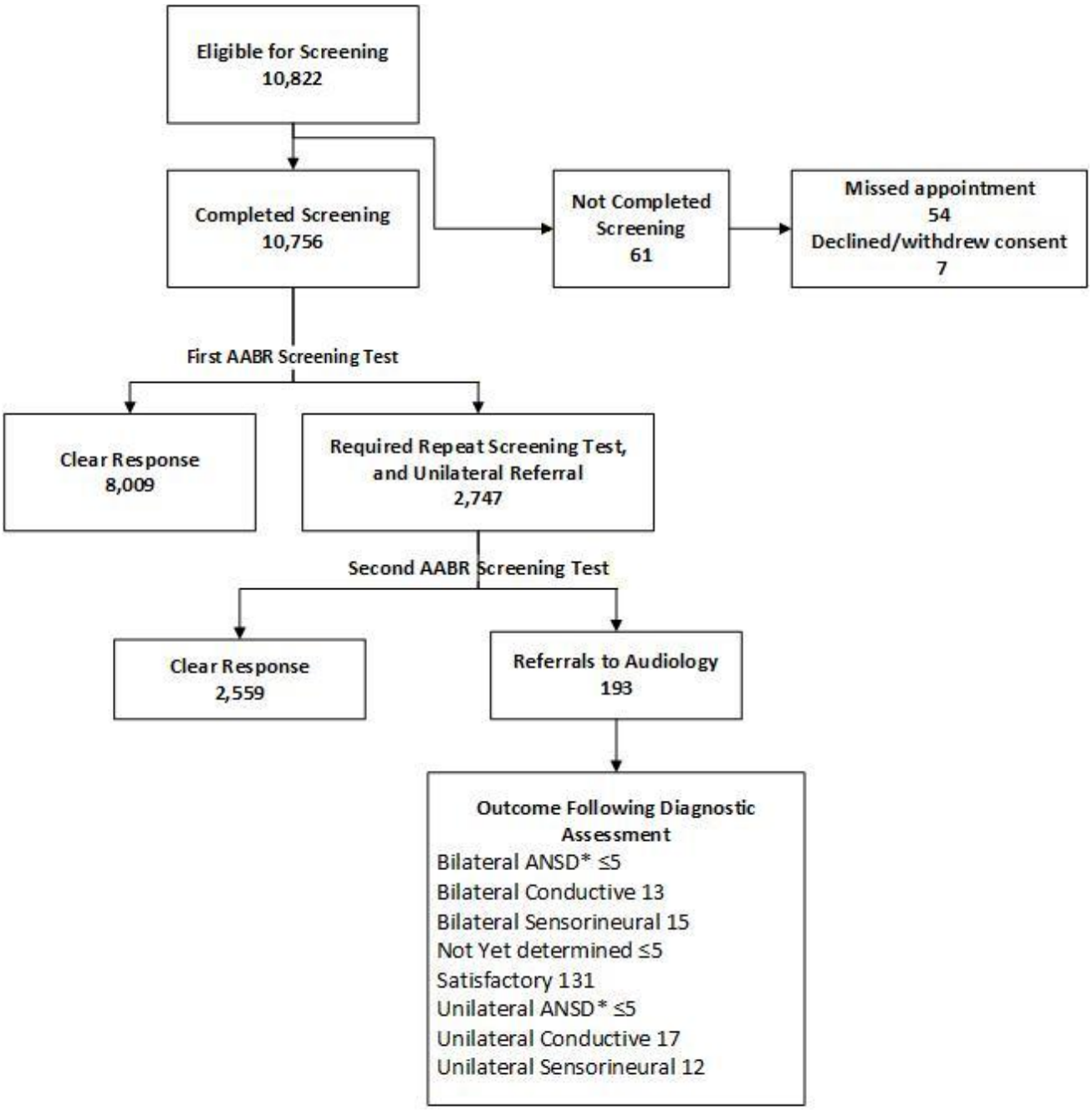
**Figure 3.1. Uptake of newborn hearing screening – ten-year trend from 2015/16 to 2024/25, NHSGGC residents**




Source: Scottish Birth Record (SBR) Extracted: October 2025

In the reporting period 1st April 2024 to 31st March 2025, 10,822 babies were eligible for newborn hearing screening. Of those who were eligible, 10,756 babies (99.4%) completed the newborn hearing screening pathway. Sixty-six babies did not complete screening, this was due to missed appointments and parents declining to or withdrawing consent for screening. The screening pathway and numbers of babies at each stage is shown in **Figure 3.2.**

**Figure 3.2. Summary of newborn hearing screening activity, NHSGGC residents, 1 April 2024 to 31 March 2025**




*Auditory Neuropathy Spectrum Disorder

### 3.7. Audiology referrals following newborn hearing screening

The total, 193 babies were referred on to Audiology following failure of second screening attempt. This included babies with hearing loss and those who were not settled despite two screening attempts.

In Audiology, these babies underwent diagnostic assessment. Following diagnostic assessment:

- 131 babies had satisfactory hearing in both ears;
- ≤5 babies had bilateral auditory neuropathy spectrum disorder (ANSD);
- 13 babies had bilateral conductive loss;
- 15 babies had bilateral sensorineural loss;
- ≤5 babies had unilateral ANSD;
- 17 babies had unilateral conductive loss;
- 12 babies had unilateral sensorineural loss; and
- ≤5 babies outcome was not yet determined.

All the babies with an identified hearing loss were and will be followed up with the appropriate care pathway for ongoing support and management.

### 3.8. Timeliness of assessment within Audiology

The total number of babies who completed the diagnostic assessment process from was 194. The details of timeliness of assessment are in **Table 3.4.**

**Table 3.4. NHSGGC Completion of newborn audiology assessment following referral from newborn hearing screening, 1st April 2024 to 31st March 2025**

| | **Number of babies** |
|---|---|
| Number of babies referred who were **offered** an initial appointment either within 4 weeks of screen completion or by 44 weeks gestational age. (Corrected age to be used for babies born at <40 weeks gestation). | 193 |
| Number of babies referred who **attended** an initial appointment either within 4 weeks of screen completion or by 44 weeks gestational age. (Corrected age to be used for babies born at <40 weeks gestation). | 185 |
| Number of babies referred who **did not attend** any diagnostic audiology appointments. | 0 |
| **Total number of babies completing diagnostic assessment process** | **193** |

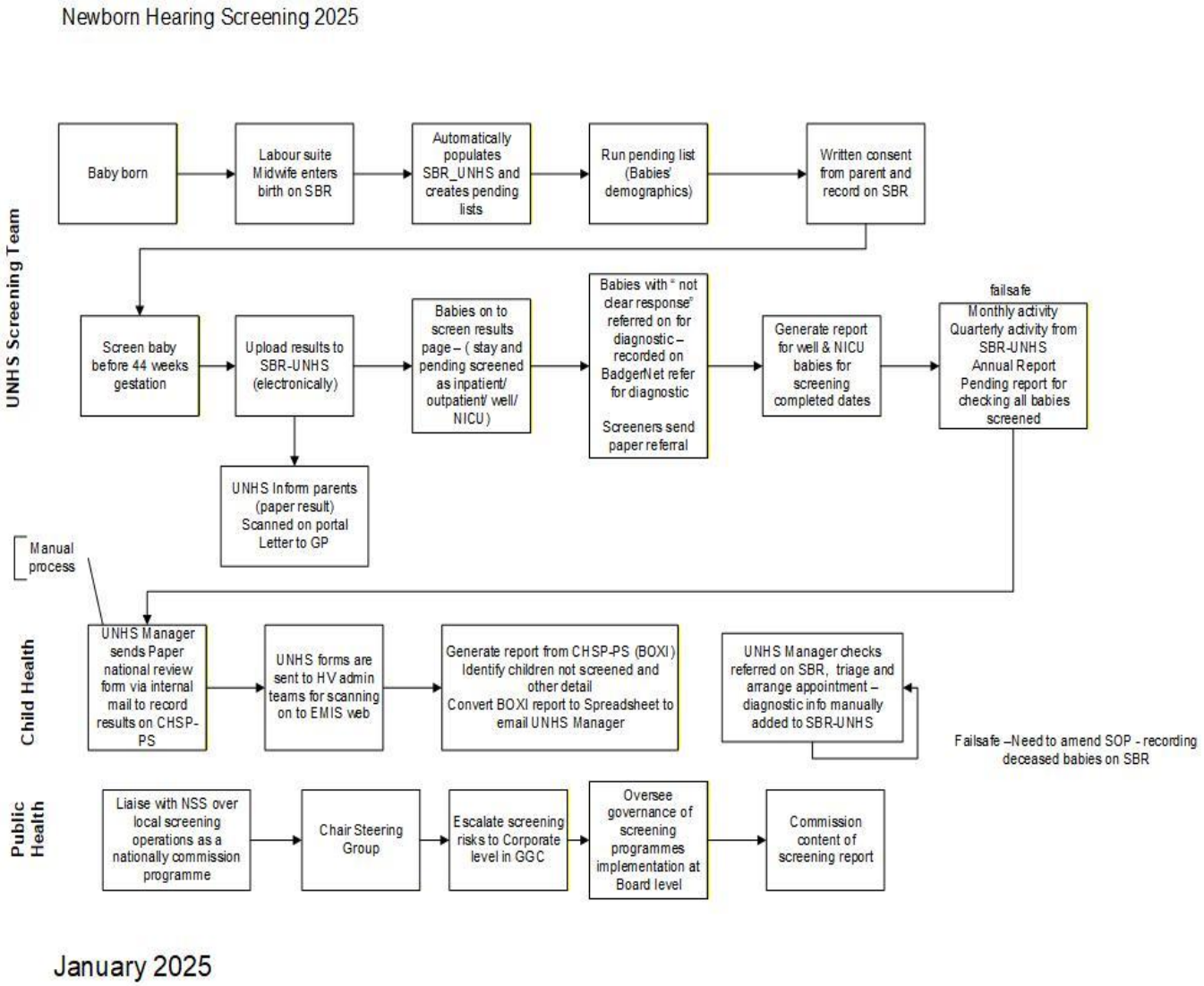
### 3.9. Challenges and future priorities

In 2023/24, NHSGGC replaced old newborn hearing screening equipment with new equipment. The new equipment had multiple faults and teething issues which led to significant service issues in 2023/24 and 2024/25. By the end of 2024/25 these were mostly resolved, however they had resulted in an increased proportion of babies needing a second screening test across 2024/25 (25.5%), see KPI 7.4 in Appendix 3.2, above the essential threshold. The proportion of babies that required referral into Audiology following two failed screening tests was within the desirable threshold (1.8%), see KPI 7.5. The number of babies diagnosed with hearing loss was similar to previous years.

There is a national priority to develop national newborn hearing screening quality assurance data, through adoption of a single data system for Scotland. In 2024/25, there have been national discussions about this and potential products were investigated, however there is no recommendation for how to proceed at this time. Currently all boards manage their own data in their own data system and produce their own performance data. Any new national data system will require investment from all NHS boards.

The Child Health System, which collates an electronic health record for every child in Scotland up to age 18 years and includes screening, immunisation and health visiting data, is due to be replaced in 2025/26. This system is used by all NHS boards, and for newborn hearing screening is used to generate failsafe reports to ensure all newborns are offered hearing screening. There are likely to be teething issues when this system is replaced and the screening service will work closely with the screening call/recall office to ensure a smooth changeover.

## Appendix 3.1 NHSGGC Universal Newborn Hearing Screening Pathway



## Appendix 3.2 - Universal Newborn Hearing Screening KPIs 2024-2025

| Criteria | Thresholds | % Achieved |
|---|---|---|
| 7.1 The proportion of babies eligible for newborn hearing screening for whom the screening process is complete by 4 weeks corrected age. | Essential: >98%<br>Desirable: >99.5% | 96.3% |
| 7.2 Refers to the OAE protocol not used in NHSGGC | | |
| 7.3 Refers to the OAE protocol not used in NHSGGC | | |
| 7.4 The proportion of well babies tested using the AABR protocol who do not show a clear response in both ears at AABR1. | Essential: <15%<br>Desirable: <12% | 25.5% |
| 7.5 The proportion of babies with a screening outcome who require an immediate onward referral to audiology for a diagnostic assessment. | Essential: <3%<br>Desirable: <2% | 1.8% |
| 7.6 The proportion of babies with a no clear response result in in one or both ears or other result that that requires an immediate onward referral for audiological assessment who receive an appointment for audiological assessment within the required timescale (within 4 weeks of screen completion or by 44 weeks gestational age). | Essential: >97%<br>Desirable: >99% | 99.5% |
| 7.7 The proportion of babies with a no clear response result in in one or both ears or other result that that requires an immediate onward referral for audiological assessment who attend for audiological assessment within the required timescale (within 4 weeks of screen completion or by 44 weeks gestational age). | Essential: >90%<br>Desirable: >95% | 95.4% |

## Chapter 4 - Child Vision Screening

### Summary

| Pre-school vision screening | |
|---|---|
| Why? | Early identification of poor vision.<br>Improves engagement in school and with learning. |
| Intervention | Vision screening test offered to all 4–5-year-olds in the year before they attend primary school.<br>Vision screening principally undertaken in nurseries, with hospital and community clinics for those who miss this opportunity or who do not attend nursery.<br>Referral as required to shared care orthoptic/optometry clinic within local hospital Ophthalmology department / local community optometrist or to community paediatric clinic. |
| Activity in 2024/25 | 83.0% screening uptake (11,182 children screened)<br>27.1% (2,518 children) referred for further investigations |
| Outcomes | Screening uptake varied by HSCP area, with highest uptake in Renfrewshire HSCP 90.7% and lowest in Glasgow North West Sector 76.0%.<br>Screening uptake varied by SIMD, with highest uptake in least deprived quintile (89.1%) and lowest in most deprived quintile (77.9%).<br>Screening result varied by HSCP area – the proportion of children with a screen abnormality detected was highest in Glasgow South (42.6%) and lowest in East Dunbartonshire (23.0%). Clear variation by SIMD with an abnormality detected in 39.6% in SIMD1 (most deprived) compared to 24.7% in SIMD5 (least deprived). |

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## Pre-school Vision Screening Programme

### 4.1. Background

Vision screening is routinely offered to all pre-school age children resident in NHS Greater Glasgow and Clyde.

Vision problems affect 15-20% of children and although obvious squints are easily detected, refractive error and subtle squints often go undetected and long-term vision loss can be the result in adulthood. Lazy eye or amblyopia can be caused by either a squint (strabismus) or differences in the focusing power of each eye (refractive error) which results in the brain receiving different images from each eye. If these problems are not treated early in childhood, this can lead to reduced vision in one or, in some cases, both eyes. The screening programme can also detect reduced vision due to other more uncommon causes.

Most problems can be treated using spectacle lenses to correct any refractive error; and occlusion therapy to treat amblyopia (reduced vision) – mainly using eye patches. These treatments can be used alone or in combination. Treatment is most effective when the brain is still developing (in young children) and when the child co-operates in wearing the patch and/or glasses. The most common cause of poor vision is refractive error.

### 4.2. Aim of Vision Screening Programme

The aim of the screening programme is to detect reduced visual acuity, the commonest causes of which are amblyopia and refractive error. There is emerging evidence that good screening and treatment result in lower incidence of significant permanent vision loss.

### 4.3. Pre-school Vision Test

The basic screen is a visual acuity test where children are asked to match a line of letters or pictures to a key card or to describe a line of pictures.

### 4.4. Information Systems Programme Performance and Delivery

Results from the vision screening assessment is recorded on paper at the appointment and manually input to the child's record in the national Child Health System.

There are no national key performance indicators for pre-school vision programme, however national and Health Board coverage (uptake) of pre-school vision screening is reported within the national Child Health Pre-School Review Coverage annual statistical reports[5].

[5] Child health pre-school review coverage 2023 to 2024 - Child health pre-school review coverage - Publications - Public Health Scotland

## 4.5. Eligible Population

All pre-school children resident in NHS Greater Glasgow and Clyde aged between 4 and 5 years are invited to attend for vision screening.

## 4.6. Pre-school Vision Screening Pathway

Eligible children (the school intake cohort for the following year), with dates of birth between 1st March and the following 28th February are downloaded from CHI and matched against the registration lists received from nurseries.

Pre-school vision screening clinics take place in nurseries. Children that do not attend nursery, or whose nursery is unknown, or who miss their appointment within the nursery, are invited to a hospital orthoptic clinic to have their vision screened.

A proportion of children require further testing in secondary care following the initial screen. These children are referred for further assessment to a paediatric clinic in an ophthalmology department, though a small number may be referred to a community optometrist initially.

The assessment appointment in ophthalmology involves a full eye examination and allows clinicians to identify whether the screening test was a false positive and no further action is required or if the screen test was a true positive to enable the specific disorder to be identified and treated.

## 4.7. Delivery of Pre-school Vision Screening Programme 2024-2025

### *Eligible population*

Over the last ten years, the number of children eligible for vision screening has fallen, from 12,975 in 2015-16 to 11,182 in the current year 2024-25. This aligns with the fall in birth rate over this period.

Of the 11,182 eligible children, 4,327 (38.7%) resided in deprived (SIMD) quintile. The majority of these children, 5,767 (72.5%), were resident within Glasgow City Health and Social Care Partnership **(Table 4.1).**

**Table 4.1. Total number of NHSGGC residents aged 4 to 5 years eligible for pre-school vision screening, by HSCP and SIMD quintiles, 2024-2025**

| | SIMD Quintile | | | | | |
|---|---|---|---|---|---|---|
| | Most deprived | | | | Least deprived | |
| **HSCP** | **1** | **2** | **3** | **4** | **5** | **Total** |
| East Dunbartonshire HSCP | 43 | 161 | 60 | 226 | 631 | **1,121** |
| East Renfrewshire HSCP | 49 | 103 | 65 | 356 | 528 | **1,101** |
| Glasgow City HSCP | 3,139 | 969 | 588 | 603 | 468 | **5,767** |
| *Glasgow North East Sector* | *(1,153)* | *(222)* | *(171)* | *(189)* | *(40)* | ***(1,775)*** |
| *Glasgow North West Sector* | *(879)* | *(221)* | *(161)* | *(130)* | *(290)* | ***(1,681)*** |
| *Glasgow South Sector* | *(1,107)* | *(526)* | *(256)* | *(284)* | *(138)* | ***(2,311)*** |
| Inverclyde HSCP | 311 | 104 | 74 | 79 | 83 | **651** |
| Renfrewshire HSCP | 414 | 327 | 261 | 276 | 460 | **1,738** |
| West Dunbartonshire HSCP | 371 | 209 | 117 | 67 | 40 | **804** |
| **Total** | **4,327** | **1,873** | **1,165** | **1,607** | **2,210** | **11,182** |
| **% of Total** | **38.7** | **16.8** | **10.4** | **14.4** | **19.8** | |

HSCP – Health and Social Care Partnership
SIMD – Scottish Index of Multiple Deprivation
Source: Child Health System. Date extracted: Sept 2025

### *Attendance at nursery*

Vision screening is principally undertaken in nurseries. However, not all children eligible for vision screening are registered with a nursery. Those that miss screening in nursery (due to not being registered or absent on the day) are sent an appointment during the summer holidays to have their vision tested within a community or hospital clinic.

Registration at nursery for 4-5 year olds varies across the region. Inverclyde has the highest proportion of children registered with a nursery 96.2% (626) and North West Glasgow the lowest, 81.8% (1,375) **Table 4.2.**

**Table 4.2. Number of NHSGGC children eligible for screening, number and percentage registered and not registered with a nursery by HSCP 2024-2025**

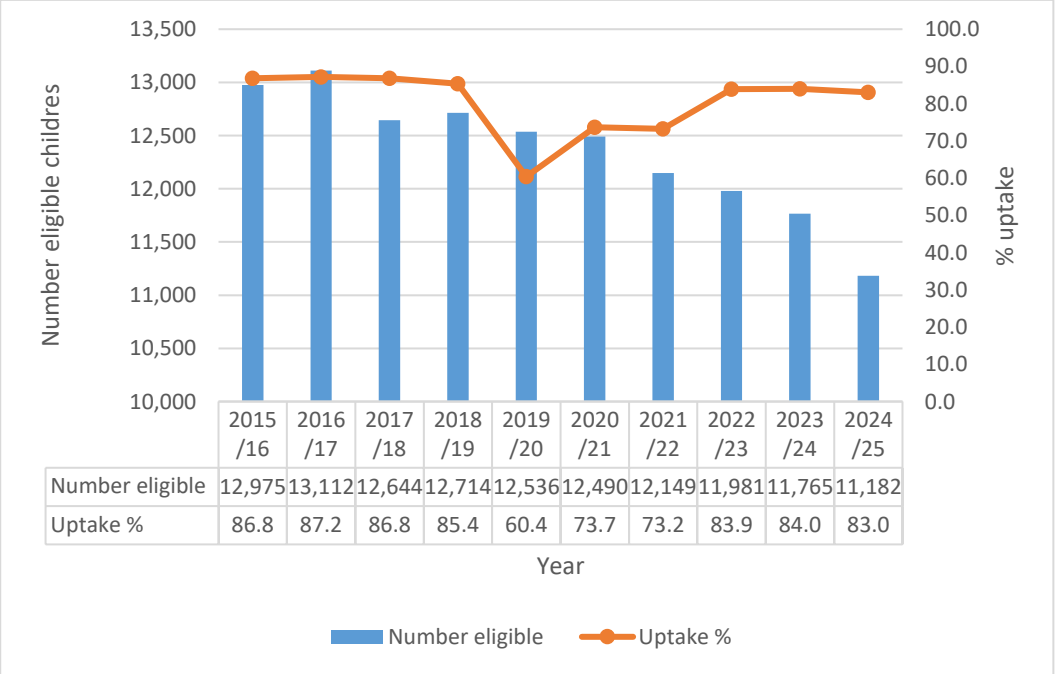
| HSCP | Children eligible for screening | Registered with a Nursery | % Registered | Not registered with a nursery | % Not Registered |
|---|---|---|---|---|---|
| East Dunbartonshire HSCP | 1,121 | 1,021 | *91.1* | 100 | *8.9* |
| East Renfrewshire HSCP | 1,101 | 1,016 | *92.3* | 85 | *7.7* |
| Glasgow City HSCP | 5,767 | 4,751 | *82.4* | 1,016 | *17.6* |
| *Glasgow North East Sector* | *(1,775)* | *(1,469)* | *82.8* | *(306)* | *17.2* |
| *Glasgow North West Sector* | *(1,681)* | *(1,375)* | *81.8* | *(306)* | *18.2* |
| *Glasgow South Sector* | *(2,311)* | *(1,907)* | *82.5* | *(404)* | *17.5* |
| Inverclyde HSCP | 651 | 626 | *96.2* | 25 | *3.8* |
| Renfrewshire HSCP | 1,738 | 1,598 | *91.9* | 140 | *8.1* |
| West Dunbartonshire HSCP | 804 | 752 | *93.5* | 52 | *6.5* |
| **Total** | **11,182** | **9,764** | ***87.3*** | **1,418** | ***12.7*** |

Source: Child Health System. Date Extracted: September 2025

### *Uptake of screening*

The uptake of pre-school vision screening has remained above 83% for the last three years. In 2024-25 uptake was 83.0% (9,281 children screened), one percentage point lower than the previous year (**Figure 4.1)**.

**Figure 4.1. Number of NHSGGC children eligible and percentage uptake of pre-school vision screening in NHSGGC residents aged 4 to 5 years, 2015/16 to 2024-2025.**




Source: Child Health System. Date extracted: Sept 2025

By Health and Social Care Partnership (HSCP) area, in 2024/25 uptake of screening ranged from 76% (1,278) in Glasgow North-West to 90.7% (1,576) in Renfrewshire**.** This is a difference of 14.7 percentage points.

Uptake varied between 77.9% in the most deprived quintile, to 89.1% in the least deprived quintile, a difference of 11.2 percentage points. **(Table 4.3).**

**Table 4.3. Percentage uptake of pre-school vision screening in NHSGGC residents aged 4 to 5 years, by HSCP and SIMD quintiles, 2024-2025**

| | SIMD Quintile | | | | | |
|---|---|---|---|---|---|---|
| | **Most deprived** | | | | **Least deprived** | |
| **HSCP** | **1** | **2** | **3** | **4** | **5** | **Total** |
| East Dunbartonshire HSCP | 83.7 | 80.7 | 85.0 | 88.1 | 88.6 | **87.0** |
| East Renfrewshire HSCP | 87.8 | 84.5 | 83.1 | 88.5 | 90.2 | **88.6** |
| Glasgow City HSCP | 74.7 | 76.8 | 80.3 | 86.1 | 80.8 | **77.3** |
| *Glasgow North East Sector* | *76.2* | *74.3* | *83.6* | *87.8* | *95.0* | ***78.4*** |
| *Glasgow North West Sector* | *73.4* | *79.2* | *80.1* | *80.8* | *77.2* | ***76.0*** |
| *Glasgow South Sector* | *74.3* | *76.8* | *78.1* | *87.3* | *84.1* | ***77.5*** |
| Inverclyde HSCP | 86.2 | 93.3 | 94.6 | 94.9 | 94.0 | **90.3** |
| Renfrewshire HSCP | 86.7 | 87.8 | 89.7 | 92.8 | 95.7 | **90.7** |
| West Dunbartonshire HSCP | 86.3 | 87.6 | 89.7 | 91.0 | 97.5 | **88.1** |
| **Total** | **77.9** | **81.6** | **84.6** | **88.7** | **89.1** | **83.0** |

**SIMD – Scottish Index of Multiple Deprivation**

**Source: Child Health System. Date extracted: Sept 2025**

### *Ethnicity*

Local analysis was undertaken to explore variations in uptake of pre-school vision by ethnicity (**Table 4.4**). Uptake rates varied by ethnic group, however uptakes were between 64% and 87% for most ethnic groups. Lower uptake rates were observed in Other: Arab, Arab Scottish, Arab British (67.2%), Asian: Other Asian, Scottish Asian or British Asian (64.1%) and White: Gypsy/Traveller (41.2%). Uptake rates for groups with a small number of pre-school children eligible for screening should be interpreted with caution.

**Table 4.4. Pre-school Vision Screening Uptake by Ethnic Group 2024-2025**

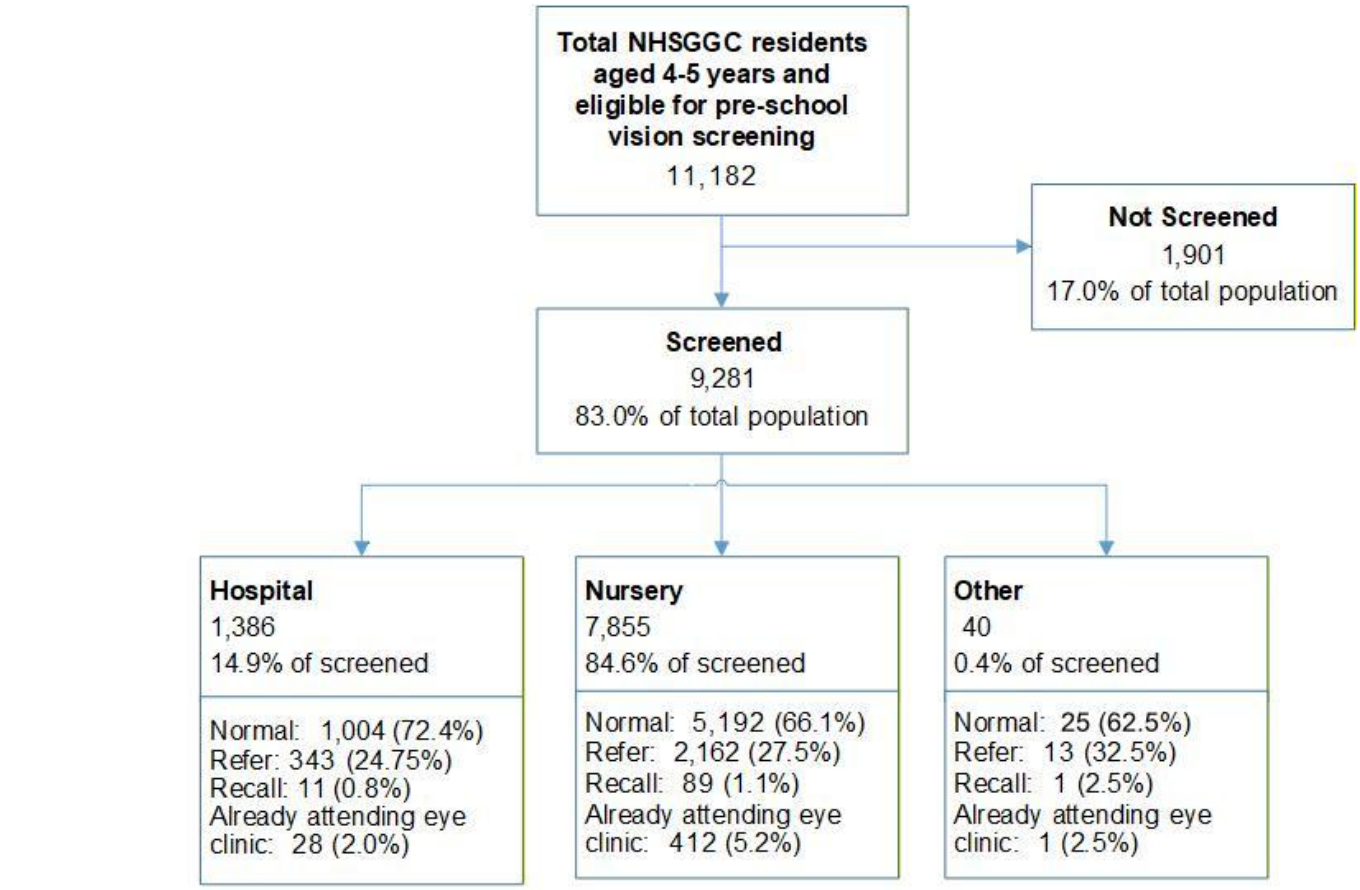
| Ethnic Group | Not Screened | Screened | Total Eligible | *% Screened* |
|---|---|---|---|---|
| African, Scottish African or British African | 119 | 583 | 702 | *83.0* |
| Asian: Bangladeshi, Scottish, Bangladeshi or British Bangladeshi | * | * | * | *82.4* |
| Asian: Chinese, Scottish Chinese or British Chinese | 15 | 103 | 118 | *87.3* |
| Asian: Indian, Scottish Indian or British Indian | 62 | 288 | 350 | *82.3* |
| Asian: Pakistani, Scottish Pakistani or British Pakistani | 144 | 576 | 720 | *80.0* |
| Asian: Other Asian, Scottish Asian or British Asian | 55 | 98 | 153 | *64.1* |
| Caribbean or Black | * | * | * | *77.3* |
| Any mixed or multiple ethnic groups | 98 | 344 | 442 | *77.8* |
| White: Gypsy / Traveller | 10 | 7 | 17 | *41.2* |
| White: Irish | 11 | 29 | 40 | *72.5* |
| White: Other British | 62 | 311 | 373 | *83.4* |
| White: Polish | 43 | 98 | 141 | *69.5* |
| White: Scottish | 965 | 6,130 | 7,095 | *86.4* |
| White: Other white ethnic group | 75 | 232 | 307 | *75.6* |
| Other: Arab, Arab Scottish, Arab British | 75 | 154 | 229 | *67.2* |
| Other: Other ethnic group | 79 | 175 | 254 | *68.9* |
| Not Known | 80 | 122 | 202 | *60.4* |
| **Total** | **1,901** | **9,281** | **11,182** | ***83.0*** |

*numbers ≤5, or identifiable as ≤5 redacted as per PHS Statistical Disclosure Control Protocol
Source: Child Health Surveillance Pre-School System
Date Extracted: September 2025

### *Outcome of screening*

The pre-school vision screening summary of activity for the service in NHSGGC for the school year 2024-25 is in **Figure 4.2.**

**Figure 4.2. Summary of NHSGGC Pre-School Vision Screening Activity and Outcomes 2024-2025**




Source: Child Health Surveillance Pre School System
Date extracted: September 2025

Overall, 67.0% (6,221) children screened had no abnormality detected, this ranged from 57.4% (1,028 children) in Glasgow South to 77.0% (751 children) in East Dunbartonshire.

Of those screened, 27.1% (2,518) children were referred for further investigations. The referral rates varied from 19.7% (116 children) in Inverclyde to 35.6% (637 children) in Glasgow South Sector. A small number of children were recalled to repeat their screening test as the result of their first screening test were not conclusive, 1.1% (101 children), (**Table 4.5**).

## Table 4.5. Pre-school Vision Screening Uptake and Outcomes by HSCP Area, NHSGGC, 2024-2025

| HSCP | Total Population | Total number of children screened | Total number of children not screened | % Uptake | No Abnormality Detected (NAD) of those screened | % No Abnormality Detected (NAD) of those screened | Referred of those screened | % Referred of those screened | Recalled of those screened | % Recalled of those screened | Ongoing Follow-up of those screened | % Ongoing Follow-up of those screened |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East Dunbartonshire HSCP | 1,121 | 975 | 146 | *87.0* | 751 | *77.0* | 202 | *20.7* | * | *0.3* | 19 | *1.9* |
| East Renfrewshire HSCP | 1,101 | 975 | 126 | *88.6* | 654 | *67.1* | 287 | *29.4* | * | *0.0* | 34 | *3.5* |
| Glasgow City HSCP | 5,767 | 4,459 | 1,308 | *77.3* | 2,776 | *62.3* | 1,423 | *31.9* | 36 | *0.8* | 224 | *5.0* |
| Glasgow North East Sector | (1,775) | (1,391) | (384) | *78.4* | (904) | *65.0* | (408) | *29.3* | 22 | *1.6* | 57 | *4.1* |
| Glasgow North West Sector | (1,681) | (1,278) | (403) | *76.0* | (844) | *66.0* | (378) | *29.6* | 9 | *0.7* | 47 | *3.7* |
| Glasgow South Sector | (2,311) | (1,790) | (521) | *77.5* | (1,028) | *57.4* | (637) | *35.6* | * | *0.3* | 120 | *6.7* |
| Inverclyde HSCP | 651 | 588 | 63 | *90.3* | 426 | *72.4* | 116 | *19.7* | 10 | *1.7* | 36 | *6.1* |
| Renfrewshire HSCP | 1,738 | 1,576 | 162 | *90.7* | 1,129 | *71.6* | 317 | *20.1* | 31 | *2.0* | 99 | *6.3* |
| West Dunbartonshire HSCP | 804 | 708 | 96 | *88.1* | 485 | *68.5* | 173 | *24.4* | 21 | *3.0* | 29 | *4.1* |
| **Total** | **11,182** | **9,281** | **1,901** | *83.0* | **6,221** | *67.0* | **2,518** | *27.1* | **101** | *1.1* | **441** | *4.8* |

*numbers ≤5, or identifiable as ≤5 redacted as per PHS Statistical Disclosure Control Protocol
Source: Child Health System
Date Extracted: September 2025

The proportion of children with normal screening result varied by deprivation category, see **Table 4.6**. For children in the most deprived quintile 60.4% (2,038) had a normal screening result, compared with 75.3% (1,484) in the least deprived quintile.

This meant that a larger proportion of children living in the most deprived areas were referred for further assessment, recalled or were already attending a clinic, compared with areas in other deprivation quintiles. Of the 2,518 (27.1%) children referred for further assessment, 32.3% (1,090) were from the most deprived quintile compared to 20.8% (410) from the least deprived quintile.

A small proportion (1.1%, 101) of children were called back to be re-screened due to difficulties screening their vision during the first screen.

Of the 441 (4.8%) children scheduled for ongoing follow up appointments, 196 (44.4%) were from the most deprived quintile, compared to 66 (15%) from the least deprived quintile **(Table 4.6).**

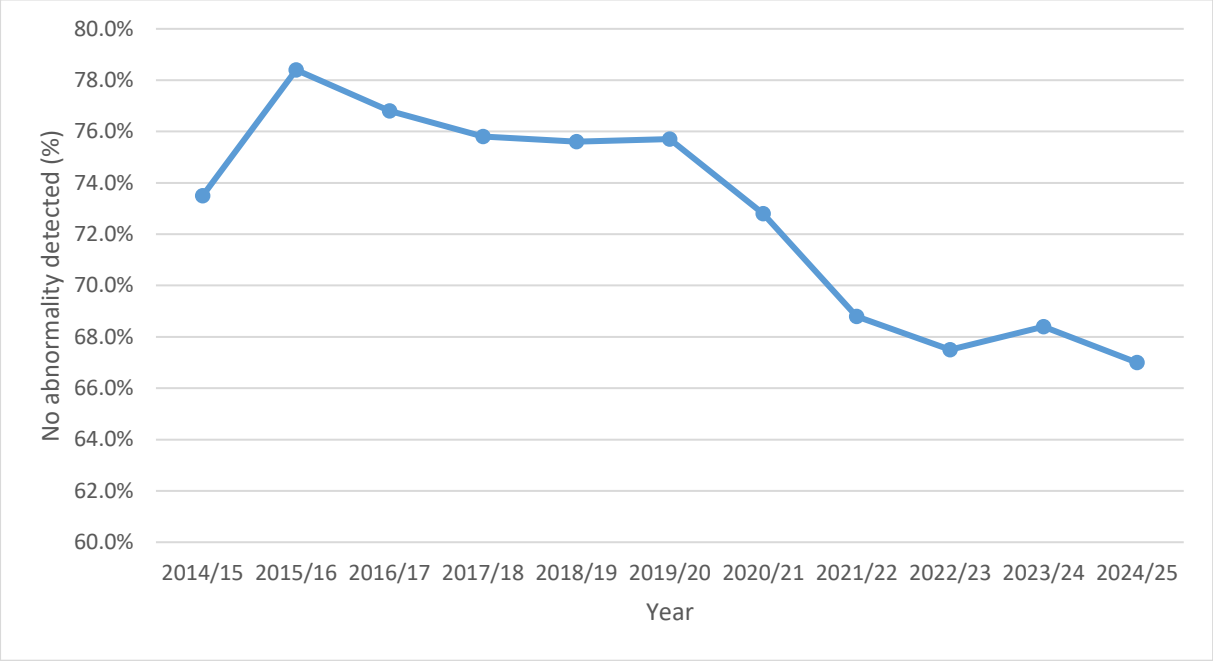
**Table 4.6. Pre-school Vision Screening Uptake and Outcomes by SIMD, NHSGGC, 2024-2025**

| SIMD | Number of Children Screened | No Abnormality Detected (NAD) | *% NAD* | Referred | *% Referred* | Recall | *% Recall* | Ongoing Follow up | *% Ongoing Follow up* |
|---|---|---|---|---|---|---|---|---|---|
| 1 (Most Deprived) | 3,372 | 2,038 | *60.4* | 1,090 | *32.3* | 48 | *1.4* | 196 | *5.8* |
| 2 | 1,528 | 1,001 | *65.5* | 427 | *27.9* | 18 | *1.2* | 82 | *5.4* |
| 3 | 986 | 679 | *68.9* | 256 | *26.0* | 7 | *0.7* | 44 | *4.5* |
| 4 | 1,425 | 1,019 | *71.5* | 335 | *23.5* | 18 | *1.3* | 53 | *3.7* |
| 5 (Least Deprived) | 1,970 | 1,484 | *75.3* | 410 | *20.8* | 10 | *0.5* | 66 | *3.4* |
| **Total** | **9,2,81** | **6,221** | *67.0* | **2,518** | *27.1* | **101** | *1.1* | **441** | *4.8* |

Source: Child Health System
Date Extracted: September 2025

In the ten-year period from 2014/15 to 2024/25, the percentage of children with normal vision screening results decreased from 73.5% to 67.0%, an overall reduction of 6.5 percentage points, (**Figure 4.3**).

**Figure 4.3. Percentage of screened children who had a normal screening result – 10 year trend from 2014-15 to 2024-25**




Source: Child Health System
Date Extracted: September 2025

### *Vision Screening for Children with Additional Support Needs*

NHSGGC Specialist Children's Services provide an annual eye examination for children in schools with additional support needs from Primary 1 to Senior 6. The results are recorded in the medical record for the child and prescriptions for glasses provided by the optometrist.

## 4.8. Pre-school Vision Screening Challenges and Future Priorities

- Work closely with nurseries to encourage support for screening, both in preparation for a screening visit and on the day. Uptake is higher at nursery compared to screening in hospital or community clinics.

In 2025/26, the Child Health System is due to be replaced in Scotland. This system is used across all health boards to record health outcomes for all children in Scotland. This system is used as a basis for call/recall for pre-school vision screening. The system changeover will need to be managed carefully to not impact the pre-school vision screening programme.