Scottish Cancer Taskforce
National Cancer Quality Steering Group

Mesothelioma
Clinical Quality Performance Indicators

Engagement Document
December 2018

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1. National Cancer Quality Programme

Better Cancer: Ambition and Action (2016)[1] details a commitment to delivering the national cancer quality programme across NHSScotland, with a recognised need for national cancer QPIs to support a culture of continuous quality improvement. Addressing variation in the quality of cancer services is pivotal to delivering improvements in quality of care. This is best achieved if there is consensus and clear indicators for what good cancer care looks like.

Small sets of cancer specific outcome focussed, evidence based indicators are in place for 18 different tumour types. These are underpinned by patient experience QPIs that are applicable to all, irrespective of tumour type. These QPIs ensure that activity is focused on those areas that are most important in terms of improving survival and individual care experience whilst reducing variation and supporting the most effective and efficient delivery of care for people with cancer. QPIs are kept under regular review and are responsive to changes in clinical practice and emerging evidence.

A programme to review and update the QPIs in line with evolving evidence is in place as well as a robust mechanism by which additional QPIs will be developed over the coming years.

1.1 Quality Assurance and Continuous Quality Improvement

The ultimate aim of the programme is to develop a framework and foster a culture of continuous quality improvement, whereby real time data is reviewed regularly at an individual Multi Disciplinary Team (MDT)/Unit level and findings actioned to deliver continual improvements in the quality of cancer care. This will be underpinned and supported by a programme of regional and national comparative reporting and review.

NHS Boards are required to report against QPIs as part of a mandatory, publicly reported, programme at a national level. A rolling programme of reporting is in place, with approximately three national tumour specific reports published annually. National reports include comparative reporting of performance against QPIs at MDT/Unit level across NHS Scotland, trend analysis and survival. This approach helps overcome existing issues relating to the reporting of small volumes in any one year.

In the intervening years tumour specific QPIs are monitored on an annual basis through established Regional Cancer Network and local governance processes, with analysed data submitted to Information Services Division (ISD) for inclusion in subsequent national reports. This approach ensures that timely action is taken in response to any issues that may be identified through comparative reporting and systematic review.

2. Quality Performance Indicator (QPI) Development Process

The QPI development process was designed to ensure that indicators are developed in an open, transparent and timely way.

The Mesothelioma QPI Development Group was convened on 14th May 2018, chaired by Dr Hilary Dobson (Deputy Director, Innovative Healthcare Delivery Programme). Membership of this group includes clinical representatives drawn from the three regional cancer networks and patient/carer representatives. Membership of the development group can be found in appendix 1.

2.1 Preparatory Work and Scoping

In March 2018 The British Thoracic Society published the 'Guideline for the Investigation and Management of MPM'[2]. This along with an abstract summary published in the British Medical Journal informed the basis of the evidence on which the QPIs were developed.

2.2 Indicator Development

The indicator development phase of the project allowed the development group to create evidence based, measurable indicators with a clear focus on what could actually make a real difference to quality of care.

Draft QPIs were then assessed by the Mesothelioma QPI Development Group against three criteria:

- **Overall importance** – does the indicator address an area of clinical importance that would significantly impact on the quality and outcome of care delivered?
- **Evidence based** – is the indicator based on high quality clinical evidence?
- **Measurability** – is the indicator measurable i.e. are there explicit requirements for data measurement and are the required data items accessible and available for collection?

A final short-list of QPIs was then agreed (see section 3), which were felt to address all of these criteria.

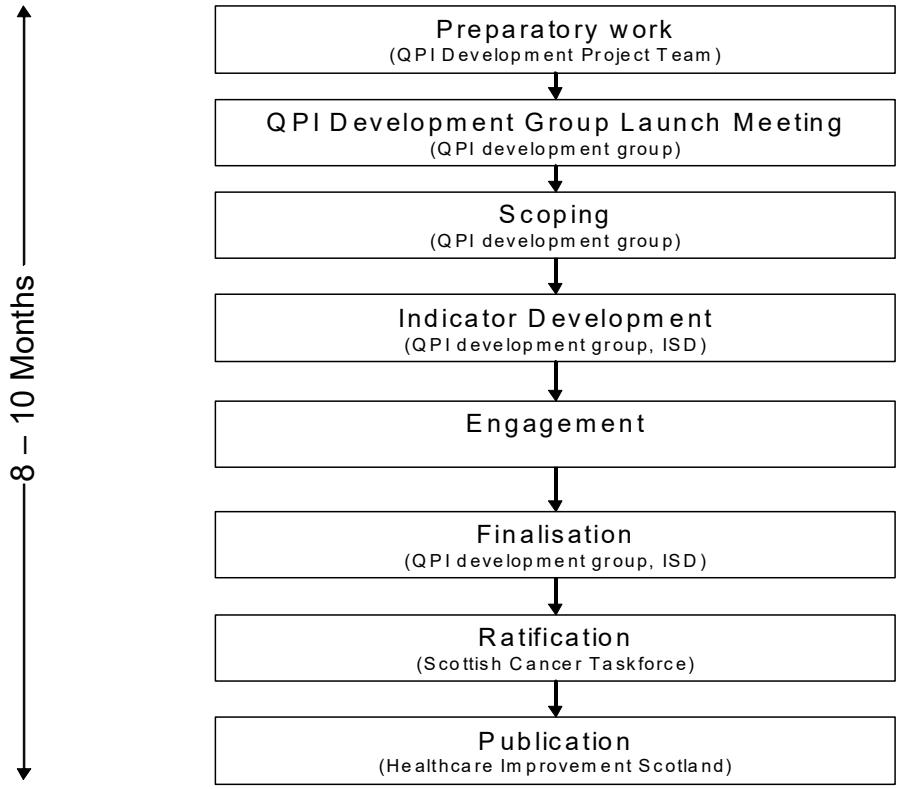

Figure 1: QPI Development Process

2.3 Format of the Quality Performance Indicators

QPIs are designed to be clear and measurable, based on sound clinical evidence whilst also taking into account other recognised standards and guidelines.

- Each QPI has a **short title** which will be utilised in reports as well as a fuller **description** which explains exactly what the indicator is measuring.

- This is followed by a brief overview of the **evidence base and rationale** which explains why the development of this indicator was important.

- The measurability **specifications** are then detailed; these highlight how the indicator will actually be measured in practice to allow for comparison across NHS Scotland.

- Finally a **target** is indicated, this dictates the level which each unit should be aiming to achieve against each indicator.

In order to ensure that the chosen target levels are the most appropriate and drive continuous quality improvement as intended they are kept under review and revised as necessary, if further evidence or data becomes available.

Rather than utilising multiple exclusions, a tolerance level has been built into the QPIs. It is very difficult to accurately measure patient choice, co-morbidities and patient fitness therefore target levels have been set to account for these factors. Further detail is noted within QPIs where there are other factors which influenced the target level.

Where 'less than' (<) target levels have been set the rationale has been detailed within the relevant QPI. All other target levels should be interpreted as 'greater than' (>) levels.

3. Supporting Documentation

A national minimum core dataset and a measurability specification document have been developed in parallel with the indicators to support the monitoring and reporting of Mesothelioma QPIs. The document will be implemented for patients diagnosed with Mesothelioma on, or after, 1st January 2019.

4. Quality Performance Indicators for Mesothelioma

QPI 1 – Diagnostic: Imaging

QPI Title:	Post-contrast thoracic computed tomography (CT) scan optimised for pleural assessment should be undertaken as standard for diagnosis and staging in patients with mesothelioma.
Description:	Proportion of patients with mesothelioma in whom post-contrast thoracic CT scan optimised for pleural assessment (between 60 and 90 seconds) was carried out as the initial, standard diagnostic imaging evaluation, with report of this available at time of multidisciplinary team (MDT) review and formal staging.
Rationale/Evidence:	Overall reported diagnostic accuracy of CT scan in the detection of pleural malignancy in 60%-97%, with specificity of 79%-89%. BTS Guidelines for Investigation and Management of Malignant Pleural Mesothelioma: Section 5[3,4,5,6, 7].
Specifications:	**Numerator:** The number of patients with mesothelioma in whom post-contrast CT scan optimised for pleural assessment was carried out, and report available at the time of MDT discussion. **Denominator:** All patients with mesothelioma. **Exclusions:** • Patients who refuse investigation.
Target:	90% The tolerance within this target is to account for those patients with significant renal impairment (e.g. eGFR <30) or allergies to iodinated contrast.

QPI 2 – Diagnostic: Histopathology

QPI Title:	Patients should have a histopathological diagnosis of Mesothelioma.
Description:	Proportion of patients who have a histopathological diagnosis of mesothelioma. **Please note:** This QPI measures 3 distinct elements: i) Patients with mesothelioma who have a histopathological diagnosis. ii) Patients with a histopathological diagnosis of mesothelioma who have a subtype identified. iii) Patients with a histopathological diagnosis of epithilioid mesothelioma who have IHC markers profiling* undertaken.
Rationale/Evidence:	A definitive histological diagnosis of mesothelioma is valuable in helping inform patients and carers about the nature of the disease and the likely prognosis and to facilitate compensation claims. Tissue should be obtained by thoracoscopy or CT guided biopsy. Cytology should not be relied upon in isolation for the diagnosis of mesothelioma[8, 9]. Histological subtyping on biopsy material is important because non-epithelioid histology is associated with a significantly shorter overall survival[10,11]. Also, the entry into some clinical trials is dependent on presence or absence of subtypes. Mesothelioma may mimic other tumours including adenocarcinoma and sarcoma. Immunohistochemistry is the most important ancillary technique in differentiating these tumours. A panel of antibodies to include at least 2 mesothelioma markers and 2 adenocarcinoma markers increases diagnostic accuracy[12].
Specification (i):	**Numerator:** The number of patients who have a histopathological diagnosis of mesothelioma. **Denominator:** All patients with mesothelioma. **Exclusions:** • Patients who refuse investigations.
Target:	95% The tolerance within this target is to account for patients in whom pursuit of tissue is not clinically safe or appropriate.

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Specification (ii):	**Numerator:**	The number of patients with a histopathological diagnosis of mesothelioma who have a subtype identified.
	Denominator:	All patients with a histopathological diagnosis of mesothelioma.
	Exclusions:	• No exclusions.
Target:	95% The tolerance level within this target is designed to account for situations where there is insufficient tissue to perform additional testing.	
Specification (iii):	**Numerator:**	The number of patients with a histopathological diagnosis of epithelioid mesothelioma who have an appropriate immuno-histochemical panel* undertaken on the biopsy.
	Denominator:	All patients with a histopathological diagnosis of epithelioid mesothelioma.
	Exclusions:	• No exclusions.
Target:	95% The tolerance level within this target is designed to account for situations where there is insufficient tissue to perform additional testing.	

***** Please note - details of the immuno-histochemical panel undertaken that are currently measured within this QPI are outlined within the associated measurability document.

QPI 3 – Multidisciplinary Team

QPI Title:	Patients should be discussed by a multidisciplinary team (MDT) prior to definitive management plan.	
Description:	Proportion of patients with mesothelioma who are discussed at the national mesothelioma MDT meeting before definitive management plan.	
Rationale and Evidence:	Evidence suggests that patients with cancer managed by a multi-disciplinary team have a better outcome. There is also evidence that the multidisciplinary management of patients increases their overall satisfaction with their care[13]. Discussion prior to definitive management plan and treatment decisions being made provides reassurance that patients are being managed appropriately.	
Specifications:	**Numerator:**	The number of patients with mesothelioma discussed at the national mesothelioma MDT before definitive management plan.
	Denominator:	All patients with mesothelioma.
	Exclusions:	• Patients who died within 7 days of confirmed diagnosis date.
Target:	90% The tolerance within this target is designed to account for situations where patients require treatment urgently.	

QPI 4 – Systemic Anti Cancer Treatment

QPI Title:	Patients with good performance status should receive first line treatment with Systemic Anti Cancer Treatment (SACT).
Description:	Proportion of patients with mesothelioma and performance status (PS) 0 -1 who receive first line treatment with SACT using platinum and pemetrexed.
Rationale/Evidence:	For patients with mesothelioma and good PS, first-line chemotherapy with cisplatin and pemetrexed leads to longer survival than cisplatin alone[14]. Where cisplatin is contraindicated, or has adverse risk, offer carboplatin in combination with pemetrexed[15]. Second line pemetrexed does not improve survival in patients previously treated with first-line chemotherapy regimens that did not include pemetrexed[16].
Specification:	**Numerator:** Patients with a diagnosis of mesothelioma and PS 0-1 who receive first line SACT with platinum and pemetrexed. **Denominator:** All patients with a diagnosis of mesothelioma and PS 0 -1. **Exclusions:** • Patients who decline treatment. • Patients receiving treatment as part of a clinical trial.
Target:	60% The tolerance within this target accounts for situations where patients may defer treatment with SACT until a later date, or where patients with PS 0 -1 may not be suitable for treatment with SACT due to co-morbidities.

QPI 5 – Radiotherapy for Management of Pain

QPI Title:	Appropriate use of radiotherapy in patients with mesothelioma.
Description:	Proportion of patients with Mesothelioma who have uncontrolled pain (as documented at MDT) who are referred for consideration of palliative radiotherapy for symptom control.
Rationale/Evidence:	Radiotherapy should not be offered as a prophylactic, preoperative or post operative treatment modality. Use should be restricted to control of mesothelioma symptoms and pain patients with poor prognostic signs. Localised radiotherapy can improve pain control in mesothelioma, although the effect is variable and is short lived[17,18,19,20,21,22]. Radiation dose fractionation utilised in studies of localised radiotherapy for pain control in mesothelioma are variable. The optimal dose is not known (SYSTEMS2).
Specification(i):	**Numerator:** Number of patients with Mesothelioma who have uncontrolled pain who are referred for consideration of palliative radiotherapy. **Denominator:** All patients with mesothelioma who have uncontrolled pain documented at MDT. **Exclusions:** • Patients who decline treatment. • Patients receiving treatment as part of a clinical trial. • Patients undergoing cordotomy.
Target:	75%

QPI 6 – Pleural Fluid Management

QPI Title:	Patients with mesothelioma, who have symptomatic pleural effusion who are offered a choice between talc pleurodesis or indwelling pleural catheter (IPC) to manage fluid.
Description:	Proportion of patients with mesothelioma with symptomatic pleural effusion who undergo either talc pleurodesis (via slurry or poudrage) or indwelling pleural catheter (IPC) insertion to manage fluid.
Rationale/Evidence:	No single fluid control technique has been shown to be superior in terms of patients' symptoms or pleurodesis success in mesothelioma. However, it is important that patients are able to be offered both techniques and given the choice on fluid management. As patient choice is difficult to measure the type of fluid management procedure undertaken is utilised within this QPI as a proxy measure. Although this will not provide an absolute measure of patient choice of procedure it will give an indication of practice across NHS Boards. VATS-PP has been shown to be more expensive, associated with greater complications and longer hospital stay than talc slurry pleurodesis[23]. IPC and talc slurry pleurodesis have similar patient-related outcomes in malignant pleural effusion and mesothelioma[24].
Specifications:	**Numerator:** Number of patients with mesothelioma who have symptomatic pleural effusion who undergo either talc pleurodesis (via slurry or poudrage) or indwelling pleural catheter (IPC) insertion to manage fluid. **Denominator:** All patients with mesothelioma who have symptomatic pleural effusion. **Exclusions:** • Patients with limited survival expectancy (< 1 month). • Patients with trapped lung. • Patients who refuse to undergo procedure.
Target:	90% The tolerance level within this target is designed to account for the fact that due to co-morbidities and fitness not all patients may be suitable for a procedure.

Please note: Additional information on the type of procedure used to manage pleural fluid (talc pleurodesis or IPC) will be reported across NHS Boards alongside this QPI. This information should be reviewed to ensure there is sufficient choice between these options for patients.

QPI 7 – Clinical Trial and Research Study Access

QPI Title:	All patients with mesothelioma should be considered for participation in available clinical trials / research studies, wherever eligible.
Description:	Proportion of patients diagnosed with mesothelioma who are consented[a] for a clinical trial / research study.
Rationale and Evidence:	Clinical trials are necessary to demonstrate the efficacy of new therapies and other interventions[25]. Evidence suggests improved patient outcomes when hospitals are actively recruiting patients into clinical trials[26]. Clinicians are therefore encouraged to enter patients into well-designed trials and to collect longer-term follow-up data. High accrual activity into clinical trials is used as a goal of an exemplary clinical research site. The measurement of this QPI focuses on those patients who have consented in order to reflect the intent to join a clinical trial and demonstrate the commitment to recruit patients. Often patients can be prevented from enrolling within a trial due to stratification of studies and precise inclusion criteria identified during the screening process. Whereas there is strong evidence against some forms of surgical treatment, there is lack of unequivocal evidence in favour of others[2]. British Thoracic Society guidelines currently recommend surgery (with radical or palliative/debulking intent) in the form and in the setting of approved Clinical Trials only[2]. It is therefore important that all eligible patients with good prognosis and good performance status are offered the option of entering the available surgical trials.
Specifications (i):	**Numerator:** Number of patients diagnosed with mesothelioma consented for a clinical trial / research study. **Denominator:** All patients diagnosed with mesothelioma. **Exclusions:** • No exclusions.
Target:	15%

(continued overleaf)

[a] Consented is defined as patients who have given consent to participate in a clinical trial / research study subject to study specific screening for eligibility.

Specifications (ii):	**Numerator:**	Number of patients diagnosed with mesothelioma consented for a surgical clinical trial / research study.
	Denominator:	All patients diagnosed with mesothelioma consented to a clinical trial / research study.
	Exclusions:	• No exclusions.
Target:	15%	

QPI 8 – Post-Mortem Examination

QPI Title:	Patients with a diagnosis of Mesothelioma should only undergo post-mortem examination where clinically required and in the absence of pathological evidence of diagnosis.
Description:	Proportion of patients with a diagnosis of mesothelioma who undergo post-mortem examination.
Rationale/Evidence:	Since 2014, the Procurator Fiscal and Chief Medical Officer have agreed procedures to reduce distress to the family. Reduction in the number of inappropriate post-mortem examinations carried out will prevent the families of patients being exposed to additional stress following a patients' death[27]. Post mortem examination is used to determine diagnosis of mesothelioma for the legal reasons and civil compensation claims. Where a patient has pathological evidence of Mesothelioma this provides a conclusive diagnosis, removing the requirement for post- mortem examination.
Specifications:	**Numerator:** Number of patients with a diagnosis of mesothelioma who undergo post- mortem examination. **Denominator:** All patients with a diagnosis of mesothelioma. **Exclusions:** Patients who have post mortem examination for reason unrelated to Mesothelioma.
Target:	<10% The tolerance within this target accounts for patients who do not receive confirmation of histological diagnosis of Mesothelioma following post mortem.

5. Survival

Improving survival forms an integral part of the national cancer quality improvement programme. Mesothelioma survival analysis will be reported on a 3-yearly basis by Information Services Division (ISD). The specific issues which will be addressed, for example 1 year or 5 year survival rates, will be identified by an expert group ahead of any analysis being undertaken, as per the agreed national cancer quality governance and improvement framework.

To ensure consistent application of survival analysis, it has been agreed that a single analyst on behalf of all three regional cancer networks undertakes this work. Survival analysis will be scheduled as per the national survival analysis and reporting timetable, agreed with the National Cancer Quality Steering Group and Scottish Cancer Taskforce. This reflects the requirement for record linkage and the more technical requirements of survival analyses which would make it difficult for individual Boards to undertake routinely and in a nationally consistent manner.

6. Areas for Future Consideration

The Mesothelioma QPI Development Group was not able to identify sufficient evidence, or determine appropriate measurability specifications, to address all areas felt to be of key importance in the treatment of Mesothelioma and therefore in improving the quality of care for patients affected by both types of cancer.

The following area for future consideration has been raised across the lifetime of the Mesothelioma QPI Development Group:

- Palliative Management of Mesothelioma Patients.

7. Governance and Scrutiny

A national and regional governance framework to assure the quality of cancer services in NHSScotland has been developed; key roles and responsibilities within this are set out below. Appendices 5 and 6 provide an overview of these governance arrangements diagrammatically. The importance of ensuring robust local governance processes are in place is recognised and it is essential that NHS Boards ensure that cancer clinical audit is fully embedded within established processes.

7.1 National

- Scottish Cancer Taskforce
    - Accountable for overall national cancer quality programme and overseeing the quality of cancer care across NHSScotland.
    - Advising Scottish Government Health and Social Care Directorate (SGHSCD) if escalation required.

- Healthcare Improvement Scotland
    - Proportionate scrutiny of performance.
    - Support performance improvement.
    - Quality assurance: ensure robust action plans are in place and being progressed via regions/Boards to address any issues identified.

- Information Services Division (ISD)
    - Publish national comparative report on tumour specific QPIs and survival for three tumour types per annum and specified generic QPIs as part of the rolling programme of reporting.

7.2 Regional – Regional Cancer Networks

- Annual regional comparative analysis and reporting against tumour specific QPIs.
- Support national comparative reporting of specified generic QPIs.
- Identify and share good practice.
- In conjunction with constituent NHS Boards identify regional and local actions required to develop an action plan to address regional issues identified.
- Review and monitoring of progress against agreed actions.
- Provide assurance to NHS Board Chief Executive Officers and Scottish Cancer Taskforce that any issues identified have been adequately and timeously progressed.

7.3 Local – NHS Boards

- Collect and submit data for regional comparative analysis and reporting in line with agreed measurability and reporting schedule (generic and tumour specific QPIs).
- Utilise local governance structures to review performance, develop local action plans and monitor delivery.
- Demonstrate continual improvements in quality of care through on-going review, analysis and feedback of clinical audit data at an individual multidisciplinary team (MDT) or unit level.

8. How to Participate in the Engagement Process

In order to ensure wide inclusiveness of clinical and management colleagues from across NHSScotland, patients affected by Mesothelioma and the wider public, several different methods of engagement are being pursued:

Professional groups, health service staff, voluntary organisations and individuals:

- Wide circulation of the draft documentation for comment and feedback.

8.1 Submitting your Comments

You can submit your comments on the Mesothelioma QPIs, via the Scottish Government Consultation Hub (website link below):

https://consult.scotland.gov.uk/west-of-scotland-cancer-network/mesothelioma-qpi

All responses should be submitted by **Friday 8th February 2019.**

If you require any further information regarding the engagement process please use the email address below.

Email: MesotheliomaQPIPublicEngagement@gov.scot

8.2 Engagement Feedback

At the end of the engagement period, all comments and responses will be collated for review by the Mesothelioma QPI Development Group. Those who have participated in the engagement process will receive an overview of the changes made and a copy of the final Mesothelioma QPI document.

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10. Appendices

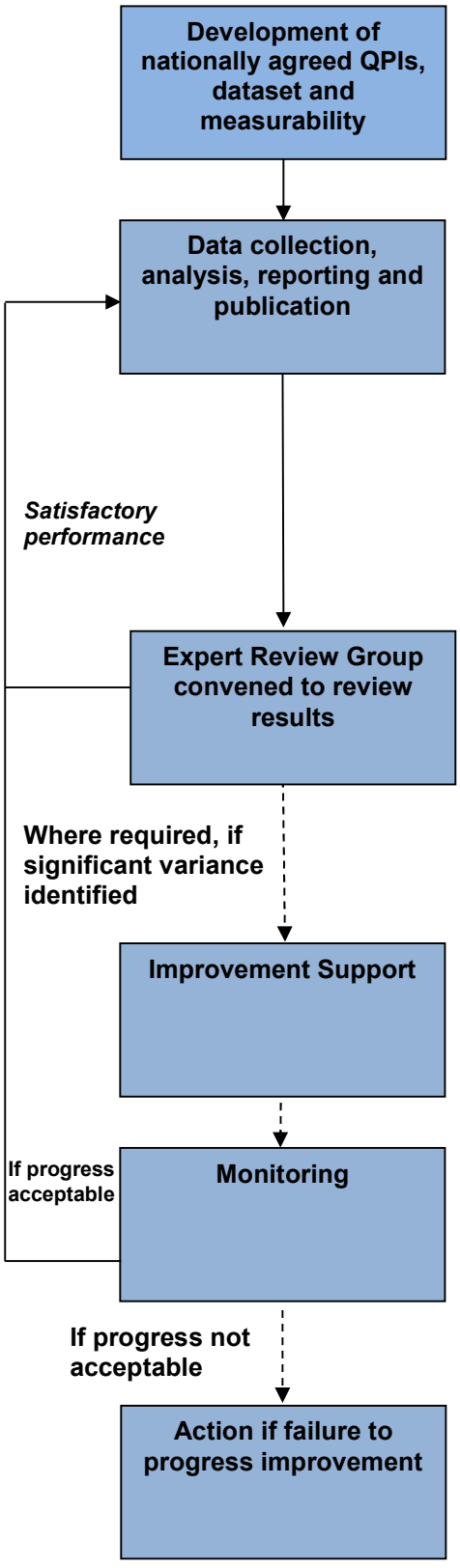
Appendix 1 - Mesothelioma QPI Development Group Membership (2018)

Name	Designation	Cancer Network/Base
Hilary Dobson	Deputy Director, Innovative Healthcare Delivery Programme	National
Andrew Baird	Consultant Radiologist	SCAN / NHS Lothian
Rocco Bilancia	Consultant Thoracic Surgeon	WoSCAN / Golden Jubilee National Hospital
Kevin Blyth	Respiratory Physician	WoSCAN / NHS Greater Glasgow and Clyde
Diana Borthwick	Lung Clinical Nurse Specialist	SCAN / NHS Lothian
Jo Bowden	Consultant in Palliative Medicine	SCAN / NHS Fife
Fiona Carnochan	Associate Specialist in Thoracic Surgery	SCAN / NHS Lothian
Mahendran Chetty	Consultant Respiratory Physician	NOSCAN / NHS Grampian
Tracy Cole	MCN Manager	WoSCAN
Gordon Cowell	Consultant Radiologist	WoSCAN / NHS Greater Glasgow and Clyde
Craig Dick	Consultant Pathologist	WoSCAN / NHS Greater Glasgow and Clyde
Kirsty Docherty	Clinical Nurse Specialist	WoSCAN / NHS Greater Glasgow and Clyde
Emma Dymond	Consultant in Palliative Medicine	WoSCAN / NHS Greater Glasgow and Clyde
Angela Elliott	Lay Representative	
Carrie Featherstone	Consultant Clinical Oncologist	WoSCAN / Beatson West of Scotland Cancer Centre
Lucy Heycock	Lung MacMillan Advanced Nurse	NOSCAN / NHS Highland
Alan Kirk	Consultant Thoracic Surgeon	WoSCAN / Golden Jubilee National Hospital
Andrew Leitch	Consultant Respiratory Physician	Scan / NHS Lothian
Carol MacGregor	Consultant Clinical Oncologist	NOSCAN / NHS Highland
Melanie Mackean	Consultant Medical Oncologist	Scan / NHS Lothian
Julie Mencnarowski	Lung Clinical Nurse Specialist	Scan / NHS Lothian
Laura McNaughton	Clinical Nurse Specialist	WoSCAN / NHS Greater Glasgow and Clyde
Noelle O'Rourke	Consultant Clinical Oncologist	WoSCAN / NHS Greater Glasgow and Clyde

Name	Designation	Cancer Network/Base
Tracy Petrie	Lung Clinical Nurse Specialist	NOSCAN / NHS Grampian
Phil Reid	Consultant Respiratory Physician	Scan / NHS Lothian
Fiona Roberts	Consultant Pathologist	WoSCAN / NHS Greater Glasgow and Clyde
Julie Roberts	Lay Representative	
Phil Short	Consultant Respiratory Physician	NOSCAN / NHS Tayside
Alan Simms	Consultant Radiologist	SCAN / NHS Lothian
Donald Slater	Consultant Pathologist	SCAN / NHS Lothian
Lorraine Stirling	Project Officer	National Cancer Quality Programme
Selina Tsim	Respiratory Physician	WoSCAN / NHS Greater Glasgow and Clyde
Vipin Zamvar	Consultant Cardiothoracic Surgeon	SCAN / NHS Lothian

Appendix 2: 3 Yearly National Governance Process and Improvement Framework for Cancer Care

This process is underpinned by the annual regional reporting and governance framework (see appendix 6).



1. National QPI Development Stage

- QPIs developed by QPI development groups, which include representation from Regional Cancer Networks, Healthcare Improvement Scotland, ISD, patient representatives and the Cancer Coalition.

2. Data Analysis Stage:

- NHS Boards and Regional Cancer Advisory Groups (RCAGs)* collect data and analyse on yearly basis using nationally agreed measurability criteria and produce action plans to address areas of variance, see appendix 6.
- Submit yearly reports to ISD for collation and publication every 3 years.
- National comparative report approved by NHS Boards and RCAGs.
- ISD produce comparative, publicly available, national report consisting of trend analysis of 3 years data and survival analysis.

3. Expert Review Group Stage (for 3 tumour types per year):

- Expert group, hosted by Healthcare Improvement Scotland, review comparative national results.
- Write to RCAGs highlighting areas of good practice and variances.
- Where required NHS Boards requested to submit improvement plans for any outstanding unresolved issues with timescales for improvement to expert group.
- Improvement plans ratified by expert group and Scottish Cancer Taskforce.

4. Improvement Support Stage:

- Where required Healthcare Improvement Scotland provide expertise on improvement methodologies and support.

5. Monitoring Stage:

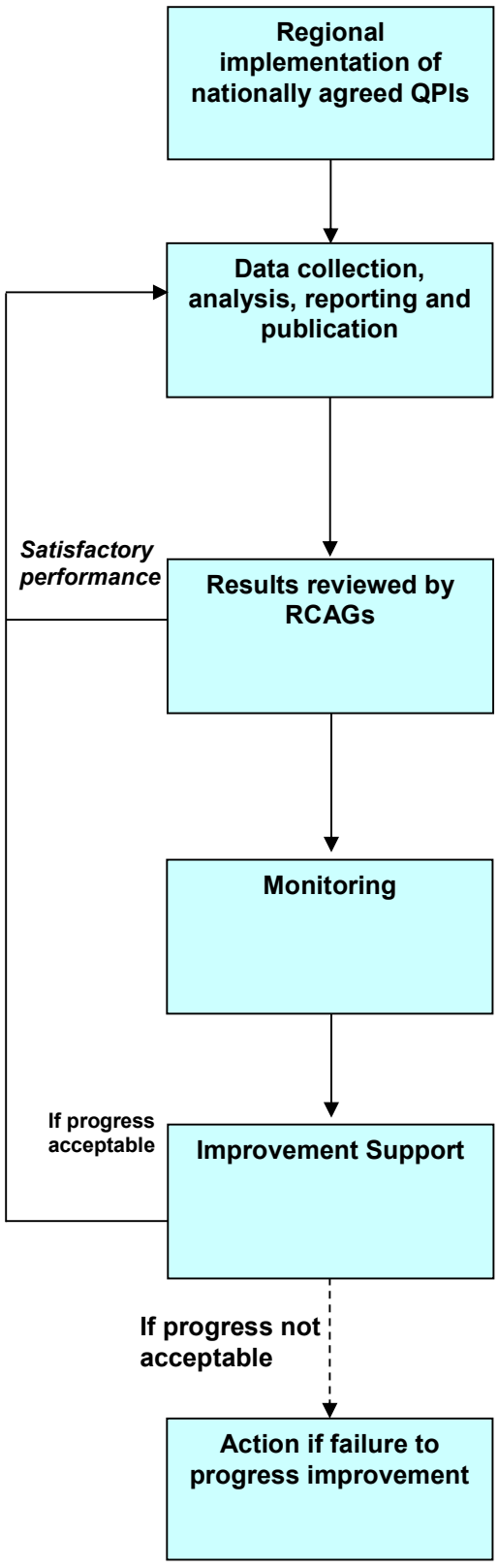
- RCAGs work with Boards to progress outstanding actions, monitor improvement plans and submit progress report to Healthcare Improvement Scotland.
- Healthcare Improvement Scotland report to Scottish Cancer Taskforce as to whether progress is acceptable.

6. Escalation Stage:

- If progress not acceptable, Healthcare Improvement Scotland will visit the service concerned and work with the RCAG and Board to address issues.
- Report submitted to Scottish Cancer Taskforce and escalation with a proposal to take forward to Scottish Government Health Department.

*In the South and East of Scotland Cancer Network (SCAN) the Regional Cancer Planning Group is the equivalent group to Regional Cancer Advisory Group (RCAG).

Appendix 3: Regional Annual Governance Process and Improvement Framework for Cancer Care



1. Regional QPI Implementation Stage:

- National cancer QPIs and associated national minimum core dataset and measurability specifications, developed by QPI development groups.
- Regional implementation of nationally agreed dataset to enable reporting of QPIs.

2. Data Analysis Stage:

- NHS Boards collect data and data is analysed on a yearly basis using nationally agreed measurability criteria at local/ regional level.
- Data/results validated by Boards and annual regional comparative report produced by Regional Networks.
- Areas of best practice and variance across the region highlighted.
- Yearly regional reports submitted to ISD for collation and presentation in national report every 3 years.

3. Regional Performance Review Stage:

- RCAGs* review regional comparative report.
- Regional or local NHS Board action plans to address areas of variance developed.
- Appropriate leads identified to progress each action.
- Action plans ratified by RCAGs.

4. Monitoring Stage:

- Where required, NHS Boards monitor progress with action plans and submit progress reports to RCAGs.
- RCAGs review and monitor regional improvement.

5. Improvement Support Stage:

- Where required Healthcare Improvement Scotland maybe requested to provide expertise to NHS Boards/RCAGs on improvement methodologies and support.

6. Escalation Stage:

- If progress not acceptable, RCAGs will escalate any issues to relevant Board Chief Executives. If progress remains unacceptable RCAGs will escalate any relevant issues to Healthcare Improvement Scotland.

*In the South and East of Scotland Cancer Network (SCAN) the Regional Cancer Planning Group is the equivalent group to Regional Cancer Advisory Group (RCAG).

Appendix 4 – Glossary of Terms

Adenocarcinoma	Cancer that begins in cells that line certain internal organs and that have gland-like (secretary) properties.
Biopsy	Removal of a sample of tissue from the body to assist in diagnosis of a disease.
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.
Chemotherapy	The use of drugs that kill cancer cells, or prevent or slow their growth.
Clinical trials	A type of research study that tests how well new medical approaches or medicines work. These studies test new methods of screening, prevention, diagnosis, or treatment of a disease.
Co-morbidities	The presence of one or more additional disorders or diseases.
Computed Tomography (CT)	An x-ray imaging technique, which allows detailed investigation of the internal organ of the body.
Contraindication/ Contraindicated	A symptom or medical condition that makes a particular treatment or procedure inadvisable because a person is likely to have a bad reaction.
Cytology	The study of the structure and function of cells under the microscope.
Diagnosis/Diagnosed	The process of identifying a disease, such as cancer, from its signs and symptoms.
First-line/Primary treatment	Initial treatment used to reduce or treat a cancer.
Glomerular Filtration Rate (GFR)/eGFR	Glomerular filtration rate (GFR) is a measure of the function of the kidneys. This test measures the level of creatinine in the blood and uses the result in a formula to calculate a number that reflects how well the kidneys are functioning, called the estimated GFR or eGFR.
Histological/ Histopathogical/Histology	The study of the structure, composition and function of tissues under the microscope, and their abnormalities.
Immunohistochemistry (IHC)	A process used to diagnose some types of cancer including mesothelioma. It is a lab test that uses antibodies to test for certain antigens (markers) in a sample of tissue.
IHC Panel	The specification of which markers should be undertaken or examined.
Indwelling Pleural Catheter (IPC)	An indwelling pleural catheter is a soft, flexible tube that runs under your skin to the area next to your lungs. One end of the tube stays outside your body.
Malignant	Cancerous. Malignant cells can invade and destroy nearby tissue and spread to other parts of the body.
Mesothelioma	A type of cancer that develops from the thin layer of tissue that covers many of the internal organs (known as the mesothelium). The most common area affected is the lining of the lungs and chest wall.

Multi-disciplinary team meeting (MDT)	A meeting which is held on a regular basis, which is made up of participants from various disciplines appropriate to the disease area, where diagnosis, management, and appropriate treatment of patients is discussed and decided.
Palliative	Anything which serves to alleviate symptoms due to the underlying cancer but is not expected to cure it.
Pathological	The study of disease processes with the aim of understanding their nature and causes. This is achieved by observing samples of fluid and tissues obtained from the living patient by various methods, or at post mortem.
Pathologist	A doctor who identifies diseases by studying cells and tissues under a microscope.
Performance Status	Performance status is a measure of a cancer patients' general well-being and activities of daily life. This measure is used to determine whether they can receive treatment or whether changes to treatments are necessary.
Platinum-based chemotherapy	Chemotherapy drugs that contain derivatives of the metal platinum.
Pleural Effusion	Pleural effusion, is the build-up of excess fluid between the layers of the pleura outside the lungs.
Pleurodesis	Pleurodesis is a procedure that is carried out to treat recurrent collapsed lungs or fluid build up between the lung and chest wall lining.
Post- Mortem Examination	A post-mortem examination, also known as an autopsy, is the examination of a body after death. The aim of a post-mortem is to determine the cause of death. Post-mortems are carried out by pathologists.
Radiotherapy	Radiotherapy is a treatment where radiation is used to kill cancer cells. There are many different ways you can have radiotherapy, but they all work in a similar way. They damage cancer cells and stop them from growing or spreading in the body. Radiotherapy can also be used as a treatment to relieve bone pain caused by cancer that has spread into the bone.
Second-line treatment	Treatment that is given when initial treatment (first-line or primary treatment) doesn't work, or stops working.
Staging	Process of describing to what degree cancer has spread from its original site to another part of the body. Staging involves clinical, surgical and pathology assessments.
Surgery/Surgical resection	Surgical removal of the tumour/lesion.
Survival	The percentage of people in a study or treatment group who are alive for a certain period of time after they were diagnosed with or treated for a disease, such as cancer.
Systemic Anti-Cancer Therapy (SACT)	Treatment of cancer using drugs which prevent the replication or growth of cancer cells. This encompasses biological therapies and cytotoxic chemotherapy.

Talc Pleurodesis	Talc pleurodesis is a specific form of chemical pleurodesis. As compared to indwelling pleural catheter placement, talc pleurodesis has been shown to be equally effective in relieving shortness of breath.
Video Assisted Thorascopic Surgery - Partial Pleurectomy (VATS-PP)	Video-assisted thoracoscopic surgery is a type of thoracic surgery performed using a small video camera that is introduced into the patient's chest via small incisions. The surgeon is able to view the instruments that are being used along with the anatomy on which the surgeon is operating. Partial pleurectomy is a surgical procedure that is done to remove part of the pleura, the linings that surround the lungs.