NHS
Quality Improvement Scotland

Clinical Standards ~ *February 2007*

Bowel Screening Programme

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Contents

1 Background on NHS Quality Improvement Scotland

NHS Quality Improvement Scotland (NHS QIS) was set up by the Scottish Parliament in 2003 to take the lead in improving the quality of care and treatment delivered by NHSScotland.

We achieve our objectives through four key functions that link together:

- setting standards
- reviewing and monitoring performance
- providing advice and guidance on effective practice, and
- supporting staff to improve services.

We deliver our commitments to the public and to NHSScotland by following an approach that is:

- **independent** – we reach our own conclusions and report on what we find
- **open and transparent** – we explain what we do, how and why we do it, and what we find, using language and formats that are easy to understand and to access
- **sensitive and professional** – we recognise needs, beliefs and opinions, and respect and encourage diversity.

Our work is:

- **partnership-focused** – we work with patients and the public, NHSScotland and many organisations to improve the quality of care and avoid duplication
- **evidence-based** – we base our conclusions and recommendations on the best evidence available
- **quality-driven** – we make sure our own work is monitored and evaluated, internally and externally.

2 Development of NHS Quality Improvement Scotland standards

Basic principles

A major part of our remit is to develop and run a national system of quality assurance of clinical services. Working in partnership with healthcare professionals and members of the public, we set standards for clinical services, assess performance throughout NHSScotland against these standards, and publish the findings. The standards are based on the patient's journey as he or she moves through different parts of the health service. A wide range of diseases and services have already been addressed, including breast and cervical screening, the provision of safe and effective primary medical services out-of-hours and blood transfusion.

In fulfilling our responsibility to develop and run a system of quality assurance, we take account of the principles set out in Fair for All and Partnership for Care to ensure that 'our health services recognise and respond sensitively to the individual needs, background and circumstances of people's lives'.

We will ensure that consideration of equality and diversity issues feature prominently in the design, development and delivery of all our functions and policies.

The standards are developed in accordance with the commitments of the National Health Service Reform (Scotland) Act (2004) which state that 'individual patients receive the service they need in the way most appropriate to their personal circumstances and all policy and service developments are shown not to disadvantage any of the people they serve.'

Process

For each set of standards we develop, we appoint a group representing a range of stakeholders, including healthcare professionals and members of the public, to:

- oversee the development of, and consultation on, the draft standards and self-assessment framework, and
- recommend an external peer review process.

The way in which standards are developed is a key element of the quality assurance process. Project groups working on our behalf are expected to:

- adopt an open and inclusive process involving members of the public, voluntary organisations and healthcare professionals
- work within NHS QIS policies and procedures, and
- test the measurability of draft standards by undertaking pilot reviews.

The standards are clear and measurable, based on appropriate evidence, and written to take into account other recognised standards and clinical guidelines. The standards are:

- written in simple language and available in a variety of formats
- focused on clinical issues and include non-clinical factors that impact on the quality of care
- developed by healthcare professionals and members of the public, and consulted on widely
- regularly reviewed and revised to make sure they remain relevant and up to date, and
- achievable but stretching.

Format of standards and definition of terminology

All standards set by NHS QIS follow the same format.

- Each standard has a **title**, which summarises the area on which that standard focuses.
- This is followed by the **standard statement**, which explains the level of performance to be achieved.
- The **rationale** section provides the reasons why the standard is considered to be important.
- The standard statement is expanded in the section headed **criteria**, which states exactly what must be achieved for the standard to be reached. Criteria are **essential**, in that it is expected that they will be met wherever a service is provided. Other criteria are **desirable**, in that they are being met in some parts of the service and demonstrate levels of quality, which other providers of a similar service should strive to achieve. The criteria are numbered for the sole reason of making the document easier to work with, particularly for the assessment process. The numbering of the criteria is not a reflection of priority.

Clinical governance and risk management standards

Every patient using healthcare services should expect these to be safe and effective. The NHS QIS standards for clinical governance and risk management will ensure NHS boards can provide assurance that clinical governance and risk management arrangements are in place, and are supporting the delivery of safe, effective, patient-focused care and services.

The clinical governance and risk management standards underpin all care and services delivered by NHSScotland and provide the context within which NHS QIS service and condition-specific standards apply. They should be read in conjunction with all our standards.

The clinical governance and risk management standards were effective from November 2005 and are available on request from NHS QIS or can be downloaded from the website (www.nhshealthquality.org).

Assessment of performance against the standards

The framework for the NHS QIS review process is as follows.

- Once the standards have been finalised, each relevant NHS board/service is asked to undertake a self-assessment of its service against the standards.
- A review team visits the NHS board/service on behalf of NHS QIS to follow-up this self-assessment exercise with an external peer review of performance in relation to the standards.
- NHS QIS reports the findings for the NHS board/service, based on the self-assessment exercise and on the external peer review.

Our processes are subject to internal and external evaluation, to help improve the quality assurance system.

3 An introduction to the bowel screening programme

Screening programmes

A screening programme is a public health service which identifies individuals at sufficient risk of a specific disorder, but who have not sought medical attention on account of symptoms, to enable them to benefit from further investigation or preventative action. Screening tests are offered to help individuals make informed choices about their health and, in the instance of pregnancy and newborn screening, the health of their child. There is an ethical obligation on agencies to ensure that the timely provision of diagnostic and treatment services meets the needs identified through the screening process.

Prior to accepting or declining the offer of a screening test, it is important that individuals receive information about the screening programme in which they have been invited to participate. While some screening tests have the potential to save lives, or improve quality of life by making possible the early diagnosis of a potentially serious condition, they are neither 100% sensitive nor 100% specific.

Screening is a two-stage process. Usually, the first-line test indicates only an increased risk or probability that a particular condition is present. A second, diagnostic test is required for confirmation.

Background to the development of the bowel screening programme

The incidence of bowel cancer is high in Scotland; it is the third most common malignancy experienced by males and females and is second only to lung cancer as a cause of cancer death in the combined male and female population. Updated figures state that 3.8% of males in Scotland develop bowel cancer by the age of 74 and 2.6% of females in Scotland develop bowel cancer by age 74[1].

The review of a series of randomised control trials (RCTs) in England[2], Denmark[3] and the United States[4] and a Cochrane Review[5] demonstrated that faecal occult blood testing (FOBt) resulted in approximately a 16% decrease in deaths from bowel cancer in the research populations.

Following review of the evidence from the three RCTs and other published work, the UK National Screening Committee recommended that screening for bowel cancer should be piloted to assess the feasibility, acceptability and practicality of a national programme. In April 2000 in Scotland, a bowel screening pilot commenced in Fife, Grampian and Tayside NHS board areas with all men and women registered with a GP practice in these three areas and aged between 50-69 years invited to participate.

A report published in 2004 by the UK Colorectal Cancer Screening Pilot Group, provided results of first round key performance indicators (KPIs), which help define and measure progress towards set targets for the screening programme. KPIs are quantifiable measurements of the improvement in performing an activity. These are critical to the success of the bowel screening service.

The KPIs identified by the Scottish Bowel Screening Programme Board and the Information Services Division (ISD Scotland) of NHS National Services Scotland include:

- overall uptake of screening
- the proportion of responders found to be FOBt positive
- the cancer detection rate, and
- the positive predictive value of the screening test for cancer or high risk adenoma.

These examples complement the screening programme's overall standards and relate to its core activities.

KPIs can also be used as performance management and improvement tools by focusing service providers on the achievement of the screening service's goals. Regular KPI monitoring allows the identification and correction of weaknesses in the screening programme, with remedial action being taken when necessary.

The Scottish bowel screening programme overview

In August 2005, the Scottish Executive Health Department (SEHD) announced a new initiative to help tackle bowel cancer, with the roll-out of a national bowel cancer screening programme. The programme will commence in 2007 and will be phased in over a three-year period to all NHS boards , targeting all eligible individuals (male and female) aged between 50–74 years[6] registered with a general practice and inviting them to complete a bowel screening test at home every two years. Other eligible individuals, eg those who are not registered with a GP, people who are homeless, in long stay NHS care, in the armed forces or in prison will also be able to participate following organisational and local agreements.

The national programme will operate from the Scottish Bowel Screening Centre (SBoSC) based in Dundee, consisting of a call-recall office, laboratory and helpline telephone service for individuals. The call-recall system will obtain individuals' information from the Community Health Index (CHI). The SBoSC will issue all invitations and bowel screening test kits for completion at home. All completed kits will be returned to the central laboratory at SBoSC for testing and results of the screening test will be sent directly from the centre to all participants. Instruction and information leaflets are provided for individuals to allow them to make an informed choice about participation in the programme.

Individuals with an overall positive screening test result will be referred to a hospital in their local NHS board area and a pre-colonoscopy assessment will be undertaken by an NHS board-based nurse. Pre-assessment is undertaken to assess an individual's fitness to undergo a colonoscopy examination and provides the opportunity for the provision of advice, reassurance and an explanation of the risks of colonoscopy as well as the benefits. If an individual is fit enough and willing to undergo a colonoscopy, an appointment is made at their local endoscopy unit. Should the colonoscopy be incomplete, the individual is referred for alternative testing. These arrangements may differ in some areas, eg in island NHS board areas.

As with all screening services, the national bowel screening programme will require to quality assure the service provided and must meet the programme's nationally set clinical standards.

As the bowel screening programme will be the responsibility of both the local NHS boards and the SBoSC based in Dundee, the following key highlights responsibility for each criterion.

Key:	
ISD Scotland	**Information Services Division, NHS National Services Scotland**
Local NHS board	**Responsibility of the local NHS board**
SBoSC	**Responsibility of the Scottish Bowel Screening Centre**
Local NHS board/SBoSC	**Joint responsibility of the local NHS board and the Scottish Bowel Screening Centre**

4 Development of the clinical standards for the bowel screening programme

The development of clinical standards for the bowel screening programme is the responsibility of NHS QIS, taking into account advice from the SBoSC and in consultation with NHS organisations. NHS QIS has also developed the quality standards for breast screening, cervical screening and diabetic retinopathy screening programmes.

NHS QIS established a project group to take this work forward, chaired by Professor Bob Steele. The group first met in February 2006 and its full membership can be found in Appendix 1. The group considered a number of topics surrounding the bowel screening programme pathway (see Appendix 5) and from this starting point six key areas for clinical standards were identified*:*

- general
- call-recall
- the screening process
- the laboratory process
- pre-colonoscopy assessment, and
- colonoscopy and histopathology.

Evidence base

During the development of the clinical standards for the bowel screening programme, the project group considered a wide range of evidence, which is fully referenced in Appendix 3. The following documents formed the core evidence reviewed by the project group.

1 Cochrane Review: Screening for colorectal cancer using the faecal occult blood test, Hemoccult[5]

The objective of this review was to determine whether screening for bowel (colorectal) cancer using the FOBt, Hemoccult, reduces bowel cancer mortality, and to consider the benefits and harms of screening. This was established by the systematic review of trials of Hemoccult screening, including meta-analysis of results from RCTs performed in England, Denmark, Sweden and the United States.

Relevance of the Cochrane Review to standards development: Following a review of the evidence, a bowel screening pilot commenced in Fife, Grampian and Tayside NHS board areas. To help tackle bowel cancer, the SEHD subsequently announced a new initiative to roll-out a national bowel screening programme. NHS QIS was tasked with developing clinical standards to meet the quality assurance requirements of the national screening programme.

2 Scottish Executive Health Department Letter: HDL(2006)3[7]

This HDL outlines the plan for the implementation of the bowel screening programme and the roles and responsibilities following roll-out.

It provides information on the support available to NHS boards and the steps which NHS boards need to take to provide investigations and follow-up care for individuals with positive screening test results.

Relevance of HDL(2006)3 to standards development: This document guides NHS boards and clinicians to implement measures necessary for the delivery of a successful bowel screening programme throughout Scotland and ensures the programme quality is delivered and maintained by meeting agreed, national standards.

5 Clinical standards for the bowel screening programme

Standard 1 General

Standard 2 Call-recall

Standard 3 The screening process

Standard 4 The laboratory process

Standard 5 Pre-colonoscopy assessment

Standard 6 Colonoscopy and histopathology

Standard 1: General

Standard Statement 1a

An effective bowel screening service is available and offered to all eligible Scottish residents.

Rationale

There is evidence that effective population-based screening leads to a reduction in mortality from bowel cancer.

References: 2, 3, 4, 5, 8

Essential Criteria

Local NHS board/SBoSC

1a.1 There are clearly defined arrangements for managing the bowel screening service and the lines of accountability within NHS boards.

Local NHS board

1a.2 There is a designated consultant in public health medicine (CPHM) or registered specialist in public health acting as the bowel screening co-ordinator for each NHS board.

1a.3 There is a designated lead clinician for each NHS board.

1a.4 NHS boards collect a minimum bowel screening dataset for all individuals with a positive screening test result and submit it to ISD Scotland within six months of the positive test result.

1a.5 Each NHS board has a multidisciplinary bowel screening co-ordinating group with public involvement that meets at least annually. This group will review local performance data, address quality assurance recommendations and produce a report annually.

ISD Scotland

1a.6 ISD Scotland provide annual key performance indicators nationally and to all individual NHS boards.

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Standard 2: Call-recall

Standard Statement 2a

Effective call-recall arrangements are in place to ensure all eligible individuals are invited for screening once every two years.

Rationale

There is evidence that effective call-recall improves coverage. There is evidence that population-based screening amongst the age range 50–74 years leads to a reduction in mortality from bowel cancer.

References: 2, 3, 4, 5, 8

Essential Criteria

SBoSC

2a.1 At least 95% of eligible individuals are sent their first invitation for screening before their 51st birthday.

2a.2 At least 95% of eligible individuals are recalled for screening within 24 months of their previous invitation for screening.

2a.3 There are arrangements to identify non-responders and offer them a further opportunity to respond within that screening round.

2a.4 For individuals unable to undertake the screening test, there are arrangements to provide an alternative test, on request.

Local NHS board/SBoSC

2a.5 Protocols are in place to ensure that groups of eligible people not accessible through their CHI details are included in the bowel screening programme. These should include people in long-stay NHS care, in the armed forces or in prison.

Standard 2: Call-recall (continued)

Standard Statement 2b

The number of individuals responding to bowel screening is maximised within the principles of informed choice.

Rationale

There is evidence that the mortality rate from bowel cancer can be reduced by a high level of participation in a population-based screening programme.

References: 2, 3, 4, 5, 9, 10

Essential Criteria

Local NHS board

2b.1 Each NHS board has a plan to maximise informed uptake, with particular attention to the local population profile and special groups such as people from deprived communities, ethnic minority groups, gypsy travellers and homeless people.

Local NHS board/SBoSC

2b.2 A minimum of 60% of invited individuals respond to an invitation to participate in the bowel screening programme and complete the screening test.

Desirable Criterion

Local NHS board/SBoSC

2b.3 A minimum of 60% of men **and** 60% of women respond to an invitation to participate in the bowel screening programme and complete the screening test.

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Standard Statement 2c

Failsafe procedures are in place, appropriate to the outcome of the screening episode.

Rationale

Failsafe procedures are important to ensure that individuals receive the follow-up appropriate to the outcome of their screening episode. In particular, it is important to ensure that all individuals with a positive screening test are provided with every opportunity to undergo colonoscopy.

References: 2, 3, 4, 5

Essential Criteria

SBoSC

2c.1 There are failsafe protocols to ensure that all individuals with a negative screening test result are returned to the routine recall system.

2c.2 Individuals can opt out for an indefinite period of time from the call-recall system by signing a disclaimer form which includes information about reinstatement.

Local NHS board/SBoSC

2c.3 There are failsafe protocols to ensure NHS boards receive information on all individuals with a positive screening test result.

Standard 3: The screening process

Standard Statement 3a

The information sent with the screening test kit and the invitation letter gives a full explanation of the screening process, and provides balanced information on the benefits and risks of screening.

Rationale

There is an obligation to provide accurate information about screening tests and diagnostic investigations.

References: 11, 12, 13, 14, 15, 16

Essential Criteria

SBoSC

3a.1 All individuals invited for screening are given standardised information explaining the benefits and risks of screening and the significance of both positive and negative screening test results.

3a.2 All individuals invited for screening are given standardised information explaining how to undertake the screening test and return it to the screening centre.

3a.3 All individuals invited for screening are given standardised information explaining that a colonoscopy may be offered if their screening test result is positive.

Local NHS board/SBoSC

3a.4 Information is made available in different formats appropriate to the needs of the target population.

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Standard Statement 3b

An adequately staffed helpline is available for all individuals receiving an invitation to participate in bowel screening.

Rationale

Evidence from the screening pilot indicates that a number of individuals require verbal clarification or extra information regarding aspects of the screening process.

Reference: 17

Essential Criteria

SBoSC

3b.1 The helpline is staffed continuously between 8.00am and 8.00pm, Monday to Friday, excluding the holidays associated with 25 and 26 December, and 1 and 2 January.

3b.2 There are arrangements for the provision of additional means of communication to the helpline, eg 24-hour answering service, email and Language Line Services.

3b.3 All staff involved with the screening helpline receive relevant communication skills training before undertaking unsupervised work.

3b.4 The time taken to answer calls to the helpline is audited.

Standard 3: The screening process (continued)

Standard Statement 3c

The time between returning the screening test and receiving the result is minimised.

Rationale

There is evidence that waiting for a screening test result can cause anxiety.

Reference: 18

Essential Criteria

SBoSC

3c.1 At least 95% of individuals returning a screening test are sent a result letter within seven days of receipt of the test by the Screening Centre.

3c.2 Individuals receiving a negative screening test result are given accompanying information highlighting the limitations of the screening test. Individuals are advised to be observant of, and report, relevant symptoms to their GP.

3c.3 The letter sent to individuals with a positive screening test result contains standardised information to explain the significance of a positive screening test result in terms of further investigation and possible outcomes.

3c.4 In at least 95% of cases, the local NHS board designated contact is informed of individuals with a positive screening test result within three days of the result being validated in the Screening Centre.

3c.5 In at least 95% of cases, GPs are sent information on individuals with a positive screening test result within seven days of the result being validated in the Screening Centre.

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Standard 4: The laboratory process

Standard Statement 4a

The laboratory providing bowel screening test analyses meets recognised professional standards.

Rationale

There is evidence that laboratories accredited and working to agreed standards achieve the required high level of test accuracy. Accreditation is regarded as a key element in ensuring good clinical governance.

References: 19, 20, 21, 22, 23

Essential Criterion

SBoSC

4a.1 All bowel screening laboratory staff are either in the bowel screening laboratory training programme or have successfully completed one, and undertake appraisal, personal development and, when appropriate, continuing professional development (CPD).

Desirable Criterion

SBoSC

4a.2 The laboratory holds accreditation from Clinical Pathology Accreditation (UK) Ltd to ISO 15189 standards.

Standard 4: The laboratory process (continued)

Standard Statement 4b

The quality of the bowel screening laboratory test analyses is continually assessed and monitored, and there is evidence of internal quality control, external quality assessment and quality assurance.

Rationale

Quality control, assessment and assurance are essential to provide independent assessments of the performance of laboratory test analyses.

References: 19, 20, 21, 22, 23

Essential Criteria

SBoSC

4b.1 Internal quality control procedures are undertaken and documented.

4b.2 The laboratory demonstrates overall satisfactory performance in an accredited independent national external quality assessment scheme (EQAS).

4b.3 The designated quality manager conducts annual vertical audits to ensure continuing conformance with relevant ISO 15189 standards.

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Standard 5: Pre-colonoscopy assessment

Standard Statement 5a

The interval between receiving a positive screening test result and receiving a pre-colonoscopy assessment is minimised.

Rationale

There is evidence that the time interval between receiving a positive screening test result and assessment for colonoscopy can result in significant anxiety.

References: 10, 18

Essential Criteria

Local NHS board

5a.1 The time between the receipt of a positive screening test result by the NHS board and the offered appointment date for pre-colonoscopy assessment is within 14 days for at least 80% of individuals.

5a.2 There are arrangements to identify all individuals who do not participate in pre-colonoscopy assessment and offer them a further opportunity to do so.

Desirable Criterion

Local NHS board

5a.3 The time between the receipt of a positive screening test result by the NHS board and the offered appointment date for pre-colonoscopy assessment is within 14 days for at least 95% of individuals.

Standard 5: Pre-colonoscopy assessment (continued)

Standard Statement 5b

Individuals with a positive screening test result are offered pre-colonoscopy assessment and are given an explanation of why, how and when colonoscopy is undertaken.

Rationale

There is evidence that providing information about tests and investigations reduces anxiety and encourages participation.

Reference: 24

Essential Criteria

Local NHS board

5b.1 All individuals with a positive screening test result are offered a pre-colonoscopy assessment and a full explanation of the process of colonoscopy, the possible risks and the possible outcomes. The opportunity to discuss any concerns is provided at this stage and written information is also given.

5b.2 Pre-colonoscopy assessment is carried out by a healthcare professional who has appropriate skills, knowledge and experience and follows national guidance in identifying those who would be at a higher risk than normal by undergoing colonoscopy.

5b.3 Clear and appropriate patient pathways are followed for individuals with a positive screening test result who do not proceed to colonoscopy.

5b.4 GPs are informed of all individuals with a positive screening test result who do not proceed to colonoscopy.

5b.5 At least 80% of individuals who undergo pre-colonoscopy assessment and are deemed fit for colonoscopy are offered a date at the time of assessment.

Desirable Criterion

Local NHS board

5b.6 At least 95% of individuals who undergo pre-colonoscopy assessment and are deemed fit for colonoscopy are offered a date at the time of assessment.

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Standard 6: Colonoscopy and histopathology

Standard Statement 6a

The time between notification of a positive screening test result and the performance of colonoscopy is minimised.

Rationale

There is evidence that waiting for colonoscopy creates anxiety.

References: 10, 18, 25

Essential Criteria

Local NHS board

6a.1 In at least 95% of cases, the interval between the notification of the positive screening test result to the NHS board and the date offered for colonoscopy is within 31 days.

6a.2 In at least 95% of cases, GPs are notified of the results of colonoscopy within seven days.

Standard 6: Colonoscopy and histopathology (continued)

Standard Statement 6b

Colonoscopy is performed to an appropriate standard.

Rationale

Colonoscopy has the potential to create morbidity and there is a small mortality associated with the procedure. Furthermore, failure to complete colonoscopy may result in significant neoplasia being missed.

References: 26, 27

Essential Criteria

Local NHS board

6b.1 Colonoscopy is carried out by a colonoscopist who has demonstrated at least 90% colonoscopy completion in continuous audit and has undergone a Joint Advisory Group (JAG) approved course.

6b.2 Screening colonoscopy is undertaken in a unit participating in the Global Rating Scale (GRS).

6b.3 There is a system to provide individuals undergoing colonoscopy with an indication of the findings, options and next steps (where appropriate) before being discharged.

Desirable Criterion

Local NHS board

6b.4 Colonoscopy is carried out by a colonoscopist who has undertaken screening colonoscopy accreditation.

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Standard Statement 6c

A completion investigation of the entire large bowel is carried out after incomplete colonoscopy.

Rationale

Failure to complete colonoscopy may result in significant neoplasia being missed.

Reference: 26

Essential Criteria

Local NHS board

6c.1 A date for a barium enema or a computed tomography (CT) colonography is offered within 31 days of an incomplete colonoscopy.

6c.2 The barium enema is performed and reported by a suitably trained consultant radiologist or radiographer.

6c.3 CT colonography is performed by a suitably trained radiologist or radiographer and reported by a consultant radiologist.

6c.4 The reports for at least 80% of radiological examinations are authorised within seven days of the date of the examination.

Desirable Criterion

Local NHS board

6c.5 The barium enema or CT colonography is offered on the same day as the incomplete colonoscopy, with the exception of when a polypectomy has been performed. In this case, a barium enema or CT colonography is not carried out within two weeks of the incomplete colonoscopy.

Standard 6: Colonoscopy and histopathology (continued)

Standard Statement 6d

Histopathology is carried out to an appropriate standard.

Rationale

Subsequent management of individuals with screen-detected neoplasia must be based on accurate histopathology.

References: 26, 28

Essential Criteria

Local NHS board

6d.1 Histopathology reports include a clear indication of the main diagnosis, in accordance with the histopathology information required by ISD.

6d.2 Histopathology reporting is in accordance with guidelines of the Royal College of Pathologists (RCPath) and Scottish Intercollegiate Guidelines Network (SIGN) relating to colorectal pathology, if applicable to the specimen type being reported.

6d.3 The reports for at least 80% of the specimens submitted from colonoscopy are authorised within seven days of receipt of the specimen by the histopathology laboratory.

Desirable Criterion

Local NHS board

6d.4 The histopathology laboratory holds accreditation from Clinical Pathology Accreditation (UK) Ltd to ISO 15189 standards.

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6 Appendices

Appendix 1: Membership of the clinical standards for bowel screening project group

Name	Title	NHS board area/ organisation
Professor Bob Steele (Chair)	Professor of Surgery	NHS Tayside
Dr Margaret Balsitis	Consultant Pathologist	NHS Ayrshire & Arran
Mrs Linda Colford	Bowel Screening Services Manager	NHS Tayside
Dr Paul Cormie	Macmillan Lead GP, Cancer and Palliative Care	NHS Borders
Mr Jim Docherty	Consultant Colorectal Surgeon	NHS Highland
Mr Keith Farrer	Lead Cancer Nurse	NHS Orkney
Professor Callum Fraser	Consultant Clinical Biochemist	NHS Tayside
Dr Margaret Kenicer	Consultant in Public Health Medicine	NHS Tayside
Ms Carole Morton	Project Manager (Bowel Screening)	National Services Division, NHS National Services Scotland (until December 2006)
Dr Kel Palmer	Consultant Gastroenterologist	NHS Lothian
Ms Lorna Renwick	Health Improvement Programme Manager	NHS Health Scotland
Mr Tim Searles	Head of Operations Scotland	Bowel Cancer UK
Mr Ian Swankie	Public Partner	Bowel Cancer UK
Mr Robert Stewart	Public Partner	NHS Ayrshire & Arran
Dr Steven Yule	Consultant Radiologist	NHS Grampian

Support from NHS QIS is provided by the Standards Development Unit: Mrs Anne Coote (Project Administrator), Ms Hilary Davison (Team Manager), Ms Clare Echlin (Senior Project Officer) and Miss Ali McAllister (Project Officer).

NHS QIS would like to thank the following for their input and support during the development of the draft clinical standards for the bowel screening programme:

- Mrs Maureen Atkinson (Colonoscopy Screening Nurse, NHS Fife)
- Mrs Margaret Briggs (Chair, Scottish Practice Nurses Association)
- Ms Shelley Dewar (Nurse Endoscopist, NHS Fife), and
- Ms Heather McIntosh (Health Services Researcher, NHS QIS).

Appendix 2: Key performance indicators

The key performance indicators listed below were developed by the Scottish Bowel Screening Programme Board in association with NHS National Services Scotland.

1 Uptake

- overall
- by deprivation category
- response rate to first invitation
- response rate to reminders

2 Time to colonoscopy

3 Proportion of individuals with a positive screening test undergoing colonoscopy

4 Colonoscopy completion rate

5 Colonoscopy complication rate

- admissions
- perforations
- bleeding
- deaths

6 Positivity rate

7 Cancer detection rate

8 State at diagnosis (including polyp cancers)

9 Adenoma detection rate

- overall
- high risk

10 Positive predictive value

- for cancer
- for adenoma
- for high risk adenoma
- for any neoplasia

Appendix 3: Evidence base

1 Information Services Division (ISD). Colorectal cancer: data analyses and reports [online]. 2006. [cited 2006 Jun 26]; Available from: http://www.isdscotland.org/isd/cancer_definition.jsp?pContentID=1425&p_applic=CCC&p_service=Content.show&.

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Appendix 4: Glossary

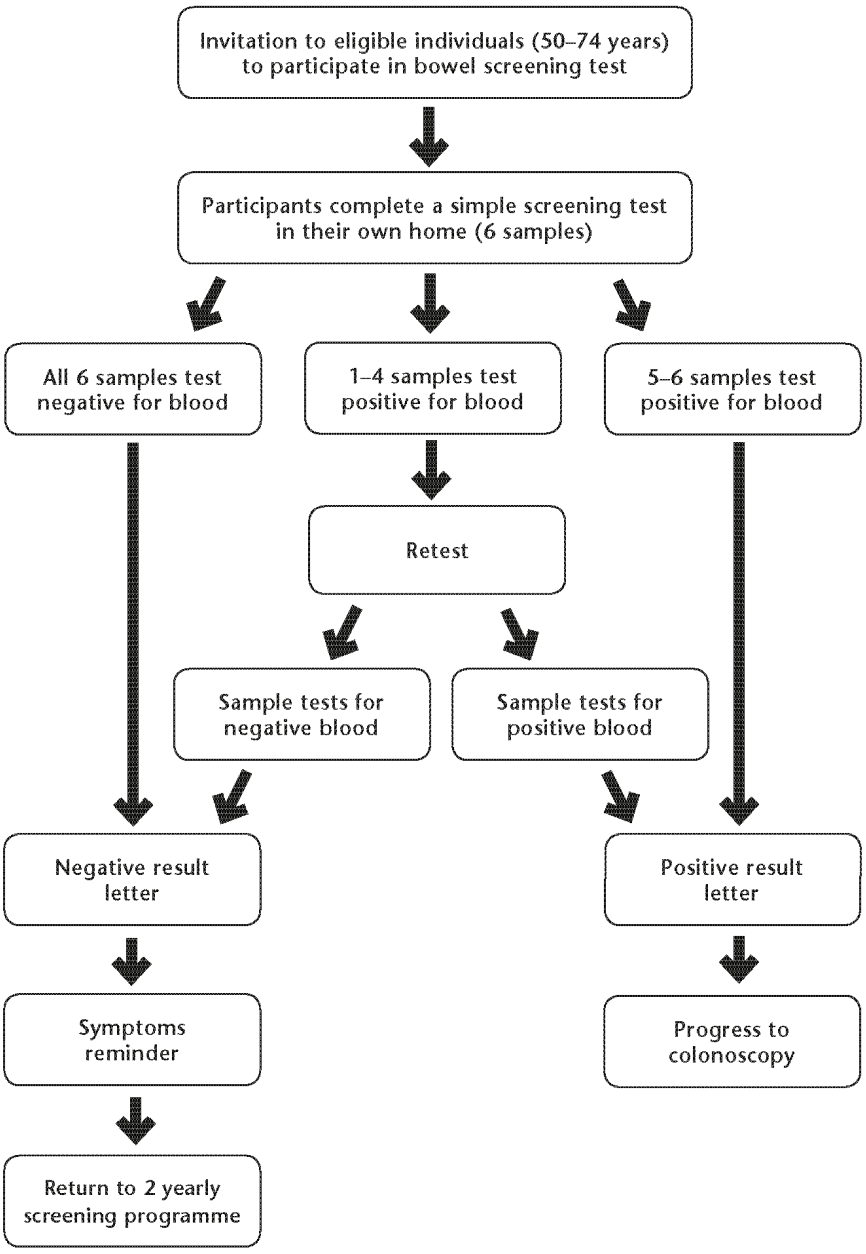
algorithm	A set of agreed or binding routines by which a process can be carried out.
audit	Systematic review of the procedures used for diagnosis, care, treatment, rehabilitation, examining how associated resources are used and investigating the effect care has on the outcome and quality of life for the patient.
barium enema	Technique for examination of the large bowel. The colon is filled with a chalky liquid (barium) and air so that it will show up on an X-ray.
benign	Non-cancerous. This refers to tumours which grow slowly in one place and which, once removed by surgery, tend not to recur. However, some benign tumours, if not removed, may develop into malignant/cancerous ones.
bowel	A tube-like structure running in its upper part from the stomach to the anus. It allows digestion of food and the discharge of waste products.
call	The process used to invite people for a screening test.
cancer	The name given to a group of diseases that can occur in any organ of the body, and in blood, and which involve abnormal or uncontrolled growth of cells.
case review	Re-examination of the diagnosis and management of a person's condition at a defined point in time.
clinical effectiveness	The extent to which specific clinical interventions, when deployed, do what they are intended to do, ie maintain and improve health, securing the greatest possible health gain from the available resources.
clinical governance	Ensures that patients receive the highest quality of care possible, putting each patient at the centre of his or her care. This is achieved by making certain that those providing services work in an environment that supports them and places the safety and quality of care at the top of the organisation's agenda. Management of clinical risk at an organisational level is an important aspect of clinical governance. Clinical risk management recognises that risk can arise at many points in a patient's journey, and that aspects of how organisations are managed can systematically influence the degree of risk.
Clinical Pathology Accreditation (UK) Ltd (CPA)	CPA provides an accreditation process which assesses whether laboratories meet a broad spectrum of pre-defined standards that cover all aspects of the work. Website: www.cpa-uk.co.uk
clinician	A healthcare practitioner who specialises in seeing, diagnosing and/or treating patients.
colon	Part of the bowel system. Also called the large intestine or large bowel. This structure has six major divisions: caecum, ascending colon, transverse colon, descending colon, sigmoid colon and rectum. The colon is responsible for forming, storing and expelling waste matter.
CT colonography	Computed tomography of the abdomen and pelvis that focuses on the colon. Computed tomography is an X-ray imaging technique used in diagnosis that can reveal many soft tissue structures not shown by conventional radiography.
colonoscopy	Examination of the interior of the large bowel using a long, flexible, instrument (a colonoscope) inserted through the anus. A colonoscope is capable of reaching to the upper end of the large bowel (colon) and can be used to diagnose diseases of the large bowel.
community health index (CHI)	A unique identifier for patients within NHSScotland.

complete colonoscopy	Complete examination of the whole of the large bowel confirmed by the identification of the ileocaecal valve (the junction between the small and large bowel).
consultant in public health medicine (CPHM)	A senior doctor who specialises in the health of populations.
desirable criterion/criteria	Good practice that is being achieved in some parts of the service and demonstrates levels of quality to which other providers of a similar service should strive.
eligible	Suitable for bowel screening. Individuals resident in Scotland between the ages of 50 and 74 years inclusive.
essential criterion/criteria	A criterion that should be met wherever a service is provided.
evidence-based practice	Evidence-based practice is an approach to decision-making in which the clinician uses the best evidence available, in consultation with the patient, to decide upon the option which suits that patient best.
faeces	The waste matter eliminated from the body through the anus (other names are stools and motions).
faecal occult blood test (FOBt)	Test to check for any blood that might be hidden (not visible to the human eye) in the faeces. Blood may arise from bleeding anywhere along the digestive tract, from the mouth to the anus.
failsafe	A process that eliminates the possibility of error.
Global Rating Scale (GRS)	A patient-focused self-assessment tool for endoscopy units, developed to improve the quality of care.
Health Department Letter (HDL)	A formal communication from the Scottish Executive Health Department (SEHD) to NHSScotland (previously known as a Management Executive Letter – MEL).
histopathology	The study of the structure of tissues under the microscope in order to assess disease processes.
incidence	The number of new cases of a disease within a defined group of people over a period of time.
ISO 15189 standards	A standard from the International Organization for Standardization (ISO) which specifies requirements for quality and competence particular to medical laboratories. Website: www.iso.org
Joint Advisory Group (JAG)	The principal advisory body for standards and training in endoscopy in the UK.
malignant (tumours)	Tumours which can invade and destroy surrounding tissue and have the capacity to spread to distant organs. A tumour which is the result of such spread is known as a 'secondary' or 'metastatic' deposit.
meta-analysis	Statistical method for the analysis of more than one randomised controlled trial (RCT). It allows for a synthesis of summaries and conclusions and may be used to evaluate therapeutic effectiveness or to plan new studies.
morbidity	A disease or state. The incidence of a particular disease or group of diseases in a given population during a specified period of time.
mortality (rate)	The number of deaths in a given population during a specified period of time.
multidisciplinary co-ordinating group	A group of people from different disciplines (both healthcare and non-healthcare) who work together to provide care for patients with a particular condition. The composition of multidisciplinary groups will vary according to many factors. These may include the specific condition, the scale of the service provided and geographical/socio-economic factors in the local area.

National Services Division (NSD)	The division of NHS National Services Scotland with responsibility for ensuring the provision of national screening programmes and specialist services on behalf of NHSScotland. Website: www.show.scot.nhs.uk/nsd
national standards	Standards defined at a national level.
negative screening test result	A screening result that is less than the specified cut-off level for a 'positive' result. A positive result indicates a need for further tests or treatment.
neoplasia	A condition that is at least in part characterised by the presence of new growths or tumours, which may be benign or malignant.
NHS board	There are 22 NHS boards of two types: 14 territorial boards responsible for healthcare in their areas and eight special health boards which offer supporting services nationally. See NHS board (territorial) and special health board.
NHS board (territorial)	There are 14 territorial boards, the mainland being covered by 11 and the island groups (Orkney, Shetland and the Western Isles) by three. They are responsible and accountable for strategic planning, service delivery, performance management and governance within their local areas. Each NHS board uses the organisational building blocks of NHS direct care, such as community health partnerships or operating divisions, in a way which suits its geography and population. NHS boards work together in regional planning arrangements for those services which require that wider perspective. Website: www.show.scot.nhs.uk/organisations/orgindex.htm
NHS Quality Improvement Scotland (NHS QIS)	NHS QIS was been established (January 2003) to lead in improving the quality of care and treatment delivered by NHSScotland. To do this it sets national standards and monitors performance, and provides NHSScotland with advice, guidance and support on effective clinical practice and service improvements. Website: www.nhshealthquality.org
NHSScotland	The National Health Service in Scotland.
non-attenders	Eligible people who do not attend following an invitation for screening.
peer review	Review of a service by those with expertise and experience in that service, either as a provider, user or carer, but who are not involved in its provision in the area under review. In the NHS QIS approach, all members of a review team are equal.
polyp	A growth, usually benign, which protrudes from the lining of the bowel causing a lump or bump.
polypectomy	The removal of a polyp during colonoscopy.
population-based screening	An investigation available to all eligible, apparently healthy people. The aim is to identify a disease or abnormality which may be treated, cured or prevented, before symptoms appear.
positive predictive value	The proportion of people with a positive (screening) test who actually have the disease.
positive screening test result	A screening result that is above the threshold that has been specified to detect a high proportion of individuals at risk. A positive result indicates a need for further tests or treatment.
primary care	The conventional first point of contact between a patient and the NHS. This is the component of care delivered to patients outside hospitals and is typically, though by no means exclusively, delivered through general practices. Primary care services are the most frequently used of all services provided by the NHS. Primary care encompasses a range of family health services, which includes services provided by GPs, dentists, pharmacists, optometrists and ophthalmic medical practitioners.
process	A series of actions that produce a change or development.

protocol	A set of operational instructions to regulate activity. Protocols may be national, or agreed locally to take into account local requirements.
public partner	A member of the general public who is included in a professional group.
randomised control trial (RCT)	Seeks to measure and compare the outcomes of two or more clinical interventions. One intervention is regarded as the standard of comparison or control. Random allocation means that all participants have the same chance of being assigned to each of the study groups.
recall	The part of a screening system whereby a person is recalled for a repeat screen or an assessment appointment. This includes routine recall and early recall.
referral	The process by which a patient is transferred from one professional to another, usually for specialist advice and/or treatment.
Scottish Bowel Screening Centre (SBoSC)	Incorporating the call/recall office, a helpline facility and a central laboratory for the implementation of the bowel screening programme.
Scottish Bowel Screening Programme (SBoSP)	A programme of screening to help tackle bowel cancer, targeting all eligible individuals (male and female) aged between 50-74 years. Website: www.nsd.scot.nhs.uk/services/bowelcancer
Scottish Executive Health Department (SEHD)	The Scottish Executive Health Department is responsible for health policy and the administration of NHSScotland. Website: www.show.scot.nhs.uk/sehd
screening	A public health service offered to groups of the population to identify risk of a particular disorder or disease. This, therefore, involves examination of people with no symptoms, to detect unsuspected disease.
screening colonoscopy accreditation	Screening colonoscopy accreditation involves a process based on initial self-assessment and subsequent peer-review for both public accountability and improvement of quality.
screening episode	A cycle of a person's screening events.
sensitivity	The ability of a test to detect a disease. A test with a sensitivity of 90% will give a positive result in 9 out of 10 people who have the disease.
specificity	The ability of a test to exclude people who do not have disease. A test with a specificity of 90% will give a negative result (ie a correct result) in 9 out of 10 people who do not have the disease.
standard statement	An agreed statement of required performance.
tumour	An abnormal mass of tissue. A tumour may be either benign (not cancerous) or malignant.
uptake	The act of accepting or taking up something on offer or available.
vertical audit	Involves randomly selecting a sample or request and following an audit trail to ensure that all procedures are in place to carry out the sample analysis and to determine compliance with the relevant standards.

Appendix 5: The bowel screening pathway



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