Public Health England

NHS

Key Performance Indicators

NHS screening programmes

Antenatal, newborn, diabetic eye and abdominal aortic aneurysm

Public Health England leads the NHS Screening Programmes

Year 2016-17
Version 3.01
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About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

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About PHE Screening

Screening identifies apparently healthy people who may be at increased risk of a disease or condition, enabling earlier treatment or better informed decisions. National population screening programmes are implemented in the NHS on the advice of the UK National Screening Committee (UK NSC), which makes independent, evidence-based recommendations to ministers in the four UK countries. The Screening Quality Assurance Service ensures programmes are safe and effective by checking that national standards are met. PHE leads the NHS Screening Programmes and hosts the UK NSC secretariat.

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Version	Date	Description
Draft 0.1-V1.13	2010 to 2013	Changes available from the screening helpdesk
Version 1.12	18/03/2013	Final Guidance
Version 1.13	05/05/2014	Minor changes to ID1, ID2, FA1, ST1, ST2, ST3, NB1, NB3, NP1, NP2, DE1, DE2, DE3 to align with standards and updated guidance Removal of AA2i and AA2ii KPIs Denominator changes from previous PCT to CCG Updating of Executive Summary and Publication Information
V 1.14	07/2014	Minor changes to FASP and NB2 indicators
V 2.0	16/03/2015	Merged process and definition documents and updated for 2015/16. NB3 replaced by NB4.
V 3.0	04/03/2016	Updated for 2016/17
V 3.01	09/05/2016	Minor clarifications of ID1, FA2 and ST1 KPIs

Review/approval

Version	Date	Requirement	Signed
Draft 0.8 – V1.12	2010-05-21	Review/sign off: National Screening Programme Directors	Approved – details available from the screening helpdesk
V 1.13	2014 May	Reviewed by Data and Information Group	Approved

V 1.14	2014 July	Reviewed by Data and Information Group	Approved
V 2.0	2015 March	Reviewed by Data Analyst and Quality Assurance Group (DAQA)	Approved
V 3.0	2016 March	Reviewed by Data Analyst and Quality Assurance Group (DAQA)	Approved
V 3.01	2016 May	Minor amendments reviewed by National Screening Data and Information Lead	Approved

Contents

Glossary

The glossary defines terms that are consistent across NHS screening programmes. The scope of each defined term as it applies to a particular screening programme is detailed separately for each screening programme.

A broken underline indicates that a term is used according to its definition in this glossary. Where terms from the glossary are used without a broken underline, their common English meaning can be assumed; except where context determines otherwise. Definitions include all forms of the defined term; so 'tested' and 'testing' refer to the definition of 'test'.

Term	Definition
accept	A response to an offer which indicates that a screening subject is willing to proceed with a screening encounter/event. Acceptance may be inferred from conduct provided that an offer has been made. In the case of newborn screening programmes, a responsible parent/guardian can accept screening on behalf of the subject baby.
acceptance of offer	The proportion of those offered screening who accept the offer. Low acceptance of offer might indicate that: i) the offer is not being communicated or delivered effectively (no response); and/or ii) screening is not deemed necessary or desirable by an entitled population (declined)
affected case	An individual in whom the condition being screened for is present.
booking	The point at which a pregnant woman first sees a midwife to book for maternity care. At the booking appointment the maternity records are completed and antenatal screening is offered.
communication	An interchange that the subject is capable of understanding and acting upon. This may be in a variety of formats including verbal and/or written.
completeness of offer	The proportion of those eligible for screening who are offered screening.

Term	Definition
	Completeness of offer is a measure of how effectively a programme offers screening to the eligible population.
coverage	The proportion of those eligible for screening who are tested and receive a result. Coverage is a measure of timely screening to an eligible population. Low coverage might indicate that: i) not all eligible people have been offered screening ii) those offered screening are not accepting the test iii) those accepting the test are not being tested
day of report	The day on which data to support an audit or performance return are collated. Usually there will be a time lag between the end of the reporting period and the day of report to allow for the completion of processes being measured and the collation of report data.
decline	A response to an offer which indicates that a screening subject does not wish to proceed with a screening test or pathway
diagnosis	A diagnostic process following a screen positive result to determine whether the subject is an affected case.
effective timeframe	The period of time within which a screening test can be delivered such that a result is most likely to be obtained. The effective timeframe for a test is usually specified by the relevant screening programme.
eligible	The population that is entitled to an offer of screening. The criteria for eligibility may be administrative, demographic, clinical, or any combination of these, and may take into account individual circumstances such as time of presentation to the screening service.
failed offer	Any indication that an attempted offer failed, such as a Post Office return. An offer will be deemed as a failed offer if: i) it did not reach the subject ii) the subject was not capable of understanding or acting

Term	Definition
	upon it iii) the screening service lacked the capacity to realise it iv) it did not offer an opportunity of testing within an effective timeframe
false negative	A screen negative result in an affected case.
false positive	A screen positive result for a subject in whom the condition being screened for is absent.
first registered	First notification to a GP practice and/or Child Health Records Department (CHRD) of responsibility for the care of a baby. Following first registration, the baby is deemed as being registered with the GP practice and/or CHRD to which the notification was made. In most cases this will be an automatic notification to a CHRD following the birth of a baby.
matched cohort	The numerator must be a subset of the denominator. For example all pregnant women booked must be matched to their result.
maternity service	A co-ordinated network of healthcare professionals contracted to or working under the policies and procedures agreed with a single acute trust, with collective responsibility for the provision of antenatal, intrapartum and postpartum care. A single maternity service may include: obstetric-led maternity units midwifery-led maternity units units responsible for the management of home births newborn intensive care units (NICU) special care baby units (SCBU) paediatric intensive care units (PICU)
NHS number	The NHS number is a unique 10 digit patient identification number.
offer	A formal communication made by the screening service, giving a specific subject a realisable opportunity to be tested within an effective timeframe. An offer or invitation will only count as an offer if: i) it reaches the subject

Term	Definition
	ii) the subject is capable of understanding and acting upon it iii) the screening service has the capacity to realise it iv) it offers an opportunity of testing within an effective timeframe In the case of newborn screening programmes, the offer of screening is made to a responsible parent/guardian rather than the subject baby.
population	The overall population for which a screening service is responsible.
presentation	The first attendance of a screening subject for a screening pathway appointment.
realisable	Capable of being acted upon, concluded or delivered.
refer	The process of securing further diagnosis/specialist assessment following a screen positive test. The date of referral is when the request for further assessment is made to the appropriate specialist.
registered	Formally recognised as being the primary provider of ongoing care to an individual and holding sufficient details to uniquely identify and contact that individual.
reporting period	The defined time period over which activities should be included in an aggregate audit or performance return. A reporting period can relate to any specified period but for routine reports is usually quarterly or annual. Most screening processes occur over a period of days or weeks, to allow a scan or sample to be assessed. In such cases, a single point in the process (such as the screening encounter/event) should be used to determine whether the process falls within a particular reporting period.
result	A formal and completed assessment of the risk of a condition being screened for in a subject. A result will be screen positive or screen negative. Insufficient or inconclusive tests indicate a failure to obtain a

Term	Definition
	result, and are **not counted** within coverage. In these cases the subject may be offered a repeat screening test.
screen negative	An indication following a test that the condition being screened for is low risk/not suspected in a subject.
screen positive	An indication following a test that the condition being screened is high risk/suspected in a subject.
screener	A healthcare professional responsible for administering screening tests.
screening	Testing people who do not have, or have not recognised, the signs or symptoms of the condition being tested for, either with the aim of reducing risk of an adverse outcome, or with the aim of giving information about risk.
screening encounter/event	The provision of screening to a screening subject, usually through a process such as a scan or the collection of a sample. A screening encounter/event is usually characterised by contact between the screening subject and a healthcare professional, but some screening may be self-administered.
screening episode	The end-to-end screening process from the perspective of a subject who has accepted an offer of screening. A complete screening episode starts with an offer and ends with the communication of a result. Some screening episodes may end prematurely, for example if the subject fails to attend a booked screening encounter/event.
subject	An eligible individual.
subject record	The personal information stored on the programme database about a subject.
test	A screening encounter/event leading to the determination of an outcome. Test outcomes can be screen positive, screen negative, insufficient or inconclusive.
total population	The population that meets the general criteria for inclusion within a screening programme. The criteria for inclusion within a screening programme may be administrative, demographic, clinical, or any combination of these. Not everyone in the total population is likely to be eligible

Term	Definition
	for screening (for example, those who present later than it would be possible to test).
true positive	A screen positive result in an affected case.
uptake	The proportion of those offered screening who are tested and receive a result. Uptake is a measure of the delivery of screening in the population to which it is offered. Low uptake might indicate that: i) those offered screening are not accepting the test ii) those accepting the test are not being tested

Abbreviations

AAA	Abdominal aortic aneurysm
CCG	Clinical commissioning group
CHIS	Child health information system
CHRD	Child health record department
DDH	Developmental dysplasia of the hip
DESP	Diabetic eye screening programme
DH	Department of Health
eSP	NHSP national information system
FASP	Fetal Anomaly Screening Programme
FOQ	Family Origin Questionnaire
GA1	Glutaric aciduria type 1
GP	General practitioner
HCU	Homocystinuria (pyridoxine unresponsive)
HSCIC	Health and Social Care Information Centre
HIV	Human immunodeficiency virus
IDPS	Infectious diseases in pregnancy screening
IVA	Isovaleric acidaemia
KPI	Key performance indicator
MCADD	Medium-chain acyl-CoA dehydrogenase deficiency
MCDS	Maternity and child health secondary data set
MSUD	Maple syrup urine disease
MU	Maternity unit
NAAASP	NHS AAA Screening Programme
NBS	Newborn blood spot
NHSE	NHS England
NHSP	Newborn Hearing Screening Programme
NICU	Newborn intensive care units
NIPE	Newborn and infant physical examination
NIPE SMART	NIPE screening management and reporting tool
PHE	Public Health England
PHOF	Public Health Outcomes Framework
PICU	Paediatric intensive care units
PKU	Phenylketonuria
QA	Quality assurance
SCBU	Special care baby units
SIL	Screening and immunisation lead
SQAS	Screening quality assurance service
UK NSC	UK National Screening Committee

Executive summary

- this document provides a catalogue of key performance indicators (KPIs) relating to each of the young person and adult, and antenatal and newborn screening programmes
- Breast, Cervical and Bowel Cancer Screening Programme KPIs will be incorporated into this document in the future
- the purpose of these KPIs is to define consistent performance measures for a selection of public health priorities, using terminology that is clear and common across all screening programmes, so that performance can be understood, assessed and compared
- the performance measures in this document were selected by the NHS screening programmes to reflect areas where consistency and an understanding of regional and national variation are particularly important. They are not intended to give a complete picture of screening performance, and must be interpreted in the light of a range of standards as well as local and regional intelligence. However, it is hoped that they will provide a starting point for increasingly robust quality assurance and for the further investigation of suspected performance issues
- screening KPIs are contained within both the Section 7a agreements between the Department of Health (DH) and NHS England and in the Public Health Outcomes Framework (PHOF)
- KPIs are a subset of programme standards that are collated and reported quarterly. Currently there are up to 3 KPIs per programme. Once a KPI consistently reaches the achievable level, the KPI will be reviewed in view of reverting to being a standard and allow entry of another KPI to focus on additional areas of concern/priorities
- the indicators relate to a limited range of key screening priorities and are not in themselves sufficient to quality assure or performance manage screening programmes
- data is required to be complete and robust. Where screening providers are unable to return complete data they are expected to make a nil (blank) return and submit an action plan with timescales to deliver complete data
- the collection of data to support certain KPIs may require the development and/or linkage of information systems, which means that the availability of complete data will depend on the commissioning and delivery of these systems. In some cases it is anticipated that the requirement to return data against KPIs will drive the development of information systems as in the case of the Maternity and Child Health Secondary Datasets and the new Child Health Record System Specification
- the new Maternity and Child Health Secondary Data Set (MCDS) was mandated in April 2013. The MCDS project is now in the implementation phase and PHE Screening are in regular contact with the Health and Social Care Information Centre (HSCIC) about its usage to support screening services. At this time KPI data should continue to be submitted to PHE screening in the usual way.

- failsafe processes must be timely to help identify where things are going wrong and take corrective action before harm occurs. KPIs must not be used as a failsafe process; potentially a 3 month delay would occur if processes were not checked until the KPIs were reported on.

Summary of changes

KPI	Type of change	Detail of change
ID1, ST1, FA2	Revised definition of transfers in and out	The provider that has responsibility for the woman at the time of antenatal screening must include the woman in their coverage KPI data, including women who have transferred out **after** they were tested and received a result. Other providers should still ensure women transferring into their service have completed screening with documented screening results as part of their duty of care, but these women should not be included in their coverage KPI data
ID1	New thresholds	Acceptable threshold raised from ≥ 90.0% to ≥ 95.0% Achievable threshold raised from ≥ 95.0% to ≥ 99.0%
ID2	Revised definition	KPI definition revised in line with updated standards
FA2	New FASP KPI	New KPI: "Fetal anomaly screening (18^{+0} to 20^{+6} fetal anomaly ultrasound) – coverage"
ST3	New thresholds	Acceptable threshold raised from ≥ 90.0% to ≥ 95.0% Achievable threshold raised from ≥ 95.0% to ≥ 99.0%
NB4	Revised definition	KPI definition revised in line with updated standards
NH1	New threshold	Acceptable threshold raised from ≥ 95.0% to ≥ 97.0% Achievable threshold remains the same at ≥ 99.5%
NH2	New threshold	Acceptable threshold remains the same at ≥ 90.0% Achievable threshold reduced from 100.0% to ≥ 95.0%
NH2	New KPI name	Name changed from "Newborn hearing – timely assessment for screen referrals" to "Newborn hearing – time from screening outcome to attendance at an audiological assessment appointment"
AA2	New AAA KPI	New KPI: "Abdominal aortic aneurysm screening – coverage of initial screen"
AA3	New AAA KPI	New KPI: "Abdominal aortic aneurysm screening – coverage of annual surveillance screen"
AA4	New AAA KPI	New KPI: "Abdominal aortic aneurysm screening – coverage of quarterly surveillance screen"
All	Data sources and organisational responsibility for submitting KPI data	This section has been removed. 'Responsible for submission' has been added to the 'Reporting arrangements' row of each KPI

Index of key performance indicators

A list of the KPIs defined in this document can be found below.

When reading this document on screen, hold ‘Ctrl’ and click the KPI identifier to view the KPI.

KPI	Description
ID1	Antenatal infectious disease screening – HIV coverage
ID2	Antenatal infectious disease screening – timely assessment of women with hepatitis B
FA1	Fetal anomaly screening – completion of laboratory request forms
FA2	Fetal anomaly screening (18^{+0} to 20^{+6} fetal anomaly ultrasound) – coverage
ST1	Antenatal sickle cell and thalassaemia screening – coverage
ST2	Antenatal sickle cell and thalassaemia screening – timeliness of test
ST3	Antenatal sickle cell and thalassaemia screening – completion of FOQ
NB1	Newborn blood spot screening – coverage (CCG responsibility at birth)
NB2	Newborn blood spot screening – avoidable repeat tests
NB4	Newborn blood spot screening – coverage (movers in)
NH1	Newborn hearing screening – coverage
NH2	Newborn hearing – time from screening outcome to attendance at an audiological assessment appointment
NP1	Newborn and infant physical examination – coverage (newborn)
NP2	Newborn and infant physical examination – timely assessment of developmental dysplasia of the hip (DDH)
DE1	Diabetic eye screening – uptake of routine digital screening event
DE2	Diabetic eye screening – results issued within 3 weeks of routine digital screening
DE3	Diabetic eye screening – timely assessment for R3A screen positive
AA1	Abdominal aortic aneurysm screening – completeness of offer
AA2	Abdominal aortic aneurysm screening – coverage of initial screen
AA3	Abdominal aortic aneurysm screening – coverage of annual surveillance screen
AA4	Abdominal aortic aneurysm screening – coverage of quarterly surveillance screen

Key performance indicators explained

Composition/format

KPIs are defined according to a standard template, which specifies:

- name of KPI and screening programme(s) to which it applies
- description
- rationale
- definition
- performance thresholds
- mitigations and qualifications
- reporting arrangements
- reporting period

The screening pathway is available in appendix A and worked examples for each KPI are available in appendix B.

Performance thresholds

Performance thresholds are selected to align with existing screening programme standards and service objectives. Two thresholds are specified:

1. The achievable threshold represents the level at which the programme is likely to be running effectively; screening programmes should aspire towards attaining and maintaining performance at this level.

2. The acceptable threshold is the lowest level of performance which programmes are expected to attain to ensure patient safety and programme effectiveness. All programmes are expected to exceed the acceptable threshold and to agree service improvement plans that develop performance towards an achievable level.

Programmes not meeting the acceptable threshold are expected to implement recovery plans to ensure rapid and sustained improvement.

Key performance indicator definitions

For further information about the programme standards please see:
https://www.gov.uk/government/collections/nhs-population-screening-programme-standards

Service specifications for each programme can be found here:
https://www.england.nhs.uk/commissioning/pub-hlth-res/

Infectious diseases in pregnancy screening

<table>
<tr><th>KPI</th><th>ID1: Antenatal infectious disease screening – HIV coverage</th></tr>
<tr><td>Description</td><td>The proportion of pregnant women eligible for HIV screening for whom a confirmed screening result is available at the day of report.</td></tr>
<tr><td>Rationale</td><td>To provide assurance that screening is offered to all eligible women and each woman accepting screening has a confirmed screening result.

Timely information on screening coverage is key in order to identify trends and to monitor the effectiveness of service improvements. Coverage is a measure of the delivery of screening to an eligible population. Low coverage might indicate that:
i) not all eligible women were offered screening
ii) those offered screening are not accepting the test
iii) those accepting the test are not being tested</td></tr>
<tr><td>Definition</td><td><table><tr><td>tested women</td><td rowspan="2">expressed as a percentage, where:</td></tr><tr><td>eligible women</td></tr></table>
‘tested women’ (numerator) is the total number of ‘eligible women’ for whom a confirmed screening result was available for HIV at the day of report, including: women who were known to be HIV positive at booking and not retested

‘eligible women’ (denominator) is the total number of pregnant women booked for antenatal care during the reporting period, or presenting in labour without previously having booked for antenatal care, excluding:</td></tr>
</table>

	• women who miscarry between booking and testing • women who opt for termination between booking and testing • women who transfer out between booking and testing, and therefore do not have a result • women who transfer in who have a result from a screening test performed elsewhere in this pregnancy
Performance thresholds	Acceptable level: ≥ 95.0% Achievable level: ≥ 99.0%
Mitigations/ qualifications	This KPI requires matched cohort data and follow up of any missing women and to ensure failsafe processes are effective.
Reporting arrangements	Reporting focus: maternity service Data source: maternity service Responsible for submission: maternity unit
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

<table>
<tr><th>KPI</th><th>ID2: Antenatal infectious disease screening – timely assessment of women with hepatitis B</th></tr>
<tr><td>Description</td><td>The proportion of pregnant women who are hepatitis B positive attending for specialist assessment within 6 weeks of the positive result being reported to maternity service.</td></tr>
<tr><td>Rationale</td><td>To provide assurance of timely interventions</td></tr>
<tr><td>Definition</td><td>
<table>
<tr><td>women seen for hepatitis B</td><td rowspan="2">expressed as a percentage, where:</td></tr>
<tr><td>women with hepatitis B
(new positive/high infectivity)</td></tr>
</table>
‘women seen for hepatitis B’ (numerator) is the number of ‘pregnant women with hepatitis B’ who are booked in the reporting period, who have been seen by an specialist within an effective timeframe, including:

all newly diagnosed hepatitis B positive women
women already known to be hepatitis B positive with high infectivity markers detected in the current pregnancy

‘pregnant women with hepatitis B’ (denominator) is the total number of pregnant women booked in the reporting period who were screened positive (newly diagnosed) for hepatitis B and women already known to be hepatitis B positive with high infectivity as defined as:

HBsAg positive and HBeAg positive
HBsAg positive, HBeAg negative and anti-HBe negative
HBsAg positive where e-markers have not been determined
has acute hepatitis B during pregnancy
HBsAg seropositive and known to have an HBV DNA level equal or above $1x10^6$IUs/ml in an antenatal sample

A specialist is a hepatologist, gastroenterologist, infectious diseases physician, or a hepatology nurse specialist working to an agreed protocol within the clinical team.
</td></tr>
<tr><td>Performance thresholds</td><td>Acceptable level: ≥ 70.0%
Achievable level: ≥ 90.0%</td></tr>
<tr><td>Mitigations/ qualifications</td><td>None</td></tr>
<tr><td>Reporting arrangements</td><td>Reporting focus: maternity service
Data source: maternity service
Responsible for submission: maternity unit</td></tr>
</table>

Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

Fetal anomaly screening

<table>
<tr><th>KPI</th><th>FA1: Fetal anomaly screening – completion of laboratory request forms</th></tr>
<tr><td>Description</td><td>The proportion of laboratory request forms including complete data prior to screening analysis, submitted to the laboratory within the recommended timeframe of 10^{+0} to 20^{+0} weeks' gestation.</td></tr>
<tr><td>Rationale</td><td>To ensure a screening test for Down's, Edwards' and Patau's syndromes provides an accurate individual result for the pregnant woman at the earliest opportunity, and to reduce unnecessary delays in processing the test, a number of essential data fields must be provided on the request form. Minimum data fields for a laboratory screening request form are available here (page 17):
https://www.gov.uk/government/publications/fetal-anomaly-screening-laboratory-handbook-downs-edwards-and-pataus-syndromes</td></tr>
<tr><td>Definition</td><td>
<table>
<tr><td>completed laboratory request forms</td><td rowspan="2">expressed as a percentage, where:</td></tr>
<tr><td>submitted laboratory request forms</td></tr>
</table>

'completed laboratory request forms' (numerator) is the number of 'submitted laboratory request forms' with completed data for all of the following fields at the initial request:
• sufficient information for the woman to be uniquely identified
• woman's correct date of birth
• maternal weight
• family origin
• smoking status
• ultrasound dating assessment in millimetres, with associated gestational date

'submitted laboratory request forms' (denominator) is the total number of request forms for Down's, Edwards' and Patau's syndromes screening submitted to the laboratory within the reporting period during the recommended timeframe for analysis of 10^{+0} weeks' to 20^{+0} weeks' gestation (inclusive). This includes request forms for Down's syndrome screening using combined or quadruple testing and Edwards' and Patau's syndromes screening using combined testing.</td></tr>
<tr><td>Performance thresholds</td><td>Acceptable level: ≥ 97.0%
Achievable level: 100.0%</td></tr>
<tr><td>Mitigations/</td><td>All services should aim for completion of all laboratory request forms. The</td></tr>
</table>

qualifications	‘acceptable’ threshold above reflects the possibility that some women may not wish to supply their family origin or smoking status. This KPI measures only laboratory requests submitted within the recommended timeframe for analysis, and not subsequent or repeat requests.
Reporting arrangements	Reporting focus: maternity service Data source: Down’s, Edwards’ and Patau’s syndromes screening laboratory or ultrasound department as appropriate Responsible for submission: maternity unit
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

<table>
<tr><th>KPI</th><th>FA2: Fetal anomaly screening (18^{+0} to 20^{+6} fetal anomaly ultrasound) – coverage</th></tr>
<tr><td>Description</td><td>The proportion of pregnant women eligible for fetal anomaly screening for whom a conclusive screening result is available within the designated timescale.</td></tr>
<tr><td>Rationale</td><td>To provide assurance that screening is offered to everyone who is eligible and each individual accepting screening has a conclusive screening result.

Timely information on screening coverage is key in order to identify trends and to monitor the effectiveness of service improvements.
Coverage is a measure of the delivery of screening to an eligible population.
Low coverage might indicate that:
i) not all eligible women were offered screening
ii) those offered screening are not accepting the test
iii) those accepting the test are not being tested</td></tr>
<tr><td>Definition</td><td>
<table>
<tr><td>tested women</td><td rowspan="2">expressed as a percentage, where:</td></tr>
<tr><td>eligible women</td></tr>
</table>

‘tested women’ (numerator) is the total number of ‘eligible women’ for whom a completed screening result was available from the 18^{+0} to 20^{+6} week fetal anomaly scan on the day of report, including women who required a single further scan by 23 weeks to complete the screening examination if the image quality of the first examination is compromised by one of the following:
• increased maternal body mass index (BMI)
• uterine fibroids
• abdominal scarring
• sub-optimal fetal position

‘eligible women’ (denominator) is the total number of pregnant women booked for antenatal care during the reporting period,
excluding:
• women who miscarry between booking and testing
• women who opt for termination between booking and testing
• women who transfer out between booking and testing, ie do not have a result
• women who transfer in who have a result from a screening test performed elsewhere in this pregnancy
• women who book later than 23^{+0} weeks of pregnancy</td></tr>
</table>

Performance thresholds	Acceptable: ≥90% Achievable: ≥95%
Mitigations/ qualifications	This KPI requires matched cohort data and follow up of any missing women to ensure failsafe processes are effective
Reporting arrangements	Reporting focus: maternity service Data source: ultrasound information systems Responsible for submission: maternity unit
Reporting period	Quarterly; data to be collated 2 quarters in arrears. Due to the potential lag time between early booking and ultrasound scanning, the complete cohort cannot be accounted for until 2 quarters later. Deadlines: 30 December (Q1), 31 March (Q2), 30 June (Q3), 30 September (Q4).

Sickle cell and thalassaemia screening

<table>
<tr><th>KPI</th><th>ST1: Antenatal sickle cell and thalassaemia screening – coverage</th></tr>
<tr><td>Description</td><td>The proportion of pregnant women eligible for antenatal sickle cell and thalassaemia screening for whom a conclusive screening result is available at the day of report.</td></tr>
<tr><td>Rationale</td><td>One of the objectives of antenatal screening for sickle cell and thalassaemia is to ensure that all eligible women accepting an offer of screening are actually tested.

Timely information on screening coverage is key in order to identify trends and to monitor the effectiveness of service improvements.
Coverage is a measure of the delivery of screening to an eligible population. Low coverage might indicate that:
i) not all eligible women were offered screening
ii) those offered screening are not accepting the test
iii) those accepting the test are not being tested</td></tr>
<tr><td>Definition</td><td><table><tr><td>tested women</td><td rowspan="2">expressed as a percentage, where:</td></tr><tr><td>eligible women</td></tr></table>
‘tested women’ (numerator) is the total number of ‘eligible women’ for whom a conclusive screening result was available for sickle cell and thalassaemia at the day of report, including: women who were known carriers who were not retested and had direct access to pre-natal diagnosis.

‘eligible women’ (denominator) is the total number of pregnant women booked for antenatal care during the reporting period, or presenting in labour without previously having booked for antenatal care,
excluding:
women who miscarry between booking and testing
women who opt for termination between booking and testing
women who transfer out between booking and testing, ie do not have a result
women who transfer in who have a result from a screening test performed elsewhere in this pregnancy</td></tr>
<tr><td>Performance thresholds</td><td>Acceptable level: ≥ 95.0%
Achievable level: ≥ 99.0%</td></tr>
<tr><td>Mitigations/</td><td>This KPI requires matched cohort data and follow up of any missing</td></tr>
</table>

qualifications	women to ensure failsafe processes are effective
Reporting arrangements	Reporting focus: maternity service Data source: maternity units and antenatal screening laboratory Responsible for submission: maternity unit
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

<table>
<tr><th>KPI</th><th>ST2: Antenatal sickle cell and thalassaemia screening – timeliness of test</th></tr>
<tr><td>Description</td><td>The proportion of women having antenatal sickle cell and thalassaemia screening for whom a screening result is available by 10^{+0} weeks' gestation.</td></tr>
<tr><td>Rationale</td><td>One of the main objectives of antenatal screening for sickle cell and thalassaemia is to ensure that all eligible women accepting an offer of screening are tested in a timely manner as identified in NICE guidance on antenatal care. Timing is crucial to informed choice; an early offer of screening affects the choices people make about accepting pre-natal diagnosis and termination of pregnancy. Approximately half of pre-natal diagnostic testing currently takes place after 12^{+6} weeks' gestation.

A high proportion of women tested after 10^{+0} weeks' gestation might indicate that:
i) women are booking for their maternity care after 10 weeks gestation
ii) screening is being offered outside the effective timeframe (there is a delay offering screening to women)
iii) there is a delay between the screening encounter/event and availability of results</td></tr>
<tr><td>Definition</td><td>
<table>
<tr><td>women tested by 10^{+0} weeks' gestation</td><td rowspan="2">expressed as a percentage, where:</td></tr>
<tr><td>women for whom sample received at laboratory</td></tr>
</table>

'women tested by 10^{+0} weeks' gestation' (numerator) is the total number of pregnant 'women for whom a sample was received at the laboratory' and for whom an antenatal sickle cell and thalassaemia screening result was available (though not necessarily communicated to the woman) by 10^{+0} weeks' (70 days) gestation. In areas with low prevalence of sickle cell disease, this may include women at low risk of sickle cell disease for whom haemoglobinopathy analysis (for example, high performance liquid chromatography) has not been indicated by the family origin questionnaire (FOQ).

Calculation of gestation age, such as 10 weeks, may be based on last menstrual cycle; there is no requirement to recalculate gestation age by ultrasound scan where this occurs after screening.

'women for whom sample received at laboratory' (denominator) is the total number of pregnant women for whom an antenatal sickle cell and thalassaemia screening sample was received at the laboratory during the</td></tr>
</table>

	reporting period as part of the antenatal screening programme.
Performance thresholds	Acceptable level: ≥ 50.0% Achievable level: ≥ 75.0%
Mitigations/ qualifications	Data for this KPI is collected from the screening laboratory and does not need to be matched cohort. Performance is affected by number of eligible women for whom tests were done but gestation was unknown or by women booking late for maternity care.
Reporting arrangements	Reporting focus: maternity service Data source: maternity units and antenatal screening laboratory Responsible for submission: maternity unit
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

<table>
<tr><th>KPI</th><th>ST3: Antenatal sickle cell and thalassaemia screening – completion of FOQ</th></tr>
<tr><td>Description</td><td>The proportion of antenatal sickle cell and thalassaemia samples submitted to the laboratory with a completed FOQ.</td></tr>
<tr><td>Rationale</td><td>Use of the FOQ is recommended in all trusts in England. It is used in areas with high prevalence of haemoglobinopathies to interpret screening results, and in low prevalence areas to identify high-risk women who are then offered further testing.

The FOQ facilitates accurate detection of affected pregnancies, one of the main objectives of antenatal sickle cell and thalassaemia screening. Low FOQ completion may result in:
• high prevalence areas: unnecessary father testing
• low prevalence areas: some affected cases may be missed.

This KPI relates to programme standard O2a, ‘Accuracy of antenatal screening testing in local laboratories’.</td></tr>
<tr><td>Definition</td><td><table><tr><td>number of antenatal samples with completed FOQ
number of antenatal samples</td><td>expressed as a percentage, where:</td></tr></table>
‘number of antenatal samples received in the laboratory with completed FOQ’ (numerator)

‘number of antenatal samples’ (denominator) for sickle cell and thalassaemia testing received by the laboratory during the reporting period.

A completed FOQ must use the national template, and must be fully completed (including at least one box for the mother and one box for the father ticked; ‘declined to answer’ or ‘don’t know’ are allowable) or returned with the ‘decline’ box ticked. FOQs that are not attached with the sample or in electronic format, attached but not completed (‘decline’ box not ticked) or inconclusive cannot be regarded as a completed FOQ.</td></tr>
<tr><td>Performance thresholds</td><td>Acceptable level: ≥ 95.0%
Achievable level: ≥ 99.0%</td></tr>
<tr><td>Mitigations/ qualifications</td><td>This data does not need to be matched cohort.</td></tr>
<tr><td>Reporting</td><td>Reporting focus: maternity service</td></tr>
</table>

arrangements	Data source: maternity units and antenatal screening laboratory Responsible for submission: maternity unit
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

Newborn blood spot screening

KPI	NB1: Newborn blood spot screening – coverage (CCG responsibility at birth)
Description	The proportion of babies registered within the clinical commissioning group (CCG) both at birth and on the last day of the reporting period who are eligible for newborn blood spot (NBS) screening and have a conclusive result recorded on the child health information system (CHIS) by **17 days of age.**
Rationale	A key objective of the programme is to ensure that all eligible babies are offered newborn screening and, with verbal consent, tested within an effective timeframe. Timely information on screening coverage is important to identify trends and to monitor the effectiveness of service improvements.
Definition	$\frac{\textit{tested babies}}{\textit{eligible babies}}$ expressed as a percentage, where: *'tested babies'* (numerator) is the total number of *'eligible babies'* for whom a conclusive screening result for phenylketonuria (PKU) was available within an effective timeframe. *'eligible babies'* (denominator) is the total number of babies born within the reporting period, excluding any baby who died before the age of 8 days. For this KPI, the cohort includes only babies for whom the CCG were responsible at birth and is still responsible for on the last day of the reporting period. *'responsible CCG'* refers to all babies that are registered with a General Practitioner (GP) within the CCG; the data should be grouped and reported per CCG responsible population or UK equivalent using the baby's, or if not available, mother's GP practice code. *'effective timeframe'* is where a conclusive result for PKU is recorded on the CHIS by 17 days of age. A conclusive result for PKU is one of the following newborn screening status codes: 04 (not suspected), 07 (not suspected - other disorders follow up) and 08 (suspected).

Performance thresholds	Acceptable level: ≥ 95.0% Achievable level: ≥ 99.9%
Mitigations/ qualifications	For this KPI, a conclusive screening result for PKU will serve as a proxy indicator for a conclusive result for each of the conditions screened for (however, a clinical response should include all the other tests – note that cystic fibrosis can only be screened for up to 8 weeks of age). Declines should be recorded on the CHIS and are included in the denominator but not the numerator. This KPI does not measure babies born who change responsible CCG since birth or move in from abroad during the reporting period (movers in), even though these babies are eligible for screening and will continue to be monitored through data collection by the NBS programme (KPI NB4), along with coverage for all 9 tests.
Reporting arrangements	Reporting focus: CCG Data source: CHIS Responsible for submission: CHRD
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

<table>
<tr><th>KPI</th><th>NB2: Newborn blood spot screening – avoidable repeat tests</th></tr>
<tr><td>Description</td><td>The proportion of babies from whom it is necessary to take a repeat blood sample due to an avoidable failure in the sampling process. Reported by maternity service.</td></tr>
<tr><td>Rationale</td><td>Poor quality samples resulting in an avoidable repeat test cause delay in identification and treatment of screen positive babies, anxiety to parents, distress to babies and waste healthcare resources. UK newborn screening laboratories report variable rates of repeat blood sampling. Whilst some repeat tests are for clinical reasons, most are avoidable. The blood sample for newborn screening requires 4 blood spots to be collected onto the newborn blood spot card. Accurate completion of all data fields on the blood spot card is essential to correctly identify the baby, inform analysis of the sample and report to the appropriate child health records department. Newborn screening laboratories in England are following a national, evidence-based consensus on blood spot quality, with standardized acceptance and rejection criteria.

A good quality blood sample is one that:
• is taken at the right time; (date of birth and date of sample being mandatory)
• has all data fields completed to enable identification of the baby (NHS number being mandatory), analysis and reporting of results
• contains sufficient blood to perform all tests
• is not contaminated
• arrives at the laboratory in a timely manner</td></tr>
<tr><td>Definition</td><td><table><tr><td>avoidable repeats</td><td rowspan="2">expressed as a percentage, where:</td></tr><tr><td>initial blood samples</td></tr></table>
‘avoidable repeats’ (numerator) is the total number of repeat (second or subsequent) samples requested by the laboratory during the reporting period because the previous sample was:
• taken when the baby was too young (on or before day 4, where day 0 is the date of birth)
• insufficient (for example, 4 blood spots did not soak through to the back of the card)
• unsuitable (for example, on an expired blood spot card, contaminated, in transit for more than 14 days, anti-coagulated sample and baby’s NHS number and/or other details not accurately recorded on the blood spot card)</td></tr>
</table>

	'initial blood samples' (denominator) is the total number of initial blood samples received in the laboratory during the reporting period as part of the newborn blood spot screening programme.
Performance thresholds	Acceptable level: ≤ 2.0% Achievable level: ≤ 0.5%
Mitigations/ qualifications	None
Reporting arrangements	Reporting focus: maternity service Data source: newborn blood spot screening laboratories Responsible for submission: maternity unit
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

<table>
<tr><th>KPI</th><th>NB4: Newborn blood spot screening – coverage (movers in)</th></tr>
<tr><td>Description</td><td>The proportion of all babies eligible for newborn blood spot (NBS) screening who:
- have changed responsible CCG in the first year of life
- have moved in from abroad
and have a conclusive result recorded on CHIS within 21 calendar days of notifying CHRD.</td></tr>
<tr><td>Rationale</td><td>A key objective of the programme is to ensure that all eligible babies are offered newborn screening and, with verbal consent, tested within an effective timeframe.

Timely information on screening coverage is important to identify trends and to monitor the effectiveness of service improvements.

This KPI focuses on those children that move in and become the responsibility of the CCG within the reporting period.</td></tr>
<tr><td>Definition</td><td><table><tr><td>tested babies</td><td rowspan="2">expressed as a percentage, where:</td></tr><tr><td>eligible babies</td></tr></table>
‘tested babies’ (numerator) is the total number of ‘eligible babies’ for whom a conclusive screening result for PKU was available within an effective timeframe.

‘eligible babies’ (denominator) is the total number of babies:
• who changed responsible CCG, or move in from abroad during the reporting period and
• for whom the CCG remains responsible on the last day of the reporting period; and
• are less than or equal to 364 days old at the point of notifying CHRD

‘responsible CCG’ refers to all babies that are registered with a GP within the CCG; the data should be grouped and reported per CCG responsible population or UK equivalent using the baby’s, or if not available, mother’s GP practice code.

‘changed responsible CCG’ – baby that was born out of the CCG but has become its responsibility because it moved in within the reporting period.

This excludes babies who are already the responsibility of the CCG at birth and transfer within the same CCG. KPI NB1 captures babies</td></tr>
</table>

	registered within the CCG both at birth and on the last day of the reporting period. *'point of notifying CHRD'* – this is either: • the point of direct electronic registration on the CHIS • the point of receipt of phone/email/fax notification to CHRD *'effective timeframe'* is where a conclusive result for PKU is recorded on the CHIS equal to or less than 21 calendar days of notifying CHRD of movement in. A conclusive result for PKU is one of the following newborn screening status codes: 04 (not suspected), 07 (not suspected - other disorders follow up) and 08 (suspected).
Performance thresholds	Acceptable level: ≥ 95.0% Achievable level: ≥ 99.9%
Mitigations/ qualifications	For this KPI, a conclusive screening result for PKU will serve as a proxy indicator for a conclusive result for each of the conditions screened for (however, a clinical response should include all the other tests – note that cystic fibrosis can only be screened for up to 8 weeks of age). Declines should be recorded on the CHIS and are included in the denominator but not the numerator.
Reporting arrangements	Reporting focus: CCG Data source: CHIS Responsible for submission: CHRD
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

Newborn hearing screening

<table>
<tr><th>KPI</th><th>NH1: Newborn hearing screening – coverage</th></tr>
<tr><td>Description</td><td>The proportion of babies eligible for newborn hearing screening for whom the screening process is complete by 4 weeks corrected age (hospital programmes: well babies, NICU babies) or by 5 weeks corrected age (community programmes: well babies).</td></tr>
<tr><td>Rationale</td><td>This KPI is needed to provide assurance that screening is offered to parents of all eligible babies and that each baby (for whom the offer is accepted) has a completed screening outcome.</td></tr>
<tr><td>Definition</td><td>
<table>
<tr><td>complete screens</td><td rowspan="2">expressed as a percentage, where:</td></tr>
<tr><td>eligible babies</td></tr>
</table>

‘complete screens’ (numerator) is the total number of ‘eligible babies’ for whom a decision about referral or discharge from the screening programmes is made within an effective timeframe. This includes:

babies for whom a conclusive screening result was available by 4 weeks corrected age (hospital programmes: well babies, NICU babies) or by 5 weeks corrected age (community programmes: well babies)
babies referred to an audiology department because a newborn hearing screening encounter/event was inconclusive or contraindicated

The ‘screening outcomes’ that comprise a complete screen are:

clear response – no follow up required
clear response – targeted follow up required
no clear response – bilateral referral, unilateral referral
incomplete – baby/equipment reason, equipment malfunction, equipment not available, baby unsettled
incomplete – screening contraindicated

‘eligible babies’ (denominator) is the total number of babies born within the reporting period whose mother was registered with a GP practice within the CCG, or (if not registered with any practice) resident within the area covered by the provider newborn hearing screening programme (NHSP) site or CCG area, excluding:

any baby who died before screening could be completed

</td></tr>
</table>

	• babies that have not reached **4 weeks corrected age** (hospital programmes: well babies, NICU babies) or **5 weeks corrected age** (community programmes: well babies) at the time of the report • babies born in England and have had their record transferred electronically to Wales or another home country Corrected age is used for babies born at <40 weeks gestation. For NHSP, coverage is defined as a screening outcome being set on the national software solution, accepting that the screen may be incomplete.
Performance thresholds	Acceptable level: ≥ 97.0% Achievable level: ≥ 99.5%
Mitigations/ qualifications	The following babies will be included in the denominator but may not be screened by NHSP and therefore not be included in the numerator. These babies should be accounted for and the reason explained in the commentary as mitigations against performance thresholds. • babies who have attained the required age (described above) but whose screening was delayed because they are not well enough • babies who are eligible for screening but were screened by one of the other home countries (Northern Ireland, Scotland, Wales) • babies born in private hospitals or US Air force (USAF) bases
Reporting arrangements	Reporting focus: local NHSP Data source: national software solution for newborn hearing screening Responsible for submission: National NHSP
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

<table>
<tr><th>KPI</th><th>NH2: Newborn hearing – time from screening outcome to attendance at an audiological assessment appointment</th></tr>
<tr><td>Description</td><td>The proportion of babies with a no clear response result in one or both ears or other result that require an immediate onward referral for audiological assessment who receive audiological assessment within the required timescale.</td></tr>
<tr><td>Rationale</td><td>To provide assurance that babies with a no clear response result in one or both ears or other result who require an immediate onward referral for audiological assessment receive diagnostic audiological assessment in a timely manner.</td></tr>
<tr><td>Definition</td><td>
<table>
<tr><td>referrals for diagnostic audiological assessment who attend an appointment that is within the required timescale</td><td rowspan="2">expressed as a percentage, where:</td></tr>
<tr><td>referrals for diagnostic audiological assessment</td></tr>
</table>

‘referrals for diagnostic audiological assessment’ (denominator) is the total number of babies who receive a no clear response result in one or both ears or other result that requires an immediate onward referral for audiological assessment. Within the national software solution for newborn hearing screening it is defined as the following ‘screening outcomes’:
• no clear response – bilateral referral, unilateral referral
• incomplete – baby/equipment reason, equipment malfunction, equipment not available, baby unsettled
• incomplete – screening contraindicated

The numerator is the number of babies from the denominator who attend an appointment within the required timescale.

The required timescale is either within 4 weeks of screen completion or by 44 weeks gestational age.

Corrected age is used for babies born at <40 weeks gestation.</td></tr>
<tr><td>Performance thresholds</td><td>Acceptable level: ≥ 90.0%
Achievable level: ≥ 95.0%</td></tr>
<tr><td>Mitigations/ qualifications</td><td>The following babies will be included in the denominator but may not attend follow up in England and therefore will not be included in the numerator. These babies should be accounted for and the reason explained in the commentary as mitigations against performance thresholds:
• babies who are too unwell to proceed or who die between screen</td></tr>
</table>

	completion and offer of diagnostic audiological assessment appointment • babies whose follow up appointment is in another country Providers need to be able to demonstrate robust follow up of those who did not attend as per local policy.
Reporting arrangements	Reporting focus: local NHSP Data source: national software solution for newborn hearing screening Responsible for submission: National NHSP
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

Newborn and infant physical examination

KPI	NP1: Newborn and infant physical examination – coverage (newborn)
Description	The proportion of babies eligible for the newborn physical examination who are tested for all 4 components (3 components in female infants) of the newborn examination within 72 hours of birth.
Rationale	To provide assurance that screening is offered to parents of all eligible babies and each baby (where the offer is accepted) has a conclusive screening result.
Definition	$\frac{\textit{tested babies}}{\textit{eligible babies}}$ expressed as a percentage, where: *'tested babies'* (numerator) is the total number of *'eligible babies'* for whom a decision about referral (including a decision that no referral is necessary as a result of the newborn physical examination) for each of the 4 conditions screened was made within an effective timeframe. *'eligible babies'* (denominator) is the total number of babies born within the reporting period whose mother was registered with a GP practice within the CCG, or (if not registered with any practice) resident within the CCG area, excluding any baby who died before an offer of screening could be made. The effective timeframe for the newborn physical examination is that a conclusive screening result should be available within 72 hours of birth.
Performance thresholds	Acceptable level: ≥ 95.0% Achievable level: ≥ 99.5%
Mitigations/ qualifications	Screening may be delayed if a baby is too premature or too unwell to have the examination (it is not the clinical priority at that given point in time). Screening should be completed as and when the baby's condition allows. These babies should be accounted for and the reason explained in the commentary as mitigations against performance thresholds. In terms of a failsafe, all babies will be eligible for the NIPE examination at some point, unless the baby dies. It is recommended that the newborn examination is undertaken prior to discharge from hospital (unless home delivery). This maximises the opportunity for the examination to be

	completed within the 72 hour target. Babies who are identified as not having a newborn physical clinical examination should be followed up locally. The NIPE programme recognises that further work is needed in the future to ensure thresholds are appropriate for neonatal intensive care units and, in particular, those that are tertiary referral centres.
Reporting arrangements	Reporting focus: CCG (see NIPE programme handbook for further information). Data source: NIPE SMART (where providers have not implemented NIPE SMART, local processes will need to be in place to enable reporting of this KPI). Responsible for submission: National NIPE Screening Programme and maternity units
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

<table>
<tr><th>KPI</th><th>NP2: Newborn and infant physical examination – timely assessment of developmental dysplasia of the hip (DDH)</th></tr>
<tr><td>Description</td><td>The proportion of babies who have a positive screening test on newborn physical examination and undergo assessment by specialist hip ultrasound within 2 weeks of age.</td></tr>
<tr><td>Rationale</td><td>To provide assurance of timely interventions</td></tr>
<tr><td>Definition</td><td>
<table>
<tr><td>timely assessments</td><td rowspan="2">expressed as a percentage, where:</td></tr>
<tr><td>referral for assessment indicated</td></tr>
</table>

‘timely assessments’ (numerator) is the number of babies with a positive screening test on newborn physical examination who attend for specialist hip ultrasound within 2 weeks of age

‘referral for assessment indicated’ (denominator) is the total number of babies with a positive screening test of the hips on newborn physical examination (in the reporting period)

Inclusion:
• babies who are found to have dislocated or dislocatable hips on newborn physical examination should be included

Exclusions:
• babies who have previously noted risk factors but normal physical examination should NOT be included (as referral timescales are different)
• babies who are found to have ‘clicky hips’ on physical examination should NOT be included (be managed and referred as per local arrangement)
</td></tr>
<tr><td>Performance thresholds</td><td>Acceptable level: ≥ 95.0%
Achievable level: 100.0%</td></tr>
<tr><td>Mitigations/ qualifications</td><td>None</td></tr>
<tr><td>Reporting arrangements</td><td>Reporting focus: maternity service
Data source: NIPE SMART (where providers have not implemented NIPE SMART, local processes will need to be in place to enable reporting of this KPI). Where NIPE SMART is implemented, local processes need to be in place to ensure outcome of the ultrasound scan is recorded on the system. Robust referral pathways, communication and feedback to the referring unit/clinician are necessary to enable local units to report on this</td></tr>
</table>

	standard. Responsible for submission: maternity unit
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

Diabetic eye screening

<table>
<tr><th>KPI</th><th>DE1: Diabetic eye screening – uptake of routine digital screening event</th></tr>
<tr><td>Description</td><td>The proportion of those offered a routine diabetic eye screening appointment who attend and complete a routine digital screening encounter/event.</td></tr>
<tr><td>Rationale</td><td>While some people with diabetes may choose to decline an offer of screening, the level of uptake is an important measure of programme performance. Low uptake may indicate that:
those offered screening are not accepting the test (for example, because they do not understand its importance, because it is inconvenient, or because they have had a bad screening experience in the past)
those accepting the test are not being tested (for example, because they attend but do not receive screening by digital photography)</td></tr>
<tr><td>Definition</td><td><table><tr><td>subjects tested</td><td rowspan="2">expressed as a percentage, where:</td></tr><tr><td>subjects offered screening</td></tr></table>
‘subjects tested’ (numerator) is the number of ‘subjects offered screening’ who attended a routine digital screening encounter/event during the reporting period. [Programme Performance Report line 3.4]

‘subjects offered screening’ (denominator) is the number of eligible people with diabetes offered a routine digital screening encounter/event which was due to take place within the reporting period [Programme Performance Report line 3.2b]. Where no specific digital screening encounter/event date was proposed, the date at which the invitation was sent should be used, and where a range of dates were proposed, the first date in the range should apply.

A digital screening event is a screening encounter/event where an attempt is made to image the subject’s retinas by digital photography.</td></tr>
<tr><td>Performance thresholds</td><td>Acceptable level: ≥ 70.0%
Achievable level: ≥ 80.0%</td></tr>
<tr><td>Mitigations/ qualifications</td><td>The numerator includes instances where one or both eyes are not assessable through digital photography and a screening outcome of ‘ungradable’ is assigned. In these cases a subsequent invitation to slit lamp biomicroscopy clinic is issued, the screening encounter/event is</td></tr>
</table>

	considered ‘complete’ and is counted in the numerator of this performance measure.
Reporting arrangements	Reporting focus: local DES service Data source: local DES service Responsible for submission: local DES service via the national DESP
Reporting period	Rolling 12 months, ending in the quarter in question; data to be collated between 2 and 3 months after each quarter end, a minimum of 6 weeks plus 1 day after the end of the report period. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

<table>
<tr><th>KPI</th><th>DE2: Diabetic eye screening – results issued within 3 weeks of routine digital screening</th></tr>
<tr><td>Description</td><td>The proportion of subjects attending for diabetic eye screening to whom results were issued within 3 weeks of the routine digital screening encounter/event.</td></tr>
<tr><td>Rationale</td><td>Following a routine digital screening encounter/event, the prompt dispatch of screening results ensures that subjects are appropriately informed, helps to minimise anxiety and minimises delay to follow up actions or interventions.

Late receipt of screening results could indicate:
• a backlog or failure in administrative or grading processes
• screening subjects not being issued results following a screening event</td></tr>
<tr><td>Definition</td><td><table><tr><td>results issued within 3 weeks</td><td rowspan="2">expressed as a percentage, where:</td></tr><tr><td>subjects tested</td></tr></table>
‘results issued within 3 weeks’ (numerator) is the number of ‘subjects attending for screening’ to whom a screening result letter was issued within 3 weeks (21 days inclusively) of the routine digital screening encounter/event. [Programme Performance Report line 5.4a]

‘subjects tested’ (denominator) is the number of subjects offered screening having attended a routine digital screening encounter/event within the reporting period. [Programme Performance Report line 3.4]

A digital screening event is a screening encounter/event where an attempt is made to image the subject’s retinas by digital photography.</td></tr>
<tr><td>Performance thresholds</td><td>Acceptable level: ≥ 70.0%
Achievable level: ≥ 95.0%</td></tr>
<tr><td>Mitigations/ qualifications</td><td>The denominator includes instances where one or both eyes are not assessable through digital photography and a screening outcome of ‘ungradable’ is assigned. In these cases, a subsequent invitation to slit lamp biomicroscopy clinic is issued, the screening event is considered ‘complete’ and is counted in the denominator of this performance measure.

Where a subject is screened for diabetic retinopathy in the hospital eye service they may have the screening outcome recorded by the local screening service and so will be counted in the denominator as tested.</td></tr>
</table>

	They will receive a results letter from the hospital eye service but this information is not recorded by the local screening service and will not be counted in the numerator.
Reporting arrangements	Reporting focus: local DES service Data source: local DES service Responsible for submission: local DES service via the national DESP
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4).

<table>
<tr><th>KPI</th><th>DE3: Diabetic eye screening – timely assessment for R3A screen positive</th></tr>
<tr><td>Description</td><td>The proportion of screen positive subjects with referred proliferative diabetic retinopathy attending for assessment within 4 weeks of notification of positive test from all diabetic eye screening pathways.</td></tr>
<tr><td>Rationale</td><td>Screen positive subjects found to have proliferative diabetic retinopathy are at immediate risk of permanent sight impairment and require early access to assessment by an ophthalmologist.
Failure of screen positive subjects to attending for assessment within 4 weeks might be caused by:
delays in the screening programme grading or administrative process
delays in availability of consultation appointment within the hospital eye department
failure by the patient to attend for assessment</td></tr>
<tr><td>Definition</td><td><table><tr><td>subjects receiving a consultation within 4 weeks</td><td rowspan="2">expressed as a percentage, where:</td></tr><tr><td>subjects referred for proliferative retinopathy</td></tr></table>
‘subjects receiving consultation within 4 weeks’ (numerator) is the number of ‘subjects referred with proliferative retinopathy’ (R3A) attending for assessment within 4 weeks (28 days) of notification of positive test from routine digital screening, digital surveillance and slit lamp biomicroscopy. [Programme Performance Report line 6.2.1a and 6.2.1b]

‘subjects referred for proliferative retinopathy’ (denominator) is the number of subjects having attended a routine digital screening encounter/event, digital surveillance event or slit lamp biomicroscopy surveillance event within the reporting period whose final grading outcome indicated proliferative diabetic retinopathy in one or both eyes (grades R3AM0 or R3AM1) and who were referred to an ophthalmology clinic. [Programme Performance Report lines 6.3b]

‘notification of positive test’ is the date the referral letter is printed from the software.

‘final grading outcome’ is an assessment of the level of diabetic retinopathy from the evidence as presented, following internal quality assurance procedures.</td></tr>
<tr><td>Performance</td><td>Acceptable level: ≥ 80.0%</td></tr>
</table>

thresholds	
Mitigations/ qualifications	Patients currently in hospital eye services for diabetic retinopathy (this must be verifiable) are not included in this indicator. All other patients referred for R3A should be included in the denominator, regardless of subsequent findings in the hospital eye service. Exceptions can be reported through the DES quarterly reporting process.
Reporting arrangements	Reporting focus: local DES service Data source: local DES service Responsible for submission: local DES service via the national DESP
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4), a minimum of 4 weeks plus one day after the end of the report period.

Abdominal aortic aneurysm

KPI	AA1: Abdominal aortic aneurysm screening – completeness of offer
Description	The proportion of men eligible for abdominal aortic aneurysm screening to whom an initial offer of screening is made.
Rationale	All men should be offered an appointment to attend for AAA screening during their 65th year. Completeness of offer is the proportion of those eligible for screening who are offered screening. Low completeness of offer might indicate that: • those eligible for screening are not being offered a screen • attempted offers of screening are in fact failed offers, not offering the subject a realisable opportunity to attend for screening.
Definition	*offers of screening* / *eligible men* expressed as a percentage, where: *'offers of screening'* (numerator) is the number of *'eligible men'* offered a realisable opportunity to attend for initial screening during the reporting period, whether they actually attended or otherwise. *'eligible men'* (denominator) is the total number of eligible men in their 65th year to whom the screening programme propose that a screening encounter/event during the reporting period should be offered. When calculated annually, this indicator must report all eligible men in their 65th year, excluding any who die or move out of the area of responsibility for the local screening service before screening can be offered.
Performance thresholds	Acceptable level: ≥ 90.0% Achievable level: ≥ 99.0% This KPI is annual. The rationale for this is that the 'due date' for screening is anytime within the screening year, and as such, does not fall within a quarter.
Mitigations/ qualifications	Men who come on to the register towards the end of the year may not be offered an appointment by the end of the screening year.
Reporting arrangements	Reporting focus: Local AAA screening service; CCG and local authority Data source: National AAA screening programme (NAAASP) database Responsible for submission: NAAASP
Reporting	Quarterly; data to be collated between 2 and 3 months after each quarter

period	end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4), a minimum of 4 weeks plus one day after the end of the report period. Data will be cumulative across the year.

KPI	AA2: Abdominal aortic aneurysm screening – coverage of initial screen
Description	The proportion of men eligible for abdominal aortic aneurysm screening who are conclusively tested.
Rationale	Coverage is a key measure for the screening programme as it provides an indication of the accessibility of the service and that men are aware of the importance of screening. Programmes should aim to increase the coverage of screening so that those not accepting have done so because of informed choice, not lack of access to the service or from lack of information in an appropriate format. Low coverage might indicate that: • those eligible for screening are not being offered a screen • those offered screening are not accepting the test (for example, because they do not understand its importance, or because it is inconvenient, or because they have had a bad screening experience in the past) • those accepting the test are not being tested (for example, because they attend but cannot be conclusively tested)
Definition	*conclusively tested* / *eligible men* — expressed as a percentage, where: *'conclusively tested'* (numerator) is the number of *'eligible men'* who have a conclusive scan result. *'eligible men'* (denominator) is the total number of eligible men in their 65th year to whom the local screening service propose that a screening encounter/event during the reporting period should be offered. When calculated annually, this indicator must report all eligible men in their 65th year, excluding any who die or move out of the area of responsibility for the local screening service before screening can be offered.
Performance thresholds	Acceptable level: ≥ 75.0% Achievable level: ≥ 85.0% This KPI is annual. The rationale for this is that the 'due date' for screening is anytime within the screening year, and as such, does not fall within a quarter.
Mitigations/ qualifications	Men who come on to the register towards the end of the year may not be screened by the end of the screening year.

	Some men may choose to defer their initial screen which may lower the number tested within the screening year plus 3 months.
Reporting arrangements	Reporting focus: local AAA screening service; CCG and local authority Data source: National AAA screening programme (NAAASP) database Responsible for submission: NAAASP
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4), a minimum of 4 weeks plus one day after the end of the report period. Data will be cumulative across the year.

<table>
<tr><th>KPI</th><th>AA3: Abdominal aortic aneurysm screening – coverage of annual surveillance screen</th></tr>
<tr><td>Description</td><td>The proportion of men on annual surveillance who are conclusively tested within 6 weeks of their due date.</td></tr>
<tr><td>Rationale</td><td>Men on surveillance are at greater risk of rupture and so it is important that they are seen as close to their due date as possible.

Low coverage might indicate that:
those on surveillance are not being offered a screen within an appropriate time frame
those offered screening are not accepting the test (for example, because they do not understand its importance, because it is inconvenient, or because they have had a bad screening experience in the past)</td></tr>
<tr><td>Definition</td><td><table><tr><td>conclusive scans</td><td rowspan="2">expressed as a percentage, where:</td></tr><tr><td>annual surveillance appointments due</td></tr></table>
‘conclusive scans’ (numerator) is the number of conclusive scan results occurring between 6 weeks before and 6 weeks after the due date for each man.

‘annual surveillance appointments due’ (denominator) is the number of due dates for annual surveillance occurring in the reporting period for each man.</td></tr>
<tr><td>Performance thresholds</td><td>Acceptable level: ≥ 85.0%
Achievable level: ≥ 95.0%</td></tr>
<tr><td>Mitigations/ qualifications</td><td>There may be more than one surveillance due date per man in the reporting period and each will be counted.

Where a man passes away prior to the due date and up to 6 weeks after the due date, he will not be counted in the denominator. Where a man becomes excluded prior to the due date and up to 6 weeks after the due date, he will not be counted in the denominator.

Exceptions can be reported to NAAASP as detailed in the young person and adult KPI submission guidance: https://www.gov.uk/government/publications/young-person-and-adult-screening-submit-key-performance-indicator-data</td></tr>
</table>

Reporting arrangements	Reporting focus: local AAA screening service; CCG and local authority Data source: National AAA screening programme (NAAASP) database Responsible for submission: NAAASP
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4), a minimum of 4 weeks plus one day after the end of the report period.

<table>
<tr><th>KPI</th><th>AA4: Abdominal aortic aneurysm screening – coverage of quarterly surveillance screen</th></tr>
<tr><td>Description</td><td>The proportion of men on quarterly surveillance who are conclusively tested within 4 weeks of their due date</td></tr>
<tr><td>Rationale</td><td>Men on surveillance are at greater risk of rupture and so it is important that they are seen as close to their due date as possible.

Low coverage might indicate that:
• those on surveillance are not being offered a screen within an appropriate time frame
• those offered screening are not accepting the test (for example, because they do not understand its importance, because it is inconvenient, or because they have had a bad screening experience in the past)</td></tr>
<tr><td>Definition</td><td><table><tr><td>conclusive scans</td><td rowspan="2">expressed as a percentage, where:</td></tr><tr><td>quarterly surveillance appointments due</td></tr></table>
‘conclusive scans’ (numerator) is the number of conclusive scan results occurring between 4 weeks before and 4 weeks after the due date for each man.

‘quarterly surveillance appointments due’ (denominator) is the number of due dates for quarterly surveillance occurring in the reporting period for each man.</td></tr>
<tr><td>Performance thresholds</td><td>Acceptable level: ≥ 85.0%
Achievable level: ≥ 95.0%</td></tr>
<tr><td>Mitigations/ qualifications</td><td>There may be more than one surveillance due date per man in the reporting period and each will be counted.

Where a man passes away prior to the due date and up to 4 weeks after the due date, he will not be counted in the denominator. Where a man becomes excluded prior to the due date and up to 4 weeks after the due date, he will not be counted in the denominator.

Exceptions can be reported to NAAASP as detailed in the young person and adult KPI submission guidance: https://www.gov.uk/government/publications/young-person-and-adult-screening-submit-key-performance-indicator-data.</td></tr>
<tr><td>Reporting</td><td>Reporting focus: local AAA screening service; CCG and local authority</td></tr>
</table>

arrangements	Data source: National AAA screening programme (NAAASP) database Responsible for submission: NAAASP
Reporting period	Quarterly; data to be collated between 2 and 3 months after each quarter end. Deadlines: 30 September (Q1), 31 December (Q2), 31 March (Q3), 30 June (Q4), a minimum of 4 weeks plus one day after the end of the report period.

Submitting key performance indicator data

Timescales

KPI data should be returned within the final month of each quarter, 1 quarter in arrears, except for FA2 which will be 2 quarters in arrears. Data collection must allow for sign off and submission by the deadline as outlined in the reporting process below. Submissions received after that date will appear as a non-submission for that quarter.

Screening commissioners may work with their local screening providers to review KPI data in accordance with locally agreed arrangements prior to submission. Local organisations can contact the screening quality assurance service (regions) for advice on data collection and submission.

Reporting period	Time for sense checking and return
Q1 (1 April – 30 June)	1 September – 30 September
Q2 (1 July – 30 September)	1 December – 31 December
Q3 (1 October – 31 December)	1 March – 31 March
Q4 (1 January – 31 March)	1 June – 30 June

Completing the KPI template

Data is reviewed by the national screening data and information team. Data that does not meet the standard definition is not accepted. It is the responsibility of the submitting organisation to ensure that only accurate data is submitted. Good quality data is extremely important for monitoring and improving the screening programmes. Screening providers may want to refer to the guidance for providers on the false or misleading information (FOMI) offence from The Care Act 2014 which sets out the responsibility of providers to supply and publish accurate data.

'Sense checking' should be used by screening providers and screening commissioners to ensure that the data is valid. 'Sense checks', which can be applied whilst completing the KPI template, include the following:

Sense checks
Is the data for the correct time period?
Is the data correct according to the national definitions?
Is the eligible population correctly identified?
Is the data for ID1, ST1 and FA2 matched cohort?

For all of the KPIs – are any of the percentage calculations greater than 100%? (are the numerators less than the denominators?)
Is the denominator stated the same for all those KPIs that use the same denominator? If there is a difference, is it justified by the commentary provided?
How does the data compare to previous submissions – are the numbers higher or lower and what is the explanation for this?
Are mitigations clearly described in detail in the commentary? For example, include explanations for breaches and action plans to rectify issues

Further support regarding data checking should be obtained from the submitting organisation's information and/or performance analyst.

Checklist for data submission

Before submission it is important for the person responsible for checking accuracy and signing off the data to scrutinise the KPI data templates:

Key points for submission
Has the correct submission template been used? These are updated for each quarter and made available on the website
Has the template been signed off? KPI data cannot be accepted if it is not signed off
Remember to put the correct organisational code and name of the programme or trust into the organisation column: these must be selected from the tab within the spreadsheet for each KPI
Remember to complete the boxes clearly at the top, for the name of the organisation the data is for and contact details for those submitting the data
Any data submitted after the submission date will not be included in the quarterly report and may be omitted from the annual data.
Missing data will be identified as non-submission for that organisation
Make sure to send the data to the correct email address: phe.screeningdata@nhs.net

Roles and responsibilities

It is strongly recommended that all screening data collection and submission is supported by a screening provider information and/or performance analyst.

Generic

- **national screening data and information team**: responsible for making submission templates available on time at: https://www.gov.uk/government/collections/nhs-screening-programmes-national-data-reporting, updating the website, assessing completeness of returns and performance against KPI thresholds, publication of data, and updating and publication of this KPI definitions and submission guidance document
- **SQAS:** responsible for reviewing data following submission and providing regional performance reports based on data supplied nationally. The SQAS (regions) will support local initiatives to use data for quality assurance. The SQAS (regions) can provide advice on the KPI collection and submission process when requested by local organisations
- **NHS England:** responsible for reviewing KPI data in accordance with locally agreed arrangements; monitoring of contracts and delivery against national service specifications and Section 7a agreements; and sharing data with local screening committees, or their equivalent, and with local authority directors of public health

Antenatal and newborn screening programmes

- **head of midwifery (HoM):** accountable and responsible for providing timely collation of accurate data. The data must be signed off by HoM and submitted on the KPI submission template to phe.screeningdata@nhs.net. The data may be shared with SQAS (regions) and the NHS England screening commissioners in accordance with locally agreed arrangements. Submission of KPI data should follow screening providers' assurance processes
- **antenatal and newborn screening co-ordinator/provider information team:** responsible for collating, checking and submitting accurate data to the head of midwifery
- **CHRD manager:** accountable and responsible for the timely collation of accurate data. The data must be submitted on the KPI submission template to phe.screeningdata@nhs.net. The data may be shared with SQAS (regions) and the NHS England screening commissioners in accordance with locally agreed arrangements. Submission of KPI data should follow screening providers' assurance processes

- **local NIPE clinical lead:** accountable and responsible for facilitating timely collation and submission of accurate and reliable data. Formal implementation of NIPE programme including use of IT system such as the recommended NIPE SMART (Screening Management and Reporting Tools) will be rolled out over the next 2 years

  NHSP local manager/NHSP team leader: accountable and responsible for facilitating timely entry of accurate data into the national NHSP IT system. The data is submitted by the national programme to the screening KPI team electronically from the national database. Submission of KPI data should follow screening providers' assurance processes. In order for screening providers to sign off their quarterly reports, the NHSP will publish KPI data reports for NH1 and NH2 before the quarter end. Each NHSP site is asked to sign off their reports within 2 weeks of uploading to the NHSP website. If reports are not signed off then, they will be taken to be accurate.

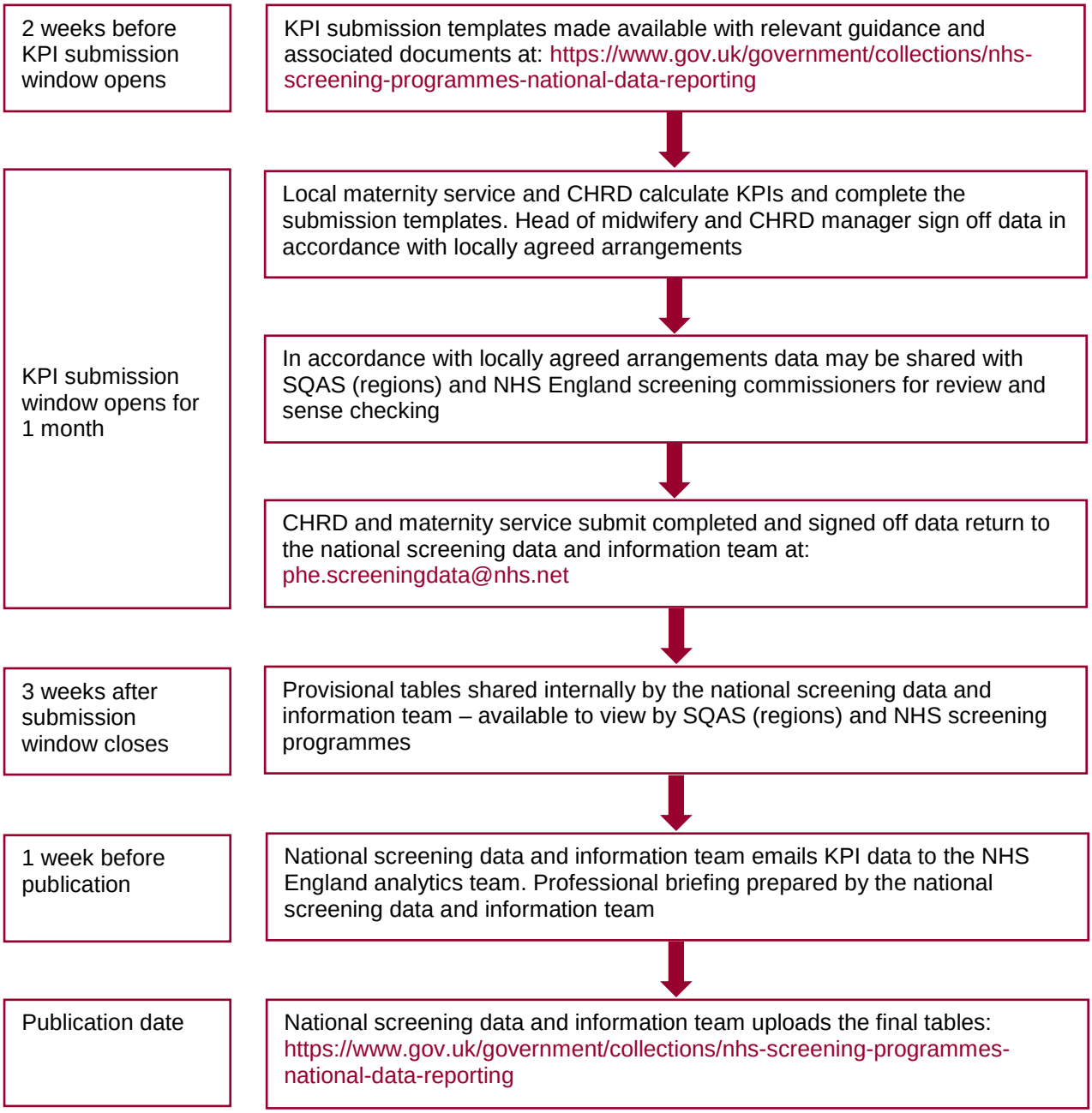
Diabetic Eye Screening Programme (DESP)

- **local DES service clinical lead/programme manager:** accountable and responsible for facilitating timely collation of accurate and reliable data. The data may be shared with the screening commissioners in accordance with locally agreed arrangements. Submission of the KPI data should follow the KPI and QA report submission guidance for programmes available at: https://www.gov.uk/government/publications/young-person-and-adult-screening-submit-key-performance-indicator-data
- **national DESP team**: responsible for informing local DES programmes when they are required to submit their programme performance reports. Calculating the KPIs from the submitted reports and checking data provided is accurate and complete, and submitting to the national screening KPI team

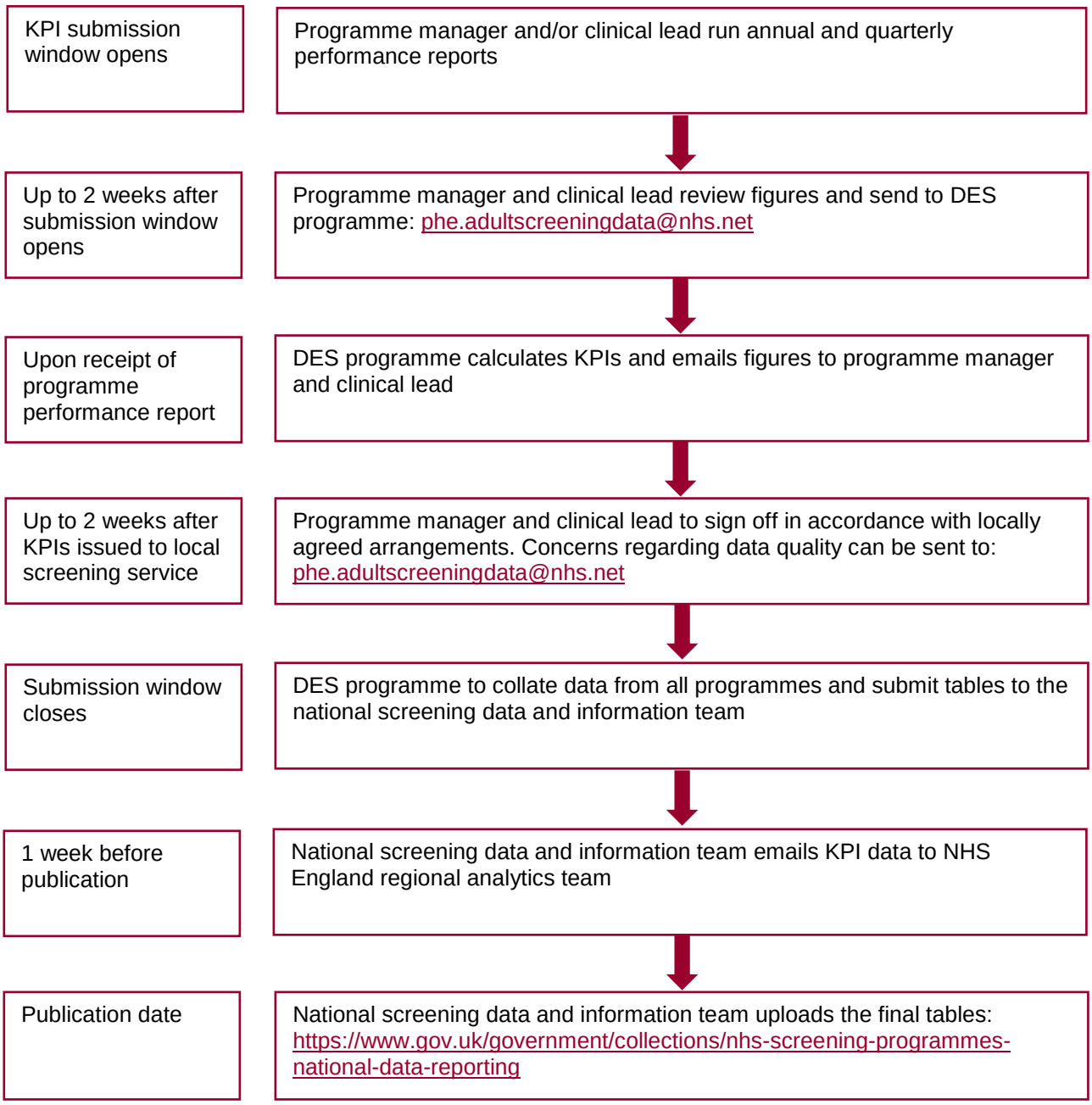
Abdominal Aortic Aneurism Screening Programme

- **local AAA service programme manager/coordinator:** accountable and responsible for facilitating timely collation of accurate and reliable data. Submission of the KPI data should follow the KPI and QA report submission guidance for programmes at: https://www.gov.uk/government/publications/young-person-and-adult-screening-submit-key-performance-indicator-data
- **national AAA team:** collates the KPI data from the national database and sends to local programme managers/coordinator for review and sign off. Once finalised, the data and information manager submits the data for all programmes to the national screening KPI team

Antenatal and newborn screening KPI submission process flowchart



Diabetic eye screening KPI submission process flowchart



Note: There are no flowcharts for the Newborn Hearing Screening Programme (NHSP) or the Abdominal Aortic Aneurysm (AAA) Screening Programme because this data is extracted from the national databases and submitted directly to the national screening data and information team. KPI data for the Newborn and Infant Physical Examination (NIPE) Screening Programme will be extracted nationally once the SMART IT solution is fully implemented nationally. Where providers have not yet implemented SMART, please follow the antenatal and newborn flowchart.

Information governance

It is the responsibility of all staff to ensure they are aware of their obligations regarding compliance with their organisation's information governance policies. In particular, they should be aware of the following:

- the reasons for adhering to information governance when collecting and validating data and information
- the accepted standards regarding data and information such as sources, control files, validity, reliability, completeness, terminology, acronyms, purpose and conventions
- data sharing protocols
- local assurance arrangements regarding board level sign off
- normally, no data is published if the numerator or denominator is less than 5 for an individual quarter. In such cases, the data will be aggregated and published annually.

Publishing key performance indicator data

Data is published online each quarter at:
https://www.gov.uk/government/collections/nhs-screening-programmes-national-data-reporting

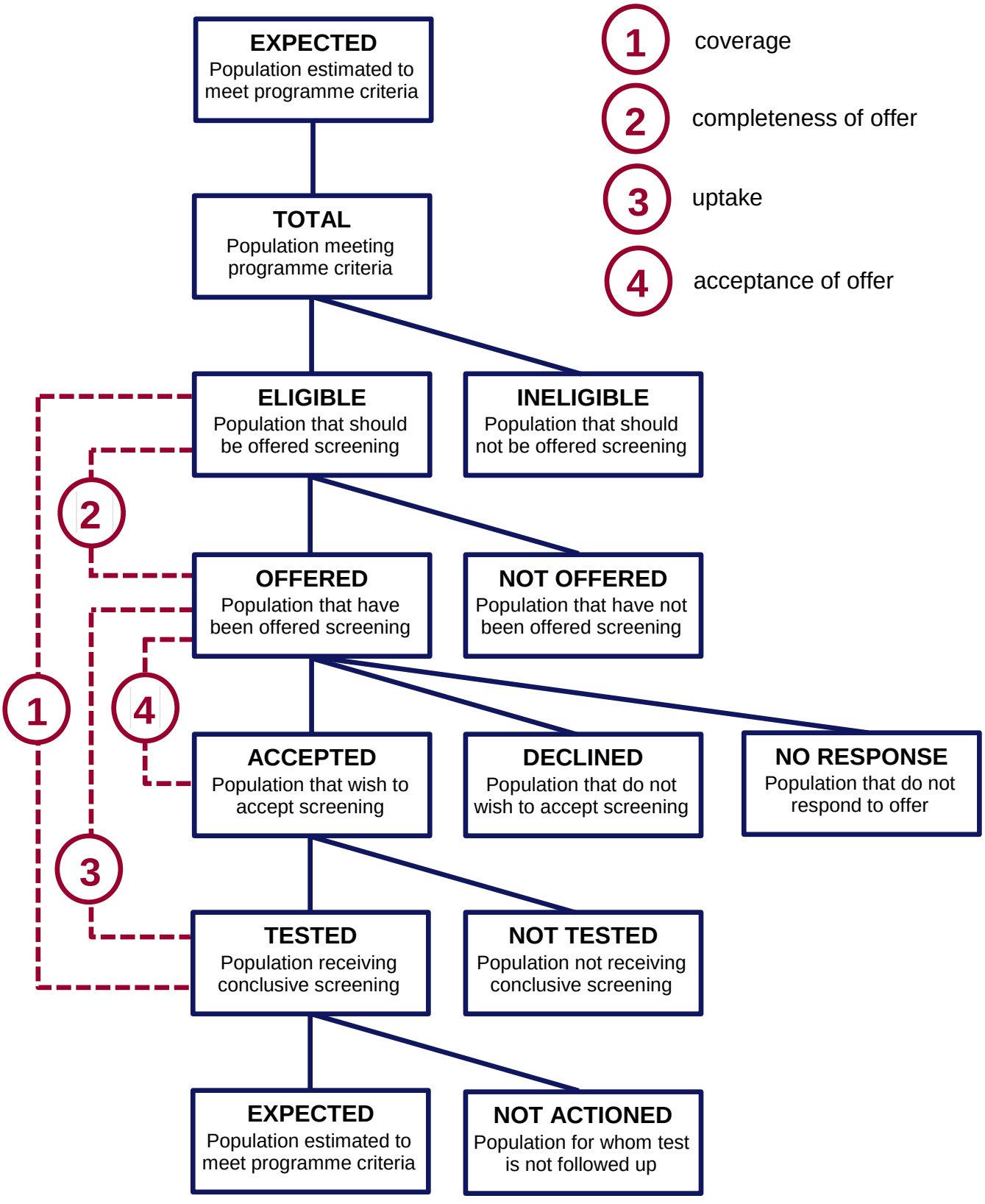
Only complete data is published. KPI data is shared with the NHS England analytics team with responsibility for screening, 1 week prior to publication, to perform data analysis to support commissioning, and to SQAS (regions) to support quality assurance.

Local screening services and NHS England screening commissioners should be aware of the contents of any material before it is placed in the public domain, so they have an opportunity to prepare suitable communications to respond to any adverse findings.

Provisional publication dates are:

Q1: mid December 2016
Q2: mid March 2017
Q3: mid June 2017
Q4: mid September 2017

Appendix A: generic screening pathway



Appendix B: worked examples for screening KPIs

<table>
<tr><th colspan="4">ID1: Antenatal infectious disease screening – HIV coverage</th></tr>
<tr><th colspan="2">Denominator</th><th colspan="2">Numerator</th></tr>
<tr><td>Eligible women
Total number of pregnant women booked for antenatal care during the reporting period, or presenting in labour without previously having booked for antenatal care.</td><td>Exclusions
• women who miscarry between booking and testing
• women who opt for termination between booking and testing
• women who transfer out between booking and testing, and therefore do not have a result
• women who transfer in who have a result from a screening test performed elsewhere in this pregnancy</td><td>Tested women
Total number of eligible women for whom a confirmed screening result was available for HIV at the day of report</td><td>Inclusions
Women who were known to be HIV positive at booking and not retested</td></tr>
<tr><td>Example: eligible women = 1,000</td><td>Example: exclusions
• miscarriages = 5
• terminations = 4
• transfers out = 2
• transfers in with results = 4
total exclusions = 15</td><td>Example: confirmed result at day of report = 800</td><td>Example: known to be HIV positive and not retested = 5</td></tr>
<tr><td colspan="2">Denominator = 1000 - 15 = 985 women</td><td colspan="2">Numerator = 800 + 5 = 805 women</td></tr>
<tr><td colspan="4">For this example ID1 = 805 / 985 x 100 = 81.7% coverage. Therefore 180 women do not have a result. You need to account for these in the commentary and clarify how many women have a documented decline, missed screen, lack of documented result etc.</td></tr>
<tr><td colspan="4">Additional information
This KPI requires matched cohort data</td></tr>
</table>

ID2: Antenatal infectious disease screening – timely referral of hepatitis B positive women for specialist assessment	
Denominator	**Numerator**
Total number of pregnant women with hepatitis B Pregnant women booked in the reporting period who were screen positive (newly diagnosed) for hepatitis B **and** women booked in the reporting period already known to be hepatitis B positive with high infectivity as defined as: • HBsAg positive and HBeAg positive • HBsAg positive, HBeAg negative and anti-HBe negative • HBsAg positive where e-markers have not been determined • has acute hepatitis B during pregnancy • HBsAg seropositive and known to have an HBV DNA level equal or above $1x10^6$IUs/ml in an antenatal sample	**Number of pregnant women with hepatitis B referred within 6 weeks** is the number of pregnant women with hepatitis B who are booked in the reporting period, who have been seen by an specialist within an effective timeframe, including: • all newly diagnosed hepatitis B positive women • women already known to be hepatitis B positive with high infectivity markers detected in the current pregnancy
Example: pregnant women with hepatitis B total number of newly diagnosed hepatitis B positive women = **5** total number of previously known hepatitis B women (high infectivity only) = **15**	Example: women seen for hepatitis B total number of women with hepatitis B who are referred and seen by an appropriate specialist* within 6 weeks of identification = **13**
Denominator = 5 + 15 = **20**	Numerator = **13**
For this example ID2 = **13 / 20 x 100 = 65.0%**.Therefore **7 women** were not seen by a specialist in 6 weeks. You need to account for these in the commentary, for example, if they were women who ‘did not attend’.	

FA1: Fetal anomaly screening – completion of laboratory request forms	
Denominator	**Numerator**
Total number of request forms for Down's, Edwards' and Patau's syndromes screening submitted to the laboratory within the reporting period during the recommended timeframe for analysis of 10^{+0} weeks' to 20^{+0} weeks' gestation (inclusive). Including: • request forms for Down's syndrome screening using combined or quadruple testing • Edwards' and Patau's syndromes screening using combined testing	Completed laboratory request forms is the number of submitted laboratory request forms with completed data compliant with the minimum data set at the initial request: • sufficient information for the woman to be uniquely identified • woman's correct date of birth • maternal weight • family origin • smoking status • ultrasound dating assessment in millimetres, with associated gestational date NB It is recognised that not all necessary data fields are included in the listed fields (for example, diabetes, IVF, donor egg are excluded). However, the fields listed are the minimum data set which should be completed on each request.
Denominator = **1,000** request forms received by the laboratory within the reporting timeframe	Numerator = **950** request forms which include the complete minimum dataset as defined in the bullet points above
For this example FA1 = **950 / 1,000 x 100 = 95.0%** completion of laboratory request forms	

<table>
<tr><th colspan="4">FA2: Fetal anomaly screening (18^{+0} to 20^{+6} fetal anomaly ultrasound) – coverage</th></tr>
<tr><th colspan="2">Denominator</th><th colspan="2">Numerator</th></tr>
<tr><td>Eligible women
Total number of pregnant women booked for antenatal care during the reporting period.</td><td>Exclusions
women who miscarry between booking and testing
women who opt for termination between booking and testing
women who transfer out between booking and testing, and therefore do not have a result
women who transfer in who have a result from a screening test performed elsewhere in this pregnancy
women who book later than 23^{+0} weeks of pregnancy</td><td>Tested women
The total number of eligible women for whom a completed screening result was available from the 18^{+0} to 20^{+6} week fetal anomaly scan on the day of report</td><td>Inclusions
Women who required a single further scan by 23 weeks to complete the screening examination if the image quality of the first examination is compromised by 1 of the following:
increased maternal body mass index (BMI)
uterine fibroids
abdominal scarring
sub-optimal fetal position</td></tr>
<tr><td>Example: eligible women = 1,000</td><td>Example: exclusions
miscarriages = 2
terminations = 2
transfers out = 1
transfers in with results = 6
booked later than 23 weeks = 9
total exclusions = 20</td><td>Example: completed screening result available from scan on the day of report = 930</td><td>Example: inclusions from single further scan by 23 weeks = 30</td></tr>
<tr><td colspan="2">Denominator = 1,000 - 20 = 980 women</td><td colspan="2">Numerator = 930+30 = 960 women</td></tr>
<tr><td colspan="4">For this example FA2 = 960 / 980 x 100 = 98.0% coverage. Therefore 20 women (2.0%) do not have a result. You need to account for these in the commentary and clarify how many women have a documented decline, missed screen, lack of documented result etc.</td></tr>
<tr><td colspan="4">Additional information
This KPI requires matched cohort data
This KPI is collated 2 quarters in arrears.</td></tr>
</table>

ST1: Antenatal sickle cell and thalassaemia screening - coverage			
Denominator		**Numerator**	
Eligible women The total number of pregnant women booked for antenatal care during the reporting period, or presenting in labour without previously having booked for antenatal care	**Exclusions** • women who miscarry between booking and testing • women who opt for termination between booking and testing • women who transfer out between booking and testing, and therefore do not have a result • women who transfer in who have a result from a screening test performed elsewhere in this pregnancy	**Tested** The total number of eligible women for whom a conclusive screening result was available for sickle cell and thalassaemia at the day of report.	**Inclusions** Women who were known carriers who were not retested and had direct access to pre-natal diagnosis.
Example: eligible women = **1,000**	Example: exclusions • miscarriages = 0 • terminations = 1 • transfers out = 3 • transfers in with results = 6 **total exclusions = 10**	Example: conclusive screening result at day of report = **930**	Example: inclusions = **20**
Denominator = 1,000 – 10 = **990 women**		Numerator = 930+20 = **950 women**	
For this example ST1 = **950 / 990 x 100 = 96.0%** Therefore **40 of the total 990** women do not have a result. You need to account for these in the commentary and clarify how many women have a documented decline, missed screen, lack of documented result etc.			
Additional information This KPI requires matched cohort data			

ST2: Antenatal sickle cell and thalassaemia screening – timeliness of test	
Denominator	**Numerator**
Number of pregnant women for whom a sample is received at the laboratory during the reporting period.	Number of pregnant women for whom a sample is received at the laboratory during the reporting period and a conclusive result is available by 10^{+0} weeks' gestation.
Denominator = **1,000 women**	Numerator = **600 women**
For this example ST2 = **600 / 1,000 x 100 = 60%** Therefore **400 of the total 1,000** do not have a conclusive test result by 10^{+0} weeks gestation. If the acceptable threshold level has not been met, please provide information on this in the commentary section, for example, number of samples with unknown gestation at test.	

ST3: Antenatal sickle cell and thalassaemia screening – of completion of FOQ	
Denominator	**Numerator**
Number of antenatal samples received at the laboratory during the reporting period.	Number antenatal samples received at the laboratory supported by a fully completed FOQ.
Denominator = **1,000 women**	Numerator = **950 women**
For this example ST3 = **950 / 1,000 x 100 = 95%** Therefore samples for **50 of the total 1,000** are not supported by fully completed FOQ.	

NB1: Newborn blood spot screening – coverage (CCG responsibility at birth)			
Denominator		**Numerator**	
Eligible babies Babies born within the reporting period for whom the CCG were responsible at birth and are still responsible for on the last day of the reporting period.	**Exclusions** Babies born within the reporting period: • who have become responsibility of the CCG since birth (movers-in) • who have ceased to be the responsibility of the CCG during the reporting (moved out) • who died before age of 8 days	**Tested babies** Eligible babies: • with a conclusive PKU results status code 04 (not suspected) 07, (not suspected - other disorders follow up) and 08 (suspected) recorded on the child health information system by 17 days of age	**Exclusions** Eligible babies: • with an inconclusive PKU screening result eg status code 03 (condition screened for) repeat/further sample required • conclusive PKU result recorded on the child health information system after 17 days of age
Example: eligible babies = **1,000**	Example: exclusions = **10**	Example: tested babies = **990**	Example: PKU status code 03 = **10** PKU conclusive result recorded after 17 days of age = **10**
Denominator = 1000 – 10 = **990 babies**		Numerator = 990 – 10 – 10 = **970 babies**	
For this example NB1 = **970 / 990 x 100 = 98.0%** Therefore **20 of the total 990** babies do not have a conclusive PKU result recorded on the child health information system by 17 days of age.			

NB2: Newborn blood spot screening – avoidable repeat tests	
Denominator	**Numerator**
Initial blood samples Received within the laboratory during the reporting period.	**Avoidable repeats** • taken when the baby was too young (on or before day 4; DOB day 0) (status code 0301) • insufficient (status code 0303) • unsuitable (status codes (0304, 0305, 0306, 0307, 0308, 0309, 0310, 0311, 0312 and 0313)
Example: initial blood samples = **1,000**	Example: • taken when the baby was too young = **1** • insufficient = **7** • unsuitable = **2**
Denominator = **1,000**	Numerator = **10**
For this example NB2 = **10 / 1,000 x 100 = 1%** Therefore **10 of the total 1,000** samples resulted in an avoidable repeat request.	

NB4: Newborn blood spot screening – coverage (movers in)			
Denominator		**Numerator**	
Eligible babies The total number of babies: • who changed responsible CCG, or move in from abroad during the reporting period and • for whom the CCG remains responsible on the last day of the reporting period; and • are less than or equal to 364 days old at the point of notifying CHRD.	**Exclusions** Babies who are already the responsibility of the CCG at birth and transfer within the same CCG.	**Tested babies** The total number of eligible babies for whom a conclusive screening result for PKU was available within an effective timeframe (where a conclusive result for PKU is recorded on the CHIS equal to or less than 21 calendar days of notifying CHRD of movement in). A conclusive result for PKU is 1 of the following newborn screening status codes: • 04 (not suspected) • 07 (not suspected - other disorders follow up) • 08 (suspected)	**Exclusions** Tested babies with • an inconclusive PKU screening result, for example, status code 03 (condition screened for) repeat/further sample required or 02 decline status code • conclusive PKU result recorded on the CHIS after 21 calendar days of notifying CHRD of movement in
Example: eligible babies = **5,000**	Example: Babies for which CCG was responsible at birth and transfer within the same CCG = **4,000**	Example: Tested babies = **967**	Example: • declines (status code 02) = **9** • repeat tests (status code 03) = **18** • babies tested and recorded on CHIS after 21 days of age = **70**
Denominator = 5,000 – 4,000 = **1,000 babies (movers in)**		Numerator = 967 – 97 = **870 babies**	
For this example NB4 = **870 / 1,000 x 100 = 87.0%** Therefore **130 of the total 1,000** babies have not been tested within 21 days of movement in being recorded on the CHIS			