NHS
The Information Centre
for health and social care

National Head and Neck Cancer Audit

Key findings for England and Wales for the audit period October 2007 to November 2008

DAHNO fourth annual report

Prepared in partnership with:

HQIP
Healthcare Quality Improvement Partnership

British Association of Head and Neck Oncologists

National Head and Neck Cancer Audit

Key findings for England and Wales for the audit period October 2007 to November 2008

This fourth report for the National Head and Neck Cancer Audit presents data collected on new registrations from 1 November 2007 to 31 October 2008 and treatment data up to 23 November 2008. The report reflects findings form the analysis of that data, and provides recommendations for improving data quality and completeness. The National Head and Neck Cancer Audit aims to improve both the volume and quality of data submissions, and from this, provide comparative feedback to NHS Provided Trusts, with the ultimate aim of improving patient care.

This year the annual report is only available in electronic format, but is accompanied by a brief printed summary report which will be widely disseminated.

An in depth more detailed reference report is also available electronically from the website below, configured for those interested in cumulative data, extended analysis and more extensive references.

Electronic copies of both these versions of this report can be found at www.ic/nhs.uk/canceraudits.

For further information about this report, email: enquiries@ic.nhs.uk or contact:

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Acknowledgements

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The project wishes to acknowledge the following who have supported the audit project and provided guidance during the data collection period October 31 2007 to November 1 2008 and during the compilation of this report [for full details of group membership please refer to reference report]

The National Head and Neck Cancer Audit project team chaired by Richard Wight and Graham Putnam, with project management from Julie Michalowski and Graeme Aldington

Simon Hodder Chair of the all Wales Head and Neck Cancer Advisory Groupand Martin Harris at Informing Healthcare for their contribution from Wales to the audit.

The following groups have supported the audit, including; the Expert Panels; the Data Management and Analysis Group; the Head and Neck Clinical Reference Group.

Analysis was undertaken by the cancer registries and thanks must be given to Sandra Edwards from the Oxford Cancer Intelligence Unit, Ceri White from the Welsh Cancer Intelligence and Surveillance Unit, Jason Poole and Neil Shepard from Trent Cancer Registry and Arthur Yelland from NCASP

Finally, thanks go to organisations that have participated in the audit so far and for the individual contributions of clinicians, managers and administrative staff without whose efforts the audit would not exist. Thank you also to all those patients whose data is contributing towards bringing about improvements in provision of care and outcomes for all similarly afflicted by head and neck cancer.

Foreword

Improving quality of care is at the heart of both the Cancer Reform Strategy and the Next Stage Review, which is entitled 'High Quality Care for All'. Both of these strategies emphasise the importance of data collection, analysis and publication as a driver for quality improvement.

I welcome this fourth report of the National Head and Neck Cancer Audit, as a significant element of this drive for quality improvement. Some of the contents are very encouraging, others are less so.

I am delighted that the scope of the audit has been broadened to include cancer of the pharynx and major salivary glands as well as larynx and oral cavity. This has led to a total of over 4000 cases being reported in the most recent year, an increase of 90%. However, case ascertainment is still not as good as it should be, with 64% of estimated incident cases being recorded. It is clearly possible to achieve high levels of reporting as several cancer networks are reporting at least 95% of estimated cases. Others need to do better!

A similar picture is observed with regard to recording of staging. Overall this was reported for 73% of all cases. However, several networks achieved 85% or more of cases being staged. Recording of performance stage (just over half of cases) and comorbidity (less than a quarter of cases) should also be improved, as these are essential to meaningful analyses of treatment and outcomes. On a positive note it is encouraging to learn that over 90% of patients are now being discussed by multidisciplinary teams and that a very large proportion have a care plan.

The audit is now at a stage of development where interesting analyses can start to be made. For example there is now sufficient information on stage and deprivation to demonstrate clearly that for patients with laryngeal and oral cavity cancers late stage is commoner in deprived groups. In contrast, no significant difference in stage at diagnosis by quintile of deprivation was observed in patients with pharyngeal cancers.

Professor Mike Richards CBE
National Cancer Director

The National Head and Neck Cancer Audit has yet again produced a lot of data that needs to be looked at carefully with in context. This year Wales has achieved a high proportion of cases entered of predicted cases but not complete data entries. We need to progress to having complete data events for the patients entered so comparisons for out come and treatment can be made. I would ask all Clinicians and local planners involved with Head and Neck cancer to not just read the paper form but go on line and view the complete data obtained.

Mr Simon Hodder
Chair of the all Wales Head and Neck Cancer Advisory Group

The fourth Annual Report, examines data submitted from November 2007 until October 2008. Milestones achieved are over 4000 cases submitted this year with collection in new sites of pharynx and major salivary gland, and a cumulative 7700 cases of larynx and oral cavity cancer since the audit inception in 2004. All networks are now actively submitting data across England and Wales

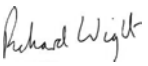
The aim remains to achieve comprehensive and consistent data collection producing meaningful results that act as a vehicle to improve delivery of care to patients with head and neck cancer. The benefits section sets out some of the achievements so far. A more detailed on line reference report is available for the first time (www.ic.nhs.uk/canceraudits) to compliment the printed version.

Success is dependent on contributions made by individual clinicians and their support staff across the country. This report represents their continuing labours, facilitated and supported by NHS Provider Trusts and Cancer Networks.

This audit benefits from the knowledge and commitment of the National Clinical Audit Support Programme (NCASP) team, and support of the Healthcare Quality Improvement Partnership.

For patients, the fourth report has again, sections with trust identifiable information, which it is hoped would be used for assurance that head and neck cancer care is being delivered to a defined standard.

Further pieces of the multi-professional aspects of head and neck cancer care have been revealed, and as comprehensive submissions continue to rise, a more complete picture of head and neck cancer care will emerge. This report brings that goal ever closer.



Richard Wight FRCS
Consultant Head and Neck Surgeon
National Head and Neck Cancer Audit Project Chair

Graham Putnam FRCS
Consultant Head and Neck Surgeon
National Head and Neck Cancer Audit Project
Vice Chair

1 Executive summary with participating trusts and non participating list

The fourth Annual Report on the management of head and neck cancer in England and Wales includes a brief background to head and neck cancer (section 2) and a description of the infrastructure, methods and analysis used within the audit (sections 3,4 and 7). Improvements and benefits from the audit and detailed recommendations are in sections 5 and 6. Detailed findings in section 8 cover outcomes, in section 9 multi-professional care and in section 11 for the first time information on rarer tumours in nasopharynx and major salivary gland. Initial work on risk adjustment can be found in section 10.

The fourth Annual Report again includes a wide variety of outcomes provided in a trust identifiable format and for the first time examines care provided in cancer of the pharynx and major salivary gland as well as more detailed aspects of multi-professional care.

Throughout the document significant points for consideration are shown in shaded green boxes, whilst practical examples of methods that improve data collection and collation can be found in the Good Practice Example boxes. A more comprehensive reference report is available at www.ic.nhs.uk/canceraudits

Submission by Provider Trust/Cancer Network is found in section 8.3.

1.1 What is DAHNO?

DAHNO (**D**ata for **H**ead and **N**eck **O**ncology), provides a continuous electronic comparative audit on management of head and neck cancer. It is supported by professional bodies and funded by the Healthcare Quality Improvement Partnership.

The disease burden of head and neck cancer is significant. Patients require intensive multi-modality treatments and rehabilitation with long-term support to achieve an adequate recovery.

The core issues addressed in the first and second phases of the National Head and Neck Cancer Audit are:

- **Delivery of appropriate primary treatment (including adjuvant therapy) in management of head and neck cancer affecting the larynx, oral cavity, pharynx and major salivary glands by a multi-professional team, and delivery of care to agreed standards.**
- **In larynx and oral cavity cancer to assess in more detail, the care provided by specialist nurses, dieticians and speech and language therapists (in particular related to surgical voice restoration).**

1.2 What DAHNO adds to existing information

To confirm the quality of care delivered, anonymised data on individual patients needs to be collected and analysed. The Head and Neck Cancer Audit continuously collects data at each patient service contact, and this record is continually updated. Clinical aspects of staging and other casemix factors can be more easily collected.

In the fourth annual report the following findings are reported in Trust identifiable format:

- Participation
- Number of new larynx, oral cavity, hypopharynx, oropharynx, nasopharynx and major salivary gland cancer primaries
- Percentage of those cases submitted with T and N category recorded
- Interval from biopsy to reporting
- Percentage of cases discussed at MDT
- Interval from diagnosis to MDT.

1.3 Where head and neck cancer care happens – submission rates

1.3.1 Contributing Cancer networks in England and Wales

The fourth annual report covers the period 1 November 2007 to 31 October 2008.

Nearly all English Cancer Networks and all three Welsh Cancer Networks have submitted patient records, and the fourth annual report describes results for over 4,000 patient records – a 90 per cent increase. Fifteen Cancer Networks have managed to achieve high levels of registration with in excess of 90 per cent of the expected case numbers recorded.

1.3.2 Overview of case ascertainment and data quality

A continued improvement in case ascertainment has occurred with 64 per cent of estimated incident cases being recorded. In England 3671 of 5910 estimated

cases (62 per cent) were submitted and in Wales 367 of an estimated 390 cases (94 per cent). The Welsh Networks are to be congratulated on their improved level of case ascertainment.

Whilst the improved case ascertainment is welcomed, **executive teams in organisations yet to contribute should ensure prioritisation of the National Head and Neck Cancer Audit in their audit programmes.** Participation in this audit is part of the Healthcare Commission's Annual Health check.

An overview of this year's submission demonstrates a broader submission of information through the patient's journey. A consideration of the number of care plans obtained by cancer site demonstrates a high level of recording, with between 81 and 91 per cent of cases having a care plan record. A comparison of those with care plans and those patient records with treatment plan recorded shows that 78 per cent of patients with a care plan have a subsequent treatment record, equating to 68 per cent of all registrations.

Complete and comprehensive submission provides a vehicle for assurance to trust boards and patient groups of the quality of care delivered in head and neck cancer.

1.4 Key overall findings

1.4.1 The pivotal role of the multi disciplinary (MDT) meeting

Patient expectations and Improving Outcomes Guidance (IOG) are that all care discussions are made at a MDT, and head and neck cancer teams need to provide assurance to Trust boards on this aspect of care delivery.

Overall 92 per cent of patients were confirmed as having been discussed at an MDT meeting. This is a significant improvement from 74.2 per cent last year. The expected standard suggested is this should reach 100 per cent. The not recorded category has reduced significantly from 20 per cent to 1 per cent.

However these results still show a further increase in the number of patients to 7 per cent this year recorded as not discussed at MDT, whose management has been planned outside of an MDT. (5.8 per cent last year, 3.8 per cent 06 – 07), In larynx, oral cavity and oropharynx where there are large numbers of cases, it remains of concern that this number of patients has been identified as not having undergone this key discussion.

1.4.2 Multi-professional care in head and neck cancer

Pre-treatment speech and swallowing and dietetic assessment recording has improved but still only for a small percentage of registrations and is likely to reflect poor data quality. Whilst the expert panel members believe that this is not a true reflection of current practice, they are aware of nationwide shortages in clinical nurse specialists and allied health professional roles to support cancer MDTs. Patient representatives feel it is imperative that these professionals are available to all patients with head and neck cancer from the point of diagnosis to enhance patient care.

Phase II of the National Head and Neck Cancer Audit has extended sections on surgical voice restoration, dietetic and clinical nurse specialist care provision. It is hoped that active involvement of all health professionals who care for head and neck cancer patients will be encouraged by MDTs to provide a comprehensive record of the multi-professional care provided.

1.5 Who receives the care?

4038 cases of head and neck cancer were submitted.

1.5.1 The patient journey – Is care getting more timely?

Again from this years analysis general dental practitioners do not appear to be embracing the two week rule referrals pathway in some networks and in others are not actively involved in the referral process. Variability is also noted from general medical practitioners. Networks need to examine local urgent referral pathways and their effective usage.

The median time from biopsy to its reporting has improved, with a 10 per cent reduction of cases reported have an interval greater than 10 days. **This is shown by provider trust and confirms there remains both a delay in a small number of organisations and a variation within providers.** To improve the patient pathway process mapping may identify areas where delays in the whole pathway could be reduced (from taking of a biopsy, through to its reporting). Manpower issues within pathology and in particularly head and neck pathology remain.

A reduction has occurred in the median interval from surgical resection to reporting on resective specimens to for larynx (6 days) and oral cavity (7 days).This reflects considerable effort by pathology colleagues to accelerate patients' pathways. In all sites more than 90 per cent of patients were reported within 20 days, which is again encouraging.

A smaller number of patients show delays in diagnostic imaging, which is an improvement from the first report. **Local teams should assess the timeliness of imaging and seek to reduce delay if applicable.**

It is encouraging the median interval from referral to start of first definitive treatment in England, has fallen to less than 62 days for all larynx, oral cavity, oropharynx and hypopharynx patients, but considerable work remains to achieve this standard for all patients. Booked care and clearly defined patient pathways are key factors to minimise delay.

1.5.2 Evidence of improvement/assurance in quality of care (increasing the proportion of patients who receive appropriate specialist opinion and treatment)

61 per cent of patients with a care plan have chest imaging recorded. This output reflects best practice (due to the recognised incidence of second primary lung cancers), chest imaging should occur prior to a cancer careplan in all patients. The level of completeness has improved for this item, but assurance is only provided for less than two thirds of all patients in the annual report. MDTs should be strongly encouraged to collect this information.

Of 2062 patients (across all anatomic head and neck subsites) with the date of first treatment recorded the median time from diagnosis to surgery was 28 days whilst to teletherapy as a primary treatment the median was 42 days. **The interval to commencing radiotherapy has slightly improved but still suggests that head and neck cancer patients continue to have difficulty in accessing radiotherapy services.** Little change is noted in the interval from surgery to post operative radiotherapy. Provider organisations for radiotherapy should review patient pathways, as well as the resource committed to head and neck cancer, with the aim of avoiding unnecessary delays.

Dietetic support is important through all parts of the patient pathway, particularly in those undergoing any form of treatment where the morbidity of the treatment can be reduced by appropriate intervention. 19 per cent of 2758 cases with a treatment had a recorded dietetic input, and over two thirds of these had assessment prior to any treatment. Recording of this item has improved but further work is needed in this area.

Of the 2398 patients with larynx and oral cavity 25 per cent were recorded as having been referred to a Clinical Nurse Specialist, which is 28 per cent of those with a care plan record. It would be expected ultimately this would be all patients.

1.6 Recommendations

The fourth analysis has again demonstrated variability in record completeness between different organisations and between individual records. High levels of submission and completeness of records are required to gain the most value from the audit. NHS Provider Trusts and Cancer Networks should facilitate data collection through the MDT by providing resources, training and direction.

Trusts, MDTs and site specific groups should review the recommendations below and develop action plans using the updated action planning tool for any deficiencies.

Trusts, MDTs and Networks should as a priority:

- **With the stimulus of the fourth Annual Report, reflect on where variation in access identified in trust identifiable data has occurred, compare with other access information and examine cancer pathways and their components that underpin these to improve timely pathways for all patients**
- **Following receipt of the local trust report, each trust should develop an action plan based on the findings in the fourth local report, particularly noting any areas of continuing weak performance compared to previous years reports**
- **Ensure that tumour staging (TNM) is confirmed and recorded prior to care planning and following surgical procedures**

- **Facilitate meeting patient expectations that all care discussions are being made at a MDT, and teams need to give assurance of this important aspect of care delivery.**

- **All Cancer Networks and constituent Provider Trusts not achieving high levels or any level of case submission should develop an action plan that reviews their processes and supports submission of data. Best practice supporting data collection can be found at: www.ic.nhs.uk/canceraudits.**

- **Record factors including performance status and co-morbidity that contribute to future risk adjustment to enable true stage comparison of outcomes.**

- **Ensure that Provider trusts uploading information via CSV should commence preparation of CSV requirements for the fifth Annual Report as well as attending future workshops.**

Full details of all recommendations from the report can be found in section 6.2. This should be used by organisations when formulating local action plans.

1.7 Key Aspects: November 2008 – October 2009

- **Head and neck cancer audit should continue to be a priority for trusts and networks in 2009-2011, to promote clinical governance and provide assurance to patients and carers of the services provided**

- **In response to the fourth Annual Report each network should oversee an annual review of case ascertainment in contributing trusts and the completeness of submission of key items required for risk adjustment, as well as recording of care delivered along the whole patient pathway from referral to status following treatment**

- **Each trust should facilitate non medical personnel to contribute to the audit process in head and neck cancer, and ensure that adequate support to achieve this is available.**

1.8 Future direction of the National Head and Neck Cancer Audit and links to the National Cancer Intelligence Network (NCIN) agenda

The National Head and Neck Cancer Audit is working closely with the evolving National Cancer Intelligence Network (NCIN) Head and Neck Site Specific Clinical Reference Group, with common membership across a number of groups.

1.9 Good Practice

This year it has been possible to capture good practice happening across England and Wales. Key factors influencing improvements in case ascertainment and data quality.

- A committed clinical team who understand the benefits and requirements of the audit.

- Close working between clinical and administrative staff in a supporting environment.

- Dedicated administrative staff to capture data and provide data quality checks.

- Close working relationships with the information and IT departments to maximise the use of technology in data capture and validation.

- Systems and processes to check (ideally by clinicians) data to be entered into DAHNO.

Whilst there is still room for improvement in terms of data completeness, levels of case ascertainment and data quality have improved significantly for a number of performance measures to be shown at trust level and have been incorporated into this report. This report has included a number of examples of good practice case studies of how organisations have achieved good results which may be useful for others.

1.10 Summary report

A summary report is in preparation and will be printed and distributed in July 2009. Its focus is for a wider audience beyond the professional head and neck community. It will be available on line at: www.ic.nhs.uk/canceraudits.

Figure 1.11 Participating Trusts

KEY

Good Data Completeness
Poor Data Completeness
Not participating in 2007-2008 audit period

In the data quality calculation [for full details of data quality score derivation please refer to reference report] **an allowance is made for diagnostic only centres in comparison to diagnostic and treatment centres.**

3 Counties Cancer Network
Gloucestershire Hospitals NHS Foundation Trust
Hereford Hospitals NHS Trust
Worcestershire Acute Hospitals NHS Trust
Anglia Cancer Network
Bedford Hospital NHS Trust
Cambridge University Hospitals NHS Foundation Trust
Hinchingbrooke Healthcare NHS Trust
Ipswich Hospital NHS Trust
James Paget Healthcare NHS Foundation Trust
Norfolk and Norwich University Hospital NHS Trust
Peterborough and Stamford Hospitals NHS Foundation Trust
The Queen Elizabeth Hospital King's Lynn NHS Trust
West Suffolk Hospitals NHS Trust
Arden Cancer Network
University Hospitals Coventry and Warwickshire NHS Trust
South Warwickshire General Hospitals NHS Trust
George Eliot Hospital NHS Trust
Avon, Somerset and Wiltshire Cancer Network
North Bristol NHS Trust
Royal United Hospital Bath NHS Trust
Taunton and Somerset NHS Foundation Trust
University Hospitals Bristol Foundation Trust
Yeovil District Hospital NHS Foundation Trust
Weston Area Health NHS Trust
Central South Coast Cancer Network
Basingstoke and North Hampshire NHS Foundation Trust
Portsmouth Hospitals NHS Trust
Southampton University Hospitals NHS Trust
The Royal West Sussex NHS Trust
Isle Of Wight Healthcare Trust
Winchester and Eastleigh Healthcare NHS Trust
Salisbury NHS Foundation Trust

Derby Burton Cancer Network
Burton Hospitals NHS Foundation Trust
Derby Hospitals NHS Foundation Trust
Dorset Cancer Network
Poole Hospital NHS Foundation Trust
Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust
Dorset County Hospitals NHS Foundation Trust
Essex Cancer Network
Basildon and Thurrock University Hospitals NHS Foundation Trust
Colchester Hospital University NHS Foundation Trust
Mid Essex Hospital Services NHS Trust
Southend Hospital NHS Trust
Greater Manchester and Cheshire Cancer Network
Central Manchester and Manchester Children's University Hospitals NHS Trust
East Cheshire NHS Trust
Salford Royal NHS Foundation Trust
Stockport NHS Foundation Trust
Tameside and Glossop Acute Services NHS Trust
Pennine Acute Hospitals NHS Trust
University Hospitals of South Manchester NHS Foundation Trust
Wrightington, Wigan and Leigh NHS Trust
The Mid Cheshire Hospitals NHS Trust
Royal Bolton Hospital NHS Foundation Trust
Trafford Healthcare NHS Trust
The Christie Hospital NHS Foundation Trust
Greater Midlands Cancer Network
Mid Staffordshire General Hospitals NHS Trust
The Royal Wolverhampton Hospitals NHS Trust
Shrewsbury and Telford Hospital NHS Trust
Dudley Group of Hospitals NHS Trust
University Hospital of North Staffordshire NHS Trust
Worcestershire Acute Hospitals NHS Trust
Humber and Yorkshire Coast Cancer Network
Hull and East Yorkshire Hospitals NHS Trust
Northern Lincolnshire and Goole Hospitals NHS Foundation Trust
Scarborough and North East Yorkshire Healthcare NHS Trust
Kent and Medway Cancer Network
East Kent Hospitals NHS Trust
Dartford and Gravesham NHS Trust
Maidstone and Tunbridge Wells NHS Trust
Medway NHS Trust
Queen Victoria Hospital NHS Foundation Trust

Lancashire and South Cumbria Cancer Network
Blackpool, Fylde and Wyre Hospitals NHS Foundation Trust
East Lancashire Hospitals NHS Trust
Lancashire Teaching Hospitals NHS Foundation Trust
University Hospitals of Morecambe Bay NHS Trust
Leicestershire Northamptonshire and Rutland Cancer Network
Kettering General Hospital NHS Trust
Northampton General Hospital NHS Trust
University Hospitals of Leicester NHS Trust
Merseyside and Cheshire Cancer Network
Aintree University Hospitals NHS Foundation Trust
Clatterbridge Centre for Oncology NHS Foundation Trust
Countess of Chester Hospital NHS Foundation Trust
Royal Liverpool and Broadgreen University Hospitals NHS Trust
Southport and Ormskirk Hospital NHS Trust
Warrington and Halton Hospitals NHS Trust
Wirral University Teaching Hospital NHS Foundation Trust
St Helens and Knowsley Hospitals NHS Trust
Mid Trent Cancer Network
Nottingham University Hospitals NHS Trust
United Lincolnshire Hospitals NHS Trust
Sherwood Forest Hospitals NHS Foundation Trust
Mount Vernon Cancer Network
East and North Hertfordshire NHS Trust
Luton and Dunstable Hospital NHS Foundation Trust
West Hertfordshire Hospitals NHS Trust
North East London Cancer Network
Barking, Havering and Redbridge Hospitals NHS Trust
Barts and The London NHS Trust
Homerton University Hospital NHS Foundation Trust
Whipps Cross University Hospital NHS Trust
North London Cancer Network
Barnet and Chase Farm Hospitals NHS Trust
North Middlesex University Hospital NHS Trust
University College London Hospitals NHS Foundation Trust
North of England Cancer Network
City Hospitals Sunderland NHS Foundation Trust
County Durham and Darlington NHS Foundation Trust
Gateshead Health NHS Foundation Trust
North Cumbria Acute Hospitals NHS Trust
Northumbria Healthcare NHS Foundation Trust
South Tees Hospitals NHS Trust

South Tyneside NHS Foundation Trust
The Newcastle upon Tyne Hospitals NHS Foundation Trust
North Trent Cancer Network
Barnsley Hospital NHS Foundation Trust
Chesterfield Royal Hospital NHS Foundation Trust
Doncaster and Bassetlaw Hospitals NHS Foundation Trust
Sheffield Teaching Hospitals NHS Foundation Trust
The Rotherham NHS Foundation Trust
Pan Birmingham Cancer Network
Heart Of England NHS Foundation Trust
Sandwell and West Birmingham Hospitals NHS Trust
University Hospital Birmingham NHS Foundation Trust
Walsall Hospitals NHS Trust
Peninsula Cancer Network
Northern Devon Healthcare NHS Trust
Plymouth Hospitals NHS Trust
Royal Cornwall Hospitals NHS Trust
Royal Devon and Exeter NHS Foundation Trust
South Devon Healthcare NHS Foundation Trust
South East London Cancer Network
Bromley Hospitals NHS Trust
Guy's and St Thomas' NHS Foundation Trust
King's College Hospital NHS Foundation Trust
Queen Mary's Sidcup NHS Trust
The Lewisham Hospital NHS Trust
South West London Cancer Network
Epsom and St Helier University Hospitals NHS Trust
Kingston Hospital NHS Trust
Mayday Healthcare NHS Trust
St George's Healthcare NHS Trust
The Royal Marsden NHS Foundation Trust
Surrey, West Sussex and Hampshire Cancer Network
Ashford and St Peter's Hospitals NHS Trust
Frimley Park Hospital NHS Foundation Trust
Royal Surrey County Hospital NHS Trust
Surrey and Sussex Healthcare NHS Trust
Sussex Cancer Network
Brighton and Sussex University Hospitals NHS Trust
East Sussex Hospitals NHS Trust
Worthing and Southlands Hospitals NHS Trust
Thames Valley Cancer Network
Buckinghamshire Hospitals NHS Trust

Great Western Hospitals NHS Foundation Trust
Heatherwood and Wexham Park Hospitals NHS Foundation Trust
Milton Keynes Hospital NHS Foundation Trust
Oxford Radcliffe Hospitals NHS Trust
Royal Berkshire NHS Foundation Trust
West London Cancer Network
Chelsea and Westminster Hospital NHS Foundation Trust
Ealing Hospital NHS Trust
Imperial College Healthcare NHS Trust
The Hillingdon Hospital NHS Trust
North West London Hospitals NHS Trust
West Middlesex University Hospital NHS Trust
Yorkshire Cancer Network
Airedale NHS Trust
Bradford Teaching Hospitals NHS Foundation Trust
Calderdale and Huddersfield NHS Foundation Trust
Harrogate and District NHS Foundation Trust
Mid Yorkshire Hospitals NHS Trust
The Leeds Teaching Hospitals NHS Trust
York Hospitals NHS Foundation Trust
North Wales Cancer Network
Conwy and Denbighshire NHS Trust
North East Wales NHS Trust
North West Wales NHS Trust
South East Wales Cancer Network
Cardiff and Vale NHS Trust
Gwent Healthcare NHS Trust
North Glamorgan NHS Trust
Pontypridd and Rhondda NHS Trust
Velindre NHS Trust
South West Wales Cancer Network
Bromorgannwg NHS Trust
Carmarthenshire NHS Trust
Ceredigion and Mid Wales NHS Trust
Pembrokeshire and Derwen NHS Trust
Swansea NHS Trust

2 Background to head and neck cancer and comparative audit

For a broader introduction please refer to the reference version.

2.1 What is head and neck cancer?

Head and neck cancer describes neoplasms in the head and neck region. Arising from the mouth (oral cavity), voice box (larynx), throat / upper gullet (pharynx) and salivary glands, head and neck cancers are amongst a group of less common cancers, with approximately 6,700 new cases diagnosed in England and Wales each year [3] [4]. The most common sites are larynx and oral cavity, and over 90 per cent of all malignant head and neck tumours are squamous cell carcinomas (SCC).

2.1.1 Cancer sites

Anatomical cancer sites covered by the head and neck cancer audit are [refer to reference report for ICD 10 code details]:

- oral cavity: mucosa of the lips, buccal mucosa, alveolus, gingiva, hard palate, dorsal and inferior tongue, floor of mouth.
- larynx: supraglottis, glottis and subglottis.
- pharynx: nasopharynx, oropharynx, hypopharynx
- major salivary gland

2.1.2 Impact of head and neck cancer on patients

Disease burden of head and neck cancer is significant. Patients require intensive multimodality treatments and prolonged rehabilitation with long term support to achieve an adequate recovery. The disease significantly impacts on functions such as eating, drinking, speech, swallowing, smell, breathing, social interaction and work capabilities.

2.1.3 Outcome in head and neck cancer

Head and neck cancers are associated with significant mortality, for example, five year survival for larynx cancer is around 50 per cent. Better prognosis is associated with early detection, while late presentation and neck node metastasis drastically reduce long term survival. The relatively poor survival prognosis for head and neck cancers is linked to lifestyle factors, co-morbidity, late presentation and the high median age of incidence.

2.2 Measuring clinical care

The core issues addressed in the first and second phases of the National Head and Neck Cancer Audit are:

- delivery of appropriate primary treatment (including adjuvant therapy) in management of head and neck cancer affecting the larynx, oral cavity, pharynx and major salivary glands by a multi-professional team, and delivery of care to agreed standards.
- in larynx and oral cavity cancer to assess in more detail, the care provided by specialist nurses, dieticians and speech and language therapists (in particular related to surgical voice restoration).

2.3 Key partners and influences in cancer audit

2.3.1 The National Clinical Audit Support Programme (NCASP) and Patient's Outcomes Programme

Both the National Clinical Audit Support Programme (NCASP) and Patients' Outcomes Programme, (Healthcare Quality Improvement Partnership), foster high quality audits in which the clinical direction is provided through the appropriate national professional bodies. [refer to reference report for details].

The National Head and Neck Cancer audit is sponsored and commissioned by the Healthcare Quality Improvement Partnership (HQIP).

2.3.2: "NHS Plan" in England and "Designed to tackle cancer" in Wales, and cancer audit

The NHS quality agenda requires services to monitor quality of care delivered in a systematic way through clinical governance. The Government is committed to introducing national comparative clinical audit to monitor clinical performance against agreed standards and indicators. The Welsh Assembly Government supports national clinical audit as an integral part of its cancer policy. All MDTs in Wales are required to participate in national clinical audit as a requirement of National Cancer Standards.

2.3.3 National Institute for Clinical Excellence (NICE) Improving Outcomes Guidance (IOG) for head and neck cancer

- NICE commissioned the National Cancer Steering Group to develop service guidance on head and neck cancer for NHS use in England and Wales. Published in 2005, it provides recommendations for good practice based on best available evidence of clinical and cost effectiveness. The guidance can be found at: www.nice.org.uk/page.aspx?o=233550, and measures at: www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/Cancer.

The areas addressed, include head and neck Cancer Network and MDTs, referral, diagnosis and assessment, treatment services, post-treatment follow-up and care, prevention and awareness, patient centred care and palliative care. A process of peer review of compliance with these measures has been completed across England.

In Wales [5], National Standards for Head and Neck Cancer Services 2005 define core aspects of service that should be provided for cancer patients throughout Wales by March 2009.

3 DAHNO Application Infrastructure

3.1 The DAHNO System

The DAHNO (Data for Head and Neck Oncology) system which supports the head and neck cancer audit, provides both technical infrastructure for data collection across England to deliver continuous comparative audit. Data from Wales is collected within the Cancer Network Information System Cymru (CaNISC) [6] and uploaded to DAHNO. [refer to reference report for more comprehensive details on the DAHNO application and its requirements].

3.2 DAHNO application security and patient confidentiality

3.2.1 DAHNO application security

Security mechanisms ensure only authorised users access information on the DAHNO application database. [refer to reference report for details].

3.2.2 Patient confidentiality

Audit data is subject to strict rules of confidentiality. NCASP works with HQIP and the Patient Information Advisory Group (PIAG) to ensure that support is provided under Section 60 of the Data Protection Act for the collection and use of patient identifiable data. The National Head and Neck Cancer Audit has PIAG support.

Data is sent to the DAHNO application via a secure connection to the NHS secure network (NHS Net) where it is securely stored on a highly encrypted national computer database. Once captured, the data is only accessible to people who store and analyse the data. Patients can choose to opt out of the audit, such that their details will not be stored or used.

4 Methods and approaches

4.1 Methodology

The methodology followed was described in the Second Annual Report [7].

4.2 Clinical aspects applicable to Phase II

4.2.1 Inclusions and exclusions in the head and neck cancer audit Phase I

The National Head and Neck Cancer Audit includes the following details from contributory centres:

- **new primary cases of head and neck carcinoma involving the larynx, oral cavity, pharynx, and major salivary glands** [refer to reference report for ICD 10 code details]:
- For larynx, this comprises: supraglottis (including lingual surface of epiglottis), glottis and subglottis, for oral cavity: cancer sites mucosa of upper and lower lips and buccal mucosa, upper alveolus and gingiva, lower alveolus and gingiva, hard palate, tongue (lateral, dorsal and inferior) and floor of mouth), for nasopharynx: superior, posterior, lateral and anterior walls, for oropharynx: tongue base, soft palate, uvula, vallecula, lateral and posterior walls, for hypopharynx: piriform sinus, post cricoid, aryepiglottic fold (hypopharyngeal aspect), posterior wall, and for major salivary glands parotid, submandibular, sublingual glands.

These are identified from a range of sources including MDT meetings, urgent two week wait rule referrals and other clinic booking systems and pathology reports.

- **decompensation from co-morbidity at diagnosis**
- **whether management of patients has been by an identified MDT, to agreed standards with equity of care and without undue delay**
- **the primary treatment modality(ies) received**
- **in larynx and oral cavity care provided by clinical nurse specialists**
- **multi-professional care provided by dietitians, and speech and language therapists (including for larynx surgical voice restoration)**
- **disease eradication, cancer specific mortality rate and age specific corrected survival.**

The exclusions in phase I/II of the head and neck cancer audit are:

- cancers in anatomical sites outside the larynx, oral cavity, pharynx and major salivary glands
- carcinoma in situ of the above sites
- secondary carcinomas to the head and neck
- adverse events.

4.3 Determining cancer centres: Provider Trusts managing head and neck cancer

Throughout the current year each network has been contacted and requested to provide an up to date list of trusts providing head and neck cancer care. In Wales, submission of data was by upload from CaNISC, plus organisations providing head and neck cancer care in Wales were provided.

4.4 DAHNO improvements rolled out in 2008

Completion of the implementation of a Web-Accessible Interface (WAI) has occurred. For advantages of WAI and why all users are encouraged to switch, to WAI DAHNO as soon as they are able, please refer to the on line report.

4.5 Priority outputs and rationale

Refer to Appendix 5 in the reference report.

4.6 Data standards

The audit dataset received full operation standard approval from the Information Standards Board (ISB) in May 2006.

5 Benefits of Participation

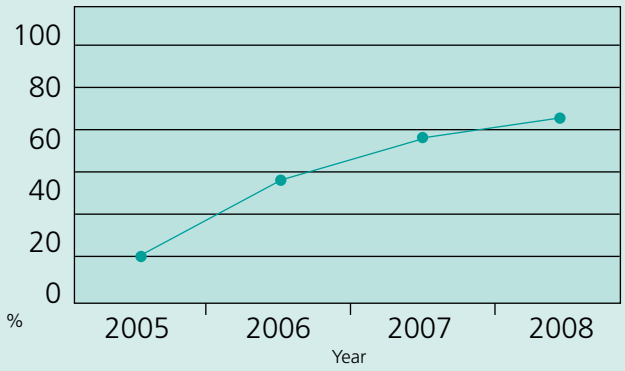
To whom	Benefit	Application
Patients	• Provides information on quality of local services to aid patient choice • Best practice guidance used to improve communication between patient, carers and clinical team. Giving rationale for treatment and care expectations	Use is planned for the incorporation of audit data into the NHS Choices database in 2009/10
National Monitoring Bodies	• Provides assurance of quality of care at both organisational and team level	It is envisaged that the Local Action Plans from the audit will be incorporated into the Peer Review process to monitor clinical practice change
Service Commissioners	• Provides assurance of quality of care given by organisations through the publication of trust level data • Enables benchmarking of comparable services	Following publication of the 3rd Annual Report a number of Cancer Networks have requested tailored reports of comparative data for their trusts to help inform local service provision
Provider Organisations	• Demonstrates compliance with the Health Commission's Annual Health Check • Provides performance data on the organisation's clinical services • Enables benchmarking of local services against peer organisations • Identifies deficiencies in multi-professional provision	Following publication of trust data in the 3rd Annual Report a number of clinical teams and Medical Directors have contacted the Project Team to feedback local audits/reviews and to indicate where changes have been made in local practice National audit has stimulated local review and resource bidding for SALT posts etc
Clinicians and Clinical Teams	• Provides a baseline measurement of clinical performance against professionally developed standards • Development of a high quality clinical database of head and neck cancer patients	An increasing number of requests from research teams has been made to access anonymised data from DAHNO, as a unique source of this type of clinical data in the UK

6 Improvements and Recommendations

6.1 Case Ascertainment and Data Quality

Continuing with the increase in case ascertainment in 2007, there has been further improvement in 2008, despite the audit extending its remit into four new anatomical sites. This shows the importance trusts and cancer networks are placing on participation and should be applauded.

Case Ascertainment

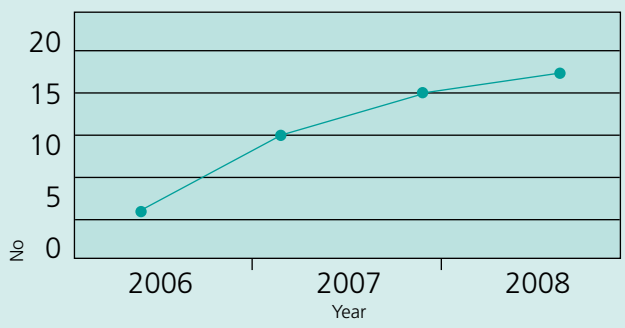


Good Practice Example

At both City Hospitals Sunderland NHS Foundation Trust and St George's Healthcare NHS Trust the provision of dedicated data entry resource has resulted in significant improvements in case ascertainment compared to last year and demonstrates a clear commitment to participation in the audit

Within England there has been a small, but demonstrable, improvement in the number of Cancer Networks submitting over 90 per cent of expected cases.

Number Cancer Networks with >90% Case Ascertainment



Wales has been able to demonstrate an increased case ascertainment from last year to over 90per cent which is an excellent result. This is supported by the national cancer information system (CANISC) which is also used for monitoring cancer wait times.

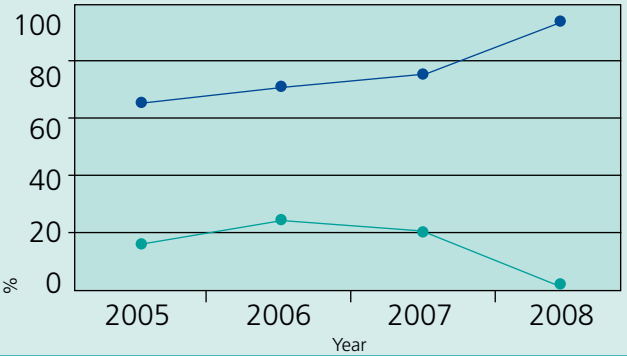
Case Ascertainment by Wales

6.2 The patient pathway

6.2.1 Patients being seen at the MDT

Once again, a demonstrable improvement in patients being seen by a MDT is shown but also a dramatic reduction where information had not been recorded (from 20 per cent to 1 per cent). This provides assurance that patients are getting an appropriate start to planning of high quality care. The dramatic reduction in "not recorded" clearly shows an improvement in data quality, and a shared recognition of the importance of demonstrating discussion at an MDT.

Seen at MDT



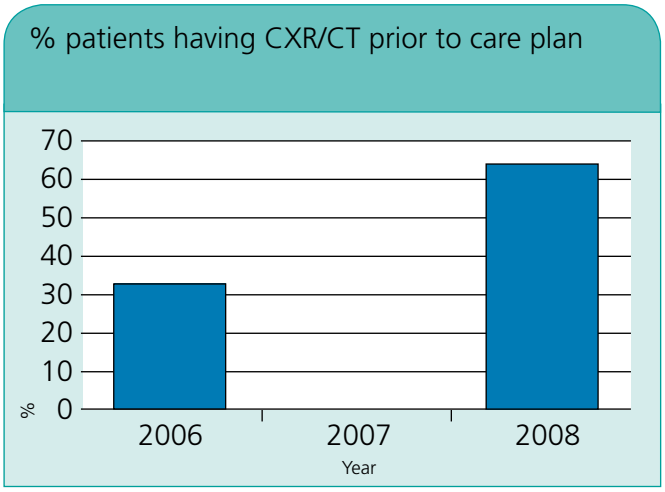
Good Practice Example

The Norfolk and Norwich University Hospital NHS Foundation Trust has significantly reduced the number of "not recorded patients seen at MDT" by collecting in real time for the audit at the actual MDT meeting. As a result they demonstrate over 90% of patients being seen at MDT

6.2.2 Patients having chest imaging by CXR/CT prior to care plan

This year it has been possible to provide a significant improvement in assurance of the number of patients receiving chest imaging prior to the cancer care plan compared to 2006 (data was not available for 2007).

This is a key element of care for patients with head and neck cancer to identify if a co-existent lung malignancy or metastatic lung deposits are evident prior to formulating a care plan. Presence of either will significantly influence treatment selection and future care.



6.3 Issues and recommendations

KEY RECOMMENDATIONS – high priority in bold text

GROUP TO ACTION

N = NETWORK
P = PROFESSIONS
T = PROVIDER TRUST
D = DAHNO PROJECT
U = USERS
M= Multidisciplinary teams

Issues	Recommendations (high priority in bold text)	Group to action
6.3.1 Moving to Network based risk adjustment	• **Each Network should oversee a review of case ascertainment in contributing trusts and the completeness of submission of key items required for risk adjustment** • **Networks should facilitate training of MDT personnel to collect staging, performance status and co-morbidity items to allow risk adjustment** • **Networks to facilitate the sharing of best practice in data collection between provider trusts**	N T U M
6.3.2 Developing a multi professional approach to head and neck cancer audit	• **Each trust should facilitate non medical personnel to contribute to the audit process in head and neck cancer** • **Each trust should ensure that an assessment of support required by non medical personnel is carried out** • **Professional groups involved in the support of patients with head and neck cancer should ensure that members collect audit data and contribute to DAHNO**	T M P U
6.3.3 Developing a local response to the audit findings	• **An updated action planning tool will be released to coincide with production of local reports in summer 2009** • **Each trust should develop an action plan based on the findings in the audit.** • **Networks should facilitate comprehensive use of the action planning tool and monitor on its outcome**	N T M U
6.3.4 Developing a Network response to the audit findings **In the fourth annual report a number of findings are re-ported in Network identifiable format** • **DAHNO registrations as a percentage of estimate** • **Ratio of low to high stage disease** • **Recording of pre and post surgical staging** • **Deprivation quintiles for registrations**	• **Each Network should liaise with provider trusts to support a comprehensive audit process in head and neck cancer** • **The Network should encourage head and neck tumour site specific groups to regularly discuss comparative audit on their agendas and provider trusts to provide an appropriate infrastructure** • **Networks should reflect on where variation in access occurs within the Network as identified in trust identifiable data and seek to examine pathways that underpin it**	N T M

Issues	Recommendations (high priority in bold text	Group to action
6.3.5 Clinical issues for multi-disciplinary teams A number of issues have been highlighted in the report. The Expert Panel had concerns about the care delivered, based on the data submitted. This may reflect the absence of collection rather true practice. However, the teams should assess their local delivery against the items opposite. In the fourth annual report a number of findings are reported in trust identifiable format:- • Participation • Number of new larynx and oral cavity cancer primaries • Percentage of those cases submitted with T and N category recorded • Interval from biopsy to reporting • Percentage of cases discussed at MDT • Interval from diagnosis to MDT	**Multi-disciplinary teams (MDTs) should:** • **Ensure the timeliness of pathways to meet national access targets Ensure the awareness and involvement of all practitioners, including general dental practitioners and community dental services in urgent cancer referral processes** • **Ensure that clinical nurse specialists, speech and language therapists and dieticians have active involvement in patient management and their care pathways** • **Ensure that tumour staging (TNM) is confirmed and recorded prior to care planning and following surgical procedures** • **Ensure that good dental health is maintained throughout treatment for all head and neck cancer sites** • **Ensure provision of surgical voice restoration counselling, pre treatment, for all patients having a laryngectomy** • **Ensure provision of swallowing counselling, pre-treatment, for all patients who are about to undergo oral and oropharyngeal resective and or reconstructive surgery with free tissue transfer or partial laryngo-pharyngeal surgery** • **Should ensure that delays in commencement of radiotherapy/ chemotherapy – either as primary or adjunctive treatment- are minimised** • **Facilitate meeting patient expectations that all care discussions are being made at a MDT, and head and neck cancer teams need to provide assurance around this important aspect of care delivery. This is unanimously supported by the expert panels.** • **Each MDT should review on a case by case basis as to why decisions are made outside of the MDT, and put steps in place to ensure all cases are discussed** • **Teams should confirm that chest imaging has occurred in all head and neck cancer patients prior to planning treatment. Because synchronous malignancies of the chest can occur and have a significant impact on treatment options.** • **For accurate understanding of care pathways it is important that all components of a surgical procedure are recorded to provide a true reflection of the breadth and complexity of surgical management.**	N T M U
6.3.6 Standards in clinical care Professional bodies, led by the British Association of Head and Neck Oncologists (BAHNO) and facilitated by the DAHNO Project Team, have evolved clinical standards.	**Support and comply with evolving clinical standards as they become available in May 2009 and prepare for audit against a selection of these standards in the fifth annual report.**	N T U P
6.3.7 Data quality and completeness The public should have access to accurate and risk adjusted clinical information.	**Each provider trust should seek to provide assurance on the quality and timeliness of care delivered to head and neck cancer patients by comprehensive and continuous contribution to DAHNO** • **The DAHNO project team will continue to expand the volume of trust identifiable data reported as data becomes more robust** • **Networks should increase local awareness and encourage compliance with the audit** • **Provider Trusts should support local provision of data collection not only at commencement of treatment, but through follow up to include data on current treatment and rehabilitation** • **Users and professionals should contribute to both support data collection and maintain consistency and quality of data collected.**	T M D

Issues	Recommendations (high priority in bold text	Group to action
6.3.8 Regular collection of current status assessment will enable disease specific survival analysis in the future 64 per cent of potential records submitted. Most Cancer Networks made some submissions to this annual report, but 24 trusts made no submissions. 15 Networks achieved greater than 90 per cent case ascertainment. Absence of resective pathology information in submissions.	• Regular collection of current status on patients who have completed treatment should become routine for all clinical teams • MDTs should ensure that a mechanism exists for the collection of this important data item, linked to the original care record • Regular audit by trust and Network should ensure that survival analysis is deliverable All Cancer Networks and constituent Provider Trusts not achieving high levels or any level of case submission should review their processes and support for submission of data. Best practice supporting data collection can be found at: www.ic.nhs.uk/canceraudits All MDTs should seek to accurately capture resective pathology information including pathological stage for every patient undergoing surgical treatment. This will enable true stage comparison of outcomes.	N T U M T U P T U M
6.3.9 Data process issues Continued identification of teams delivering cancer care.	In light of changes occurring with Improving Outcomes Guidance all networks will be regularly contacted on a quarterly basis by the National Head and Neck Cancer Audit team to confirm contacts at Provider Trusts/hospitals that deliver head and neck cancer care. In particular trusts will be identified for the fifth annual report as to whether they provide diagnostic services only or diagnosis and treatment.	D N
6.3.10 Application issues-web DAHNO and installed DAHNO Web DAHNO as sole route of submission. Uploading from third party systems. Reporting of import errors.	A web based access to DAHNO has been introduced (January 2008) in response to user requests for a more user friendly environment . Details on this and registration requirements can be found at www.ic.nhs.uk/canceraudits The web version contains all the required fields for the extended audit. It is intended that web DAHNO will be the sole route of submission with the phasing out of installed DAHNO by late 2009. National Head and Neck Cancer Audit team to continue to advise IT providers of requirements to achieve successful upload. National Head and Neck Cancer Audit team to review csv documentation and provide improved user manual and continued support to uploaders. Provider trusts uploading information should perform this on a regular basis throughout the index year. Provider trusts uploading information via csv should commence preparation of csv requirements and refer to the latest documentation as well as attending future workshops. National Head and Neck Cancer Audit team to proactively advise users via central import log of issues with import.	D D T U T U D D
6.3.11 Audit data to support clinical process Contemporaneous data collection.	Although DAHNO is an audit process the timely collection of patient pathway data can support and expedite the overall delivery of patient care.	N T U

7 Statistical methods used for data analysis

The presented information is an analysis of a sample of larynx cancer and oral cancer cases from hospital Provider Trusts across England and Wales. Most of the reported measures are either a count of cases or a percentage of total recorded cases. Notes accompanying each measure seek to make the basis of the calculations clear. The interpretation of the results must take into consideration the incomplete ascertainment of the cohort; not all incident cases in England and Wales have been entered onto the system, and many of those cases that are recorded have data items which have not been entered.

- Counts are the totals number of records (usually of patients) in the DAHNO application data extract with a specific record value, or in some cases a count of records with a recorded value.

- The calculation of percentages involves a count and a denominator. The choice of denominator is complicated by incompleteness. For certain measures the selected denominator is the total number of registrations, for others it has been more appropriate to use the number of registrations with any recorded value for a particular data item.

The quality of any data analysis is dependent upon the ascertainment, completeness and accuracy of the data submitted. Analysis is based purely on the data submitted to the DAHNO application by contributing Provider Trusts. It is important to recognise that because some records are incomplete, the published information is based on fewer than the total number of registered cases. Particularly vulnerable are the interval calculations, for instance,

In England the Interval from referral to first appointment, broken down by "Two Week Wait" referrals and others; if a record has either of the two dates or referral details missing, that record cannot contribute to the chart.

Data is presented as a simple description of data gathered during work-in-progress. As the quality and quantity of data improves, more sophisticated analyses will become possible. The data for analysis was extracted from the DAHNO application as a collection of text files (CSV format).

Analysis was carried out using Stata® 8.1, Microsoft® Access 2000 and Microsoft® Excel 2000.

8 Findings

8.1 Introduction

The following analysis was performed by the cancer registries on data extracted from the DAHNO application database The data extract period includes patient records with a 'date of diagnosis' between 1 November 2007 and 31 October 2008 inclusive.

8.2 Analysed data

Over 4000 patient diagnoses have been included in the analysis. For the first time the audit has extended to cover cancers of the oropharynx, hypopharynx, nasopharynx and major salivary glands. Overall submissions have increased by 89 per cent compared to the third annual report [8].

If all estimated cases had been collected, the total would have exceeded 6000. The estimated figures have risen year on year (a correction factor to the estimation in the first annual report has been included) to reflect the overall rise in cancer incidence.

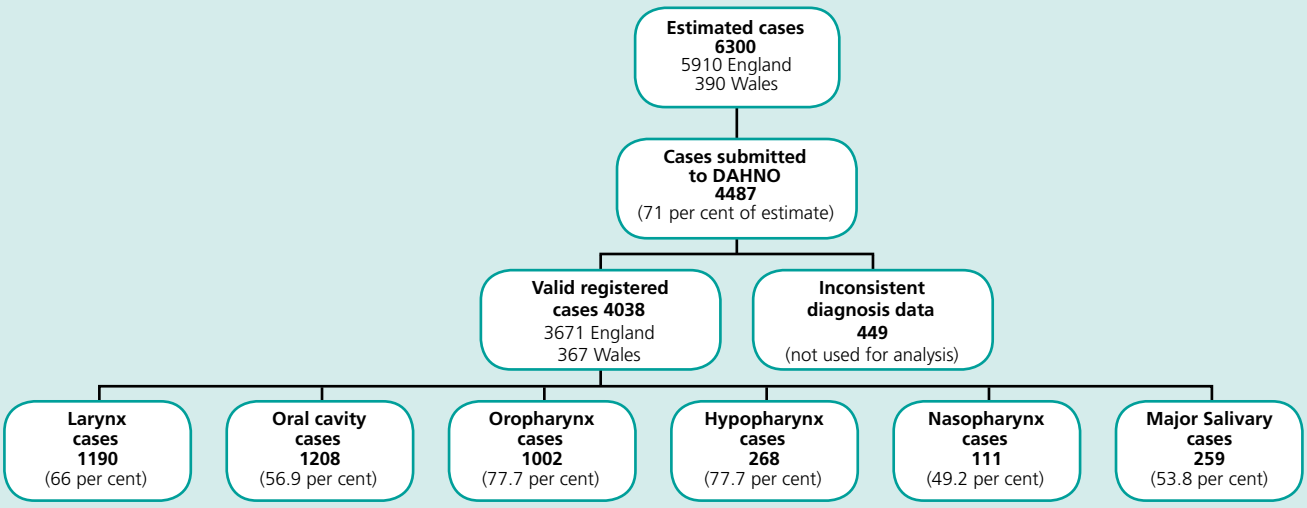
It should be noted that the estimated number of cases for larynx and oral cavity which in the 3rd annual report was 3032 has risen to 3918 due to more unspecified sites in oral cavity being included. If this denominator had been used for the third annual report the submission rate would have been 54 per cent rather than the 67 per cent declared. Similar corrections would need to be applied to the first and second annual reports.

The information presented in this report is, therefore, a snapshot of the total population. The following chart shows an overview of data collected for the described cancer sites for cases with date of diagnosis between 1 November 2007 and 31 October 2008.

Figure 8.2.a: Submitted diagnoses by year

	Audit Year 04-05	Audit Year 05-06	Audit Year 06-07	Audit Year 07-08
Diagnoses submitted	1042	1446	2130	4038
Submissions from	England	England & Wales	England & Wales	England & Wales
Months of audit	21	13	12	12
Estimate for period of audit	4454	2945	3032	6300
Corrected annual estimate	2545 England only	2718	3918	6300
Per cent of estimate	23%	49%	54%	64%
Larynx cancer	561	745	1049	1190
Oral cavity cancer	477	698	986	1208

Figure 8.2.b: Analysed Data



A continued improvement in case ascertainment has occurred with 64 per cent of estimated incident cases being recorded. In England 3671 of 5910 estimated cases (62 per cent) were submitted and in Wales 367 of an estimated 390 cases (94 per cent). The Welsh Networks are to be congratulated on their improved level of case ascertainment. Comprehensive case ascertainment remains a goal for future iterations of the audit to ensure a representative reflection of current English and Welsh head and neck cancer management.

449 diagnoses were excluded from the analysis because of inconsistent diagnosis data. [refer to reference report for details]

The analysis presented thus reflects 4038 cases in 4013 individuals. In 25 patients more than one tumour was recoded in the index period [refer to reference report for details].

As this is a continuous audit with annual reporting years, inevitably some patients will complete the treatment phase of their pathway beyond the reporting year. 48 patients with a date of diagnosis prior to 1 November 2007, subsequently had treatment [refer to reference report for details].

Users are encouraged to provide both diagnostic and treatment data as close as possible to the point of care delivery.

8.2.1 Is data quality improving?

An overview of this years' submission demonstrates a broader submission of information through the patients' journey. In the third annual report the data was of good quality from referral to diagnosis but of poorer quality beyond this.

A consideration of the number of care plans obtained by cancer site demonstrates a high level of recording, with between 81 and 91 per cent of cases having a care plan record.

Of the total patients registered it would be expected that 8 to 10 per cent of them would not have reached the point in their pathway where a careplan would be agreed, and when this adjustment* is applied between 89 and 100 per cent of patients have a care plan record.

Figure 8.2.1a: Number of registered cases with at least one care plan and adjusted for cases not yet reaching care planning journey in patient pathway

	Larynx	Oral Cavity	Oropharynx	Hypopharynx	Nasopharynx	Major Salivary Gland	**All cases**
Total number of cases	1190	1208	1002	268	111	259	**4038**
Cases having at least one care plan	1023	1102	874	228	101	212	**3540**
As per cent of total cases	86	91	85	87	91	81	**87.7**
As adjusted per cent of total cases *	94	99.5	95	93	100	89	**96.4**

A comparison of those with care plans and those patient records with treatment plan recorded shows that 78 per cent of patients with a care plan have a subsequent treatment record, equating to 68 per cent of all registrations. This varies by subsite being highest in oropharynx and lowest in oral cavity.

Figure 8.2.1b: Number of cases with at least one care plan and a treatment record

	Larynx	Oral Cavity	Oropharynx	Hypopharynx	Nasopharynx	Major Salivary Gland	**All cases**
Total number of cases	1023	1102	874	228	101	212	**3540**
Cases having at least one care plan	813	813	714	185	69	194	**2758**
As per cent of those with at least one care plan	79.4	64.0	81.6	81.0	68.0	77.0	**78**

Thus data quality has improved along the patient pathway and MDTs are to be congratulated for their efforts. The report will identify key areas where additional effort to assist in progressing risk adjustment is required.

8.2.2 Which subsites of head and neck cancer have been reported

4038 cases were presented for analysis, with a date of diagnosis between 1 November 2007 and 31 October 2008, into DAHNO. These comprised 1190 (66.3 per cent of estimate) laryngeal cancers, 1208 (56.9 per cent) oral cavity cancers, 1002 (77.7 per cent) oropharyngeal cancers, 268 (69.5 per cent) hypopharyngeal cancers, 111 (49.2 per cent) nasopharyngeal cancers and 259 (53.8 per cent) salivary gland cancers. A breakdown of registrations by anatomic sub-site is included in Figure 8.2.2.a. A more detailed breakdown for all sites can be found in the full report [refer to reference report for details], and for nasopharynx and major salivary gland see section 11.

In larynx, as expected, glottic cancers predominate, (57 per cent), with 24 per cent occurring in the supraglottis. This was a similar distribution to that seen previously. 'Larynx NOS' (not otherwise specified) represents those cancers which involve cartilage, multiple sub-sites, and are also referred to as transglottic tumours, or it reflects failure to delineate the site of tumour origin.

In this years report the percentage of subglottic tumours is identical to last years figure at 1.8 per cent, suggesting that the figure seen in 2005-6 (2.7 per cent) was anomalous.

In oral cavity, tumours of the lateral border of the tongue are the most common cancer site, (31.2 per cent), with a more even distribution amongst the remaining sub-sites. The hard palate (5 per cent compared to 2 per cent of all ONS registrations) appears to be, again, over represented as in earlier years. In this years data collection tumours of the floor of mouth have become the second commonest subsite (18.5 per cent).

In oropharynx tonsil is the commonest site (47 per cent) and in combination with base of tongue making up 80 per cent of cases.

In hypopharyngeal cancer, piriform sinus predominates (51 per cent) with a more even distribution amongst the remaining subsites.

Figure 8.2.2.a: Number of registered new head and neck primaries.

Site	Total
Larynx	
Glottis	679
Supraglottis	283
Larynx, unspecified	193
Subglottis	21
Anterior surface of epiglottis	14
Larynx Total	**1190**
Oral Cavity	
Border of tongue	377
Dorsal surface of tongue	63
Ventral surface of tongue	70
Floor of mouth	224
Cheek mucosa	128
Upper & lower gingivae	85
Retromolar area	69
Lip, inner aspect	63
Hard palate	60
Vestibule of mouth	26
Lingual tonsil	11
Overlapping lesion palate	5
Mouth, unspecified	27
Oral Cavity Total	**1208**
Oropharynx	
Tonsil	469
Base of tongue	325
Soft palate	95
Overlapping lesion oropharynx	37
Posterior wall	30
Lateral wall	23
Vallecula	12
Uvula	11
Oropharynx Total	**1002**
Hypopharynx	
Piriform sinus	138
Overlapping lesion hypopharynx	52
Postcricoid region	46
Posterior wall	23
Aryepiglottic fold	9
Hypopharynx Total	**268**
Nasopharynx Total	**111**
Major Salivary Glands Total	**259**
Total	**4038**

8.3 Where head and neck cancer care happens

8.3.1 Estimate of total number of patients with new head and neck primaries of the larynx and oral cavity in the index period by Cancer Network

The following figure includes an estimate of the expected number of cases of larynx, oral cavity, oropharynx, hypopharynx, nasopharynx and major salivary gland cancers per year in England and Wales. The estimate has been taken as the average number of new head and neck primaries that were registered by cancer registries in England and Wales for the period 2004 - 2006.

The estimate consists of 5910 cases in England and in Wales 390 cases, comprising 1796 larynx cancers and 2122 oral cavity cancers 1290 oropharyngeal cancers, 385 hypopharyngeal cancers, 226 nasopharyngeal and 482 salivary gland cancers.

Cancer registry data provides a good estimate of new cases, which allows for incident cases not attending at hospital. Although Cancer Networks serve a geographically defined population, they may also see cross border referrals.

Figure 8.3.1.a: Estimate of total number of patients with new head and neck primaries of the in the index period.

Network	DAHNO Registrations	Estimate for 12 Months	DAHNO Registrations as % of estimate
North of England	409	434	94
Anglia	230	307	75
Peninsula	225	220	102
Mid-Trent	219	232	95
Merseyside & Cheshire	218	204	107
Yorkshire	215	311	69
Pan Birmingham	175	185	95
Thames Valley	171	230	74
Leicestershire, Northamptonshire & Rutland	154	183	84
South West London	136	238	57
Essex	122	101	121
Mount Vernon	122	107	114
Lancashire & South Cumbria	119	203	59
Greater Manchester & Cheshire	113	396	29
3 Counties	107	127	84
North Trent	105	260	40
Dorset	97	88	111
Avon, Somerset & Wiltshire	93	202	46
Sussex	87	108	80
Greater Midlands	68	249	27
Derby Burton	66	139	47
Humber & Yorkshire Coast	63	120	53
Arden	62	94	66
Surrey, West Sussex & Hants	61	92	67
Central South Coast	59	218	27
North East London	50	149	33
North London	48	173	28
West London	42	186	23
South East London	35	180	19
Kent & Medway	0	172	0
England	**3671**	**5737**	**64**
South East Wales	150	170	88
South West Wales	130	126	103
North Wales	87	95	92
Wales	**367**	**390**	**94**
England and Wales	**4038**	**6127**	**66**

Networks are shown as defined at the start of the index period November 2007.

Kent and Medway Network did not submit any cases by the deadline for data submission, but subsequently uploaded 42 cases. These have been excluded from the analysis. Of the remaining Networks all but Derby / Burton showed a significant increase in submission. Six Networks, Central South Coast, Greater Manchester and Cheshire, North East London, North London, South East London and West London submitted less than one third of their estimated cases.

Cases submitted by Network ranged from 35 in South East London (estimate 108 cases) to a high of 409 in North of England (estimate 434 cases).

8.3.2 Submission by Network and Provider Trust of patients with new head and neck primaries in the index period

Network	Trust	Larynx	Oral Cavity	Hypopharynx	Oropharynx	Nasopharynx	Salivary Glands	**Total**
3 Counties	Gloucestershire Hospitals NHS Foundation Trust	17	14	0	10	0	0	41
	Hereford Hospitals NHS Trust	5	5	0	3	0	1	14
	Worcestershire Acute Hospitals NHS Trust	11	22	1	11	3	4	52
Total		**33**	**41**	**1**	**24**	**3**	**5**	**107**
Anglia	Cambridge University Hospitals NHS Foundation Trust	21	44	2	36	3	2	108
	Ipswich Hospital NHS Trust	2	0	0	4	0	2	8
	Norfolk and Norwich University Hospitals NHS Foundation Trust	44	33	10	22	0	5	114
	Peterborough and Stamford Hospitals NHS Foundation Trust	0	0	0	0	0	0	0
Total		**67**	**77**	**12**	**62**	**3**	**9**	**230**
Arden	University Hospitals Coventry and Warwickshire NHS Trust	17	22	2	18	0	3	62
Total		**17**	**22**	**2**	**18**	**0**	**3**	**62**
Avon Somerset and Wiltshire	North Bristol NHS Trust	15	9	2	33	3	9	71
	Royal United Hospital Bath NHS Trust	3	0	0	0	0	2	5
	Taunton and Somerset NHS Foundation Trust	3	4	0	2	0	1	10
Total		**21**	**13**	**2**	**35**	**3**	**12**	**86**
Central South Coast	Basingstoke and North Hampshire NHS Foundation Trust	0	0	0	0	0	0	0
	Portsmouth Hospitals NHS Trust	6	6	0	9	1	0	22
	Salisbury NHS Foundation Trust	0	0	0	0	0	0	0
	Southampton University Hospitals NHS Trust	4	13	2	7	0	1	27
	The Royal West Sussex NHS Trust	0	7	0	0	1	2	10
	Winchester & Eastleigh Healthcare NHS Trust	0	0	0	0	0	0	0
Total		**10**	**26**	**2**	**16**	**2**	**3**	**59**
Derby Burton	Burton Hospitals NHS Foundation Trust	1	0	0	1	1	1	4
	Derby Hospitals NHS Foundation Trust	21	19	1	12	0	9	62
Total		**22**	**19**	**1**	**13**	**1**	**10**	**66**
Dorset	Poole Hospital NHS Foundation Trust	19	31	8	31	3	5	97
Total		**19**	**31**	**8**	**31**	**3**	**5**	**97**

Network	Trust	Larynx	Oral Cavity	Hypopharynx	Oropharynx	Nasopharynx	Salivary Glands	Total
Essex	Basildon and Thurrock University Hospitals NHS Foundation Trust	7	1	1	2	1	1	13
	Colchester Hospital University NHS Foundation Trust	4	11	0	7	2	4	28
	Mid Essex Hospital Services NHS Trust	6	11	3	12	0	3	35
	Southend University Hospital NHS Foundation Trust	12	14	2	14	2	2	46
Total		**29**	**37**	**6**	**35**	**5**	**10**	**122**
Greater Manchester and Cheshire	Royal Bolton Hospital NHS Foundation Trust	0	0	0	0	0	0	0
	Central Manchester University Hospitals NHS Foundation Trust	0	0	0	0	0	0	0
	Salford Royal NHS Foundation Trust	13	0	0	6	0	0	19
	Stockport NHS Foundation Trust	5	5	0	1	0	0	11
	Tameside Hospital NHS Foundation Trust	15	13	5	9	0	2	44
	The Mid Cheshire Hospitals NHS Trust	0	0	0	0	0	0	0
	The Pennine Acute Hospitals NHS Trust	0	2	0	0	1	0	3
	The Christie NHS Foundation Trust	*	*	*	*	*	*	*
	Trafford Healthcare NHS Trust	0	0	0	0	0	0	0
	University Hospital Of South Manchester NHS Foundation Trust	2	0	0	1	0	1	4
	Wrightington, Wigan and Leigh NHS Foundation Trust	10	9	2	7	0	4	32
Total		**45**	**29**	**7**	**24**	**1**	**7**	**113**
Greater Midlands	Mid Staffordshire NHS Foundation Trust	1	1	0	1	0	0	3
	The Royal Wolverhampton Hospitals NHS Trust	6	11	0	8	0	2	27
	The Shrewsbury and Telford Hospital NHS Trust	6	7	1	12	0	5	31
	University Hospital of North Staffordshire NHS Trust	4	1	0	2	0	0	7
Total		**17**	**20**	**1**	**23**	**0**	**7**	**68**
Humber & Yorkshire Coast	Hull and East Yorkshire Hospitals NHS Trust	35	5	0	20	0	3	63
Total		**35**	**5**	**0**	**20**	**0**	**3**	**63**
Kent & Medway	East Kent Hospitals NHS Trust	0	0	0	0	0	0	0
	Medway NHS Trust	0	0	0	0	0	0	0
	Maidstone and Tunbridge Wells NHS Trust	0	0	0	0	0	0	0
	Queen Victoria Hospital NHS Foundation Trust	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**
Lancashire & South Cumbria	Blackpool, Fylde and Wyre Hospitals NHS Foundation Trust	16	4	4	10	1	3	38
	East Lancashire Hospitals NHS Trust	0	0	0	0	0	0	0
	Lancashire Teaching Hospitals NHS Foundation Trust	13	22	5	24	1	6	71
	University Hospitals of Morecambe Bay NHS Trust	3	1	0	6	0	0	10
Total		**32**	**27**	**9**	**40**	**2**	**9**	**119**
Leicestershire Northamptonshire Rutland	Northampton General Hospital NHS Trust	25	19	5	10	4	4	67
	University Hospitals of Leicester NHS Trust	23	33	12	13	0	6	87
Total		**48**	**52**	**17**	**23**	**4**	**10**	**154**

Network	Trust	Larynx	Oral Cavity	Hypopharynx	Oropharynx	Nasopharynx	Salivary Glands	**Total**
Merseyside and Cheshire	Aintree University Hospitals NHS Foundation Trust	15	28	0	21	1	0	65
	Clatterbridge Centre For Oncology NHS Foundation Trust **	31	6	14	31	0	8	90
	Countess Of Chester Hospital NHS Foundation Trust	2	0	2	1	0	0	5
	Royal Liverpool and Broadgreen University Hospitals NHS Trust	12	2	1	8	1	2	26
	Southport and Ormskirk Hospital NHS Trust	0	0	0	1	0	0	1
	St Helens & Knowsley Teaching Hospitals NHS Trust	0	0	0	0	0	0	0
	Warrington and Halton Hospitals NHS Foundation Trust	0	0	0	0	0	0	0
	Wirral University Teaching Hospital NHS Foundation Trust	12	9	1	9	0	0	31
Total		**72**	**45**	**18**	**71**	**2**	**10**	**218**
Mid Trent	Nottingham University Hospitals NHS Trust	35	58	8	35	3	4	143
	United Lincolnshire Hospitals NHS Trust	13	42	1	11	3	6	76
Total		**48**	**100**	**9**	**46**	**6**	**10**	**219**
Mount Vernon	East and North Hertfordshire NHS Trust	11	31	4	24	2	2	74
	Luton and Dunstable Hospital NHS Foundation Trust	19	11	10	6	0	2	48
Total		**30**	**42**	**14**	**30**	**2**	**4**	**122**
North East London	Barking, Havering and Redbridge NHS Trust	23	5	2	5	0	1	36
	Barts and The London NHS Trust	0	5	0	0	0	0	5
	Homerton University Hospital NHS Foundation Trust	0	0	0	0	0	0	0
	Whipps Cross University Hospital NHS Trust	3	1	2	2	1	0	9
Total		**26**	**11**	**4**	**7**	**1**	**1**	**50**
North London	Barnet & Chase Farm Hospitals NHS Trust	0	0	0	0	0	0	0
	University College London Hospitals NHS Foundation Trust	18	14	1	3	7	5	48
Total		**18**	**14**	**1**	**3**	**7**	**5**	**48**
North of England	City Hospitals Sunderland NHS Foundation Trust	33	27	5	20	5	5	95
	County Durham and Darlington NHS Foundation Trust	6	12	1	2	2	2	25
	North Cumbria University Hospitals NHS Trust	14	11	1	12	0	0	38
	South Tees Hospitals NHS Trust	37	27	9	29	3	3	108
	The Newcastle Upon Tyne Hospitals NHS Foundation Trust	46	50	9	28	6	4	143
Total		**136**	**127**	**25**	**91**	**16**	**14**	**409**
North Trent	Barnsley Hospital NHS Foundation Trust	1	0	0	0	0	0	1
	Chesterfield Royal Hospital NHS Foundation Trust	13	10	1	4	0	3	31
	Doncaster and Bassetlaw Hospitals NHS Foundation Trust	14	1	0	5	1	0	21
	Sheffield Teaching Hospitals NHS Foundation Trust	26	5	11	7	2	0	51
	The Rotherham NHS Foundation Trust	0	1	0	0	0	0	1
Total		**54**	**17**	**12**	**16**	**3**	**3**	**105**
Pan Birmingham	Heart Of England NHS Foundation Trust	16	10	3	9	2	3	43
	Sandwell and West Birmingham Hospitals NHS Trust	10	1	4	6	0	3	24
	University Hospital Birmingham NHS Foundation Trust	18	56	10	19	0	5	108
Total		**44**	**67**	**17**	**34**	**2**	**11**	**175**

Network	Trust	Larynx	Oral Cavity	Hypopharynx	Oropharynx	Nasopharynx	Salivary Glands	Total
Peninsula	Northern Devon Healthcare NHS Trust	0	2	0	1	0	1	4
	Plymouth Hospitals NHS Trust	20	17	0	18	0	5	60
	Royal Cornwall Hospitals NHS Trust	13	19	3	19	0	4	58
	Royal Devon and Exeter NHS Foundation Trust	16	17	7	12	1	4	57
	South Devon Healthcare NHS Foundation Trust	10	15	0	15	0	6	46
Total		**59**	**70**	**10**	**65**	**1**	**20**	**225**
South East London	Guy's and St Thomas' NHS Foundation Trust	7	21	1	1	1	4	35
Total		**7**	**21**	**1**	**1**	**1**	**4**	**35**
South West London	Epsom and St Helier University Hospitals NHS Trust	0	1	0	0	0	0	1
	St George's Healthcare NHS Trust	19	34	5	17	3	1	79
	The Royal Marsden NHS Foundation Trust	13	8	4	25	6	0	56
Total		**32**	**43**	**9**	**42**	**9**	**1**	**136**
Surrey, West Sussex & Hants	Royal Surrey County Hospital NHS Trust	25	17	7	3	1	8	61
Total		**25**	**17**	**7**	**3**	**1**	**8**	**61**
Sussex	Brighton and Sussex University Hospitals NHS Trust	6	8	5	5	0	5	29
	East Sussex Hospitals NHS Trust	11	10	0	12	1	5	39
	Worthing and Southlands Hospitals NHS Trust	4	2	0	8	3	2	19
Total		**21**	**20**	**5**	**25**	**4**	**12**	**87**
Thames Valley	Buckinghamshire Hospitals NHS Trust	0	0	0	0	0	0	0
	Great Western Hospitals NHS Foundation Trust	4	1	0	2	0	0	7
	Heatherwood and Wexham Park Hospitals NHS Foundation Trust	11	5	0	3	2	6	27
	Milton Keynes Hospital NHS Foundation Trust	0	0	0	1	0	3	4
	Oxford Radcliffe Hospitals NHS Trust	34	52	10	28	7	9	140
	Royal Berkshire NHS Foundation Trust	0	0	0	0	0	0	0
Total		**49**	**58**	**10**	**34**	**9**	**18**	**178**
West London	Chelsea and Westminster Hospital NHS Foundation Trust	0	0	0	0	0	0	0
	Ealing Hospital NHS Trust	0	0	0	0	0	0	0
	Imperial College Healthcare NHS Trust	0	1	0	2	0	0	3
	The Hillingdon Hospital NHS Trust (Mount Vernon Cancer Centre)	0	3	0	2	0	0	5
	The North West London Hospitals NHS Trust	6	10	2	3	2	7	30
	West Middlesex University Hospital NHS Trust	1	2	0	1	0	0	4
Total		**7**	**16**	**2**	**8**	**2**	**7**	**42**
Yorkshire	Bradford Teaching Hospitals NHS Foundation Trust	12	28	6	9	1	4	60
	Mid Yorkshire Hospitals NHS Trust	0	0	0	3	0	0	3
	The Leeds Teaching Hospitals NHS Trust	24	13	11	16	5	2	71
	York Hospitals NHS Foundation Trust	13	31	5	24	2	6	81
Total		**49**	**72**	**22**	**52**	**8**	**12**	**215**
England Total		**1072**	**1139**	**234**	**892**	**101**	**233**	**3671**

Network	Trust	Larynx	Oral Cavity	Hypopharynx	Oropharynx	Nasopharynx	Salivary Glands	Total
North Wales	Conwy and Denbighshire NHS Trust	13	16	3	5	1	3	41
	North East Wales NHS Trust	15	2	2	4	1	2	26
	North West Wales NHS Trust	5	4	3	7	0	1	20
Total		**33**	**22**	**8**	**16**	**2**	**6**	**87**
South East Wales	Cardiff and Vale NHS Trust	8	5	3	13	0	3	32
	Gwent Healthcare NHS Trust	16	3	4	11	2	1	37
	North Glamorgan NHS Trust	5	5	3	9	0	1	23
	Pontypridd and Rhondda NHS Trust	1	3	0	5	1	1	11
	Velindre NHS Trust	19	7	5	10	3	3	47
Total		**49**	**23**	**15**	**48**	**6**	**9**	**150**
South West Wales	Bro Morgannwg NHS Trust	14	2	4	7	2	1	30
	Carmarthenshire NHS Trust	5	2	1	11	0	0	19
	Ceredigion and Mid Wales NHS Trust	2	1	0	1	0	0	4
	Pembrokeshire and Derwen NHS Trust	3	0	3	4	0	0	10
	Swansea NHS Trust	12	19	3	23	0	10	67
Total		**36**	**24**	**11**	**46**	**2**	**11**	**130**
Wales Total		**118**	**69**	**34**	**110**	**10**	**26**	**367**
England and Wales Total		**1190**	**1208**	**268**	**1002**	**111**	**259**	**4038**

* Treating trust only, data allocated to trust entering demographic data

** Treating trust only, but trust code used for submitting organisation (diagnosis file)

Networks are shown as defined at the start of the index period November 2007.

- 4038 cancers, of a theoretical maximum total of 6300 cancers have been registered (64 per cent) to the audit.
- 32 out of 33 Cancer Networks in England and Wales have entered at least 35 patients into the DAHNO system. The minimum contribution from any submitting network was 35 cases. Kent and Medway Cancer Network submitted 42 cases after the deadline.

8.3.2.1 Where cancer care happens – has it changed since the inception of the audit?

At the inception of the audit 143 hospitals in England were identified as delivering head and neck cancer care by surveying cancer networks. Since the first annual report a number of hospitals have merged with trust formation, and the current report is by hospital trust.

The current number of units identified by Networks as delivering head and neck cancer care is 111 hospital trusts.

8.3.3 Cancer Networks with consistently high levels of case ascertainment

Figure 8.3.3.a: Submission of number of cases by network where over 90 per cent of estimated new head and neck primaries of the larynx and oral cavity in the index period, were made in 2007-2008, 2006-2007 and 2005-2006.

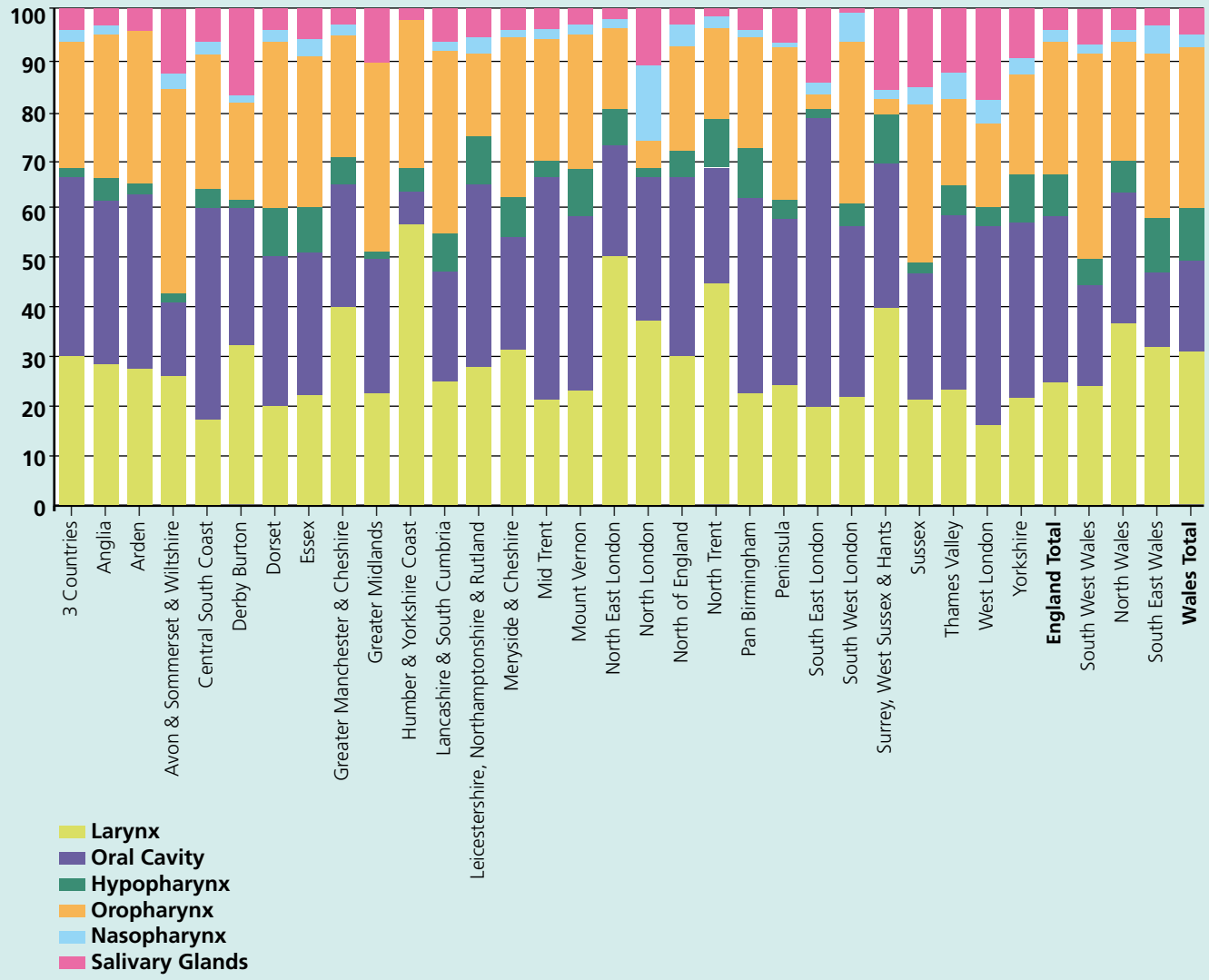
Cancer Network	Over 90% of estimate in 2007-2008 DAHNO registrations	Over 90% of estimate in 2006-2007 DAHNO registrations	Over 90% of estimate in 2005-2006 DAHNO registrations
Essex	**121**		
Mount Vernon	**114**		
Dorset	**111**	**102**	
Merseyside & Cheshire	**107**		
South West Wales	**103**		
Peninsula	**102**	**120**	**110**
Pan Birmingham	**95**	**121**	**92**
Mid-Trent	**95**	**118**	**151**
North of England	**94**		
North Wales	**92**		
Leicestershire, Northamptonshire & Rutland	**84**	**125**	
Sussex	**80**	**100**	**124**
Yorkshire	**69**	**139**	
Arden	**66**	**100**	
Derby Burton	**47**	**172**	**118**
Cancer Care Alliance of Teeside, South Durham and North Yorkshire		162	112
Norfolk and Waveney Cancer Network		110	100
Northern Cancer Network		102	
South Essex Cancer Network		96	

* Cancer Care Alliance of Teeside, South Durham and North Yorkshire and Northern Cancer Network have merged to become North of England Cancer Network

* Mid Anglia, Norfolk and Waveney, and South Essex Cancer Networks are now Anglia Cancer Network and Essex Cancer Network.

- 15 networks achieved more than 90 per cent of expected cases compared to 13 per cent in 2006 – 2007 compared to 7 out of 34 in 2005 – 2006.
- At individual Provider Trust level one organisation who had previously contributed high levels of registration was unable to achieve this in 2007 – 2008.
    - Mid Yorkshire Hospitals NHS Trust
- The DAHNO application can receive data by either direct data entry (2/3 of submissions) or by the use of a CSV upload facility (1/3 of submissions). A number of organisations that collect data on in-house / third party systems have not taken the opportunity to contribute as yet. The DAHNO helpdesk is available to help users contribute by this means, with both technical and practical advice. The audit development team continue to try and simplify the upload process.
- Data from Wales was initially collected in the National Summary Electronic Cancer Patient Report (CaNISC) system and uploaded via a CSV export into DAHNO.
- The best performing Cancer Networks have managed to achieve high levels of registration. These have benefited from good organisation, shared learning and the investment by hospital Provider Trusts in data collection personnel.
- The multi-disciplinary team (MDT) meeting is a key focal point for data collection as the correct members of the team are assembled.

Figure 8.3.3b: Submission by cancer network of patients with new head and neck primaries in the index period.



- The submissions for each network are shown by anatomic sub site as a percentage of the networks submissions (8.3.3.a for absolute numbers)
- The majority of networks have submitted some cases for each of the new anatomic subsites. It would be expected that approximately similar numbers of larynx and oral cavity cancers would be reported.

8.3.4 Submission by Cancer Network and Provider Trust of patients with new head and neck primaries in the index period, where cases had pre treatment recorded T and N staging category

Counts and percentage of cases with recorded pre treatment T and N staging by provider trust. Trusts have been colour banded to represent completeness of staging information:

- of 4038 patients, who have been registered to the audit, 2936 (72.7 per cent) contained T and N pre treatment staging category information
- this year there has been a significant improvement in staging in Wales and they should be encouraged to improve this further
- TNM pre treatment staging recording has been maintained with the extension in the number of anatomic sites in the audit. It should however be noted that in 14 trusts, a significant number of cases were recorded as Tx or Nx (primary tumour cannot be assessed, regional lymph nodes cannot be assessed). These organisations should review their processes for recording accurate staging and seek to significantly reduce cases where Tx or Nx is utilised.
- In this year's report the colour banding has been adjusted, with green representing 85 per cent (previously 75 per cent)
- In 12 Networks 85 per cent or greater recording of TNM category was achieved with a number obtaining 100 per cent. No Network in Wales achieved 85 per cent, but 4 trusts obtained this level
- There is a variation between and within networks and between England (73.6 per cent) and Wales (62.9 per cent) in the quantity of staging information submitted.

Recording cancer site and accurate stage is a key medical responsibility, with best practice suggesting that this should be clearly documented and captured at the MDT. Staging remains a key influence on outcome. It is important that this improves to achieve 100 per cent of cases staged in any high quality database collection, to allow valid comparisons to be made.

Figure 8.3.4a: Submitted diagnoses by year where T and N recorded

	04-05	05-06	06-07	07-08
Diagnoses submitted	1042	1443	2035	4038
Submissions from	England only	England and Wales	England and Wales	England and Wales
Cases with T and N staging recorded	673	776	1550	2936
Per cent of staging	64.8	53.8	76.2	72.7

Figure 8.3.4.b: Submission by Network and Provider Trust of patients with new head and neck primaries in the index period, where cases had recorded T and N staging category.

KEY 07-08 GREEN = 85 per cent or more T and N recorded
AMBER = 40 per cent to 84 per cent T and N recorded
RED = Less than 40 per cent T and N recorded

KEY 07-08 GREEN = 75 per cent or more T and N recorded
AMBER = 25 per cent to 74 per cent T and N recorded
RED = Less than 25 per cent T and N recorded

		November 2007-October 2008					November 2006-October 2007		
Network	**Trust**	**Yes**	**TX**	**NX**	**Total**	**% Recorded**	**Yes**	**Total**	**%**
3 Counties	Gloucestershire Hospitals NHS Foundation Trust	31	0	2	41	76	38	40	95
	Hereford Hospitals NHS Trust	3	1	1	14	21	2	8	25
	Worcestershire Acute Hospitals NHS Trust	44	20	30	52	85*			
Total		**78**	**21**	**33**	**107**	**73**	**40**	**48**	**83**
Anglia	Cambridge University Hospitals NHS Foundation Trust	93	0	7	108	86	41	45	91
	Ipswich Hospital NHS Trust	7	0	0	8	88	2	4	50
	Norfolk and Norwich University Hospitals NHS Foundation Trust	114	92	93	114	100*	44	44	100
Total		**214**	**92**	**100**	**230**	**93**	**98**	**107**	**92**
Arden	University Hospitals Coventry and Warwickshire NHS Trust	23	1	0	62	37	15	47	32
Total		**23**	**1**	**0**	**62**	**37**	**15**	**47**	**32**
Avon Somerset and Wiltshire	North Bristol NHS Trust	71	41	46	71	100*	58	58	100
	Royal United Hospital Bath NHS Trust	5	5	5	5	100*	0	1	0
	Taunton and Somerset NHS Foundation Trust	10	6	6	10	100*	19	19	100
Total		**86**	**52**	**57**	**86**	**100***	**77**	**78**	**99**
Central South Coast	Portsmouth Hospitals NHS Trust	0	0	0	22	0			
	Southampton University Hospitals NHS Trust	27	1	1	27	100			
	The Royal West Sussex NHS Trust	1	0	0	10	10	6	8	75
Total		**28**	**1**	**1**	**59**	**47**	**7**	**9**	**78**
Derby Burton	Burton Hospitals NHS Foundation Trust	1	1	1	4	25			
	Derby Hospitals NHS Foundation Trust	55	1	4	62	89	66	67	99
Total		**56**	**2**	**5**	**66**	**85**	**66**	**67**	**99**
Dorset	Poole Hospital NHS Foundation Trust	97	0	1	97	100	45	47	96
Total		**97**	**0**	**1**	**97**	**100**	**46**	**48**	**96**
Essex	Basildon and Thurrock University Hospitals NHS Foundation Trust	12	0	0	13	92	2	2	100
	Colchester Hospital University NHS Foundation Trust	26	0	0	28	93	11	14	79
	Mid Essex Hospital Services NHS Trust	32	2	0	35	91	0	16	0
	Southend University Hospital NHS Foundation Trust	46	0	0	46	100	28	28	100
Total		**116**	**2**	**0**	**122**	**95**	**30**	**36**	**83**
Greater Manchester and Cheshire	Salford Royal NHS Foundation Trust	10	0	0	19	53			
	Stockport NHS Foundation Trust	5	0	0	11	45			
	Tameside Hospital NHS Foundation Trust	2	0	0	44	5	8	26	31
	The Pennine Acute Hospitals NHS Trust	0	0	0	3	0			
	University Hospital Of South Manchester NHS Foundation Trust	0	0	0	4	0			
	Wrightington, Wigan and Leigh NHS Foundation Trust	3	0	0	32	9			
Total		**20**	**0**	**0**	**113**	**18**	**8**	**27**	**30**

		November 2007-October 2008					November 2006-October 2007		
Network	**Trust**	**Yes**	**TX**	**NX**	**Total**	**% Recorded**	**Yes**	**Total**	**%**
Greater Midlands	Mid Staffordshire NHS Foundation Trust	0	0	0	3	0	0	1	0
	The Royal Wolverhampton Hospitals NHS Trust	27	13	14	27	100*	0	29	0
	The Shrewsbury and Telford Hospital NHS Trust	23	0	0	31	74	12	29	41
	University Hospital Of North Staffordshire NHS Trust	7	7	7	7	100*			
Total		**57**	**20**	**21**	**68**	**84**	**12**	**59**	**20**
Humber and Yorkshire Coast	Hull and East Yorkshire Hospitals NHS Trust	29	0	0	63	46	44	47	94
Total		**29**	**0**	**0**	**63**	**46**	**44**	**47**	**94**
Kent and Medway	Maidstone and Tunbridge Wells NHS Trust						0	15	0
	Medway NHS Trust						4	9	44
Total							**4**	**24**	**17**
Lancashire and South Cumbria	Blackpool, Fylde and Wyre Hospitals NHS Foundation Trust	38	11	10	38	100	11	11	100
	Lancashire Teaching Hospitals NHS Foundation Trust	71	67	63	71	100*			
	University Hospitals Of Morecambe Bay NHS Trust	10	10	10	10	100*	1	1	100
Total		**119**	**88**	**83**	**119**	**100***	**20**	**20**	**100**
Leicestershire N'hampton-shire Rutland	Northampton General Hospital NHS Trust	22	0	1	67	33	21	35	60
	University Hospitals of Leicester NHS Trust	72	0	0	87	83	52	54	96
Total		**94**	**0**	**1**	**154**	**61**	**73**	**89**	**82**
Merseyside and Cheshire	Aintree University Hospitals NHS Foundation Trust	63	0	0	65	97	27	28	96
	Clatterbridge Centre For Oncology NHS Foundation Trust	6	0	0	90	7			
	Countess Of Chester Hospital NHS Foundation Trust	5	0	0	5	100	2	11	18
	Royal Liverpool and Broadgreen University Hospitals NHS Trust	24	0	0	26	92	4	26	15
	Southport and Ormskirk Hospital NHS Trust	0	0	0	1	0			
	Wirral University Teaching Hospital NHS Foundation Trust	27	11	12	31	87	2	4	50
Total		**125**	**11**	**12**	**218**	**57**	**39**	**80**	**49**
Mid Trent	Nottingham University Hospitals NHS Trust	44	0	0	143	31	63	67	94
	United Lincolnshire Hospitals NHS Trust	67	4	5	76	88	26	37	70
Total		**111**	**4**	**5**	**219**	**51**	**97**	**112**	**87**
Mount Vernon	East and North Hertfordshire NHS Trust	59	1	0	74	80			
	Luton and Dunstable Hospital NHS Foundation Trust	33	0	0	48	69	19	26	73
Total		**92**	**1**	**0**	**122**	**75**	**19**	**26**	**73**
NE London	Barking, Havering and Redbridge Hospitals	36	0	0	36	100	16	20	80
	Barts and The London NHS Trust	4	0	0	5	80			
	Whipps Cross University Hospital NHS Trust	8	0	0	9	89			
Total		**48**	**0**	**0**	**50**	**96**	**16**	**20**	**80**

		November 2007-October 2008					November 2006-October 2007		
Network	**Trust**	**Yes**	**TX**	**NX**	**Total**	**% Recorded**	**Yes**	**Total**	**%**
North London	University College London Hospitals NHS Foundation Trust	0	0	0	48	0			
Total		**0**	**0**	**0**	**48**	**0**			
North of England	City Hospitals Sunderland NHS Foundation Trust	56	1	0	95	59	17	17	100
	County Durham and Darlington NHS Foundation Trust	19	5	8	25	76			
	North Cumbria University Hospitals NHS Trust	26	0	1	38	68	25	30	83
	South Tees Hospitals NHS Trust	103	2	1	108	95	69	73	95
	The Newcastle Upon Tyne Hospitals NHS Foundation Trust	122	0	4	143	85	98	100	98
Total		**326**	**8**	**14**	**409**	**80**	**222**	**243**	**91**
North Trent	Barnsley Hospital NHS Foundation Trust	1	0	0	1	100			
	Chesterfield Royal Hospital NHS Foundation Trust	31	0	1	31	100	5	7	71
	Doncaster and Bassetlaw Hospitals NHS Foundation Trust	21	0	0	21	100	25	26	96
	Sheffield Teaching Hospitals NHS Foundation Trust	44	1	0	51	86	22	30	73
	The Rotherham NHS Foundation Trust	0	0	0	1	0			
Total		**97**	**1**	**1**	**105**	**92**	**52**	**63**	**83**
Pan Birmingham	Heart Of England NHS Foundation Trust	31	0	0	43	72	25	35	71
	Sandwell and West Birmingham Hospitals NHS Trust	12	0	0	24	50	1	5	20
	University Hospital Birmingham NHS Foundation Trust	90	0	0	108	83	93	95	98
Total		**133**	**0**	**0**	**175**	**76**	**119**	**135**	**88**
Peninsula	Northern Devon Healthcare NHS Trust	3	3	4	4	75	1	1	100
	Plymouth Hospitals NHS Trust	60	35	39	60	100*	34	34	100
	Royal Cornwall Hospitals NHS Trust	57	7	11	58	98	20	24	83
	Royal Devon and Exeter NHS Foundation Trust	55	0	4	57	96	36	36	100
	South Devon Healthcare NHS Foundation Trust	46	1	1	46	100	31	32	97
Total		**221**	**46**	**59**	**225**	**98**	**122**	**127**	**96**
South East London	Guy's and St Thomas' NHS Foundation Trust	27	0	4	35	77			
Total		**27**	**0**	**4**	**35**	**77**			
South West London	Epsom and St Helier University Hospitals NHS Trust	0	0	0	1	0			
	St George's Healthcare NHS Trust	75	0	1	79	95	1	1	100
	The Royal Marsden NHS Foundation Trust	56	1	1	56	100	10	13	77
Total		**131**	**1**	**2**	**136**	**96**	**11**	**14**	**79**
Surrey, West Sussex & Hants	Royal Surrey County Hospital NHS Trust	61	52	54	61	100*	21	23	91
Total		**61**	**52**	**54**	**61**	**100***	**22**	**24**	**92**

		November 2007-October 2008					November 2006-October 2007		
Network	**Trust**	**Yes**	**TX**	**NX**	**Total**	**% Recorded**	**Yes**	**Total**	**% Recorded**
Sussex	Brighton and Sussex University Hospitals NHS Trust	29	23	24	29	100*	13	26	50
	East Sussex Hospitals NHS Trust	37	29	31	39	95*	14	27	52
	Worthing and Southlands Hospitals NHS Trust	19	19	19	19	100*	0	3	0
Total		**85**	**71**	**74**	**87**	**98***	**27**	**56**	**48**
Thames Valley	Great Western Hospitals NHS Foundation Trust	7	6	6	7	100			
	Heatherwood and Wexham Park Hospitals NHS Foundation Trust	4	0	0	27	15	0	7	0
	Milton Keynes Hospital NHS Foundation Trust	4	4	4	4	100			
	Oxford Radcliffe Hospitals NHS Trust	31	16	17	140	22	19	36	53
Total		**46**	**26**	**27**	**178**	**26**	**19**	**43**	**44**
West London	Imperial College Healthcare Trust	2	0	0	3	67			
	The Hillingdon Hospital NHS Trust (Mount Vernon Cancer Centre)	3	0	0	5	60	20	22	91
	The North West London Hospitals NHS Trust	12	0	3	30	40			
	West Middlesex University Hospital NHS Trust	3	0	0	4	75			
Total		**20**	**0**	**3**	**42**	**48**	**20**	**22**	**91**
Yorkshire	Bradford Teaching Hospitals NHS Foundation Trust	53	1	3	60	88	36	48	75
	Mid Yorkshire Hospitals NHS Trust	0	0	0	3	0	31	46	67
	The Leeds Teaching Hospitals NHS Trust	38	0	0	71	54	54	60	90
	York Hospitals NHS Foundation Trust	74	0	0	81	91	44	47	94
Total		**165**	**1**	**3**	**215**	**77**	**165**	**201**	**82**
England Total		**2705**	**501**	**560**	**3671**	**74**	**1490**	**1882**	**79**
North Wales	Conwy and Denbighshire NHS Trust	35	1	1	41	85	1	7	14
	North East Wales NHS Trust	14	0	1	26	54	0	11	0
	North West Wales NHS Trust	14	0	0	20	70	1	8	13
Total		**63**	**1**	**2**	**87**	**72**	**2**	**26**	**8**
South East Wales	Cardiff and Vale NHS Trust	7	0	2	32	22	2	12	17
	Gwent Healthcare NHS Trust	32	0	1	37	86	28	36	78
	North Glamorgan NHS Trust	21	0	1	23	91	7	15	47
	Pontypridd and Rhondda NHS Trust	8	0	0	11	73			
	Velindre NHS Trust	42	0	1	47	89	8	21	38
Total		**110**	**0**	**5**	**150**	**73**	**45**	**84**	**54**
South West Wales	Bro Morgannwg NHS Trust	23	0	1	30	77	4	9	44
	Carmarthenshire NHS Trust	4	0	0	19	21	3	6	50
	Ceredigion and Mid Wales NHS Trust	0	0	0	4	0	0	2	0
	Pembrokeshire and Derwen NHS Trust	1	0	0	10	10	1	4	25
	Swansea NHS Trust	30	2	8	67	45	5	22	23
Total		**58**	**2**	**9**	**130**	**45**	**13**	**43**	**30**
Wales Total		**231**	**3**	**16**	**367**	**63**	**60**	**153**	**39**
England and Wales Total		**2936**	**504**	**576**	**4038**	**73**	**1550**	**2035**	**76**

* High T and N staging, but recorded as TX/NX. However, an error was reported in the Somerset Cancer Register system recording T0 as TX and N0 as NX. This may explain these high values in trusts using this data collection system.

- Where trusts only contribute to the diagnostic part of the pathway, final pre-treatment staging may only be confirmed at the MDT led by the treatment centre. Technical difficulties may hinder the reconciliation of data from different sources in some Cancer Networks.

8.4 Distribution of stage

8.4.1 Larynx

8.4.1.1 Stage at diagnosis

- Recording of staging continues to improve, but is offset by increased use of Tx and Nx
- Over 77 per cent had T and N category recorded.
- Overall 14 per cent of larynx cancers were node positive at presentation.
- Analysis by sub-site of primary showed, for glottic cancers, 39 of 679 cases to be node positive at diagnosis, compared to 89 of 283 cases of supraglottic cancer, with 32 of 192 larynx NOS (not specified). This demonstrates the greater propensity of supraglottic cancer compared to glottic cancer to involve regional nodes.
- 1.9 cent were M1, confirming the low propensity of laryngeal carcinomas of presenting with distant metastatic disease.

59.6 per cent of laryngeal cancers have stage at diagnosis recorded to allow categorisation into low stage and high stage disease (thus excluding Tx and Nx). In laryngeal cancer, as previously found, early stage disease predominates.16

8.4.1.2 Comparison of stage at diagnosis and post-surgery staging

Recording cancer site and accurate stage is a key medical responsibility, with best practice suggesting that this should be clearly documented and captured at the MDT. Staging remains a key influence on outcome. It is important that this improves to achieve 100 per cent of cases staged, to allow valid comparisons to be made.

Of the 316 patients recorded as undergoing surgery (205 with stated curative intent), information on stage at diagnosis, with post surgical staging (i.e. based on resective pathology), was available for T category in 150 patients and N category in 134 patients.

Of the 150 patients where staging was recorded 37 underwent laser surgery.

- In T category, 10 patients were upstaged following surgery, and 8 downstaged.
- 5 patients were upstaged and 6 patients were downstaged, which shows a level of correlation expected rather than the previous absence of any change in N category. The sample size, however, is too small and incomplete at this stage to draw any definitive conclusions.
- As expected only a small number of patients with very advanced neck disease staging recorded (N3) underwent surgical treatment.

8.4.1.3 Summary of recorded stage certainty

Figure 8.4.1.3.a: Summary of recorded stage certainty

Certainty factor	
C1	**Evidence from standard diagnostic means (e.g. inspection, palpation, and standard radiography, intraluminal endoscopy for tumours of certain organs)**
C2	**Evidence obtained by special diagnostic means (e.g. radiographic imaging in special projections, tomography, computerised tomography(CT), ultrasonography, lymphography, angiography, scintigraphy, magnetic resonance imaging (MRI), endoscopy, biopsy and cytology)**
C3	**Evidence from surgical exploration, including biopsy and cytology**
C4	**Evidence of the extent of disease following definitive surgery and pathological examination of the resected specimen**
C5	**Evidence from autopsy**

- 52 per cent had T stage certainty factor recorded, 51.3 per cent had N stage certainty factor recorded and 49 per cent had M stage certainty factor recorded. [refer to reference report for details]
- This is an improvement this year in the recording of this item, a rise of 10 per cent and the relevance of this item will continue to be raised in future workshops.
- C4 has shown the largest improvement reflecting those cases in which information was gained following surgical resection (recorded T C4 has risen from 3.1 per cent to 18.2 per cent)
- At key points in the patient pathway, staging is a defining parameter which allows for more interpretation of outcome, which facilitates grouping a description of disease extent in a uniform manner, to allow valid comparison.

For those cases undergoing surgical management it is important that resective pathology is accurately recorded to allow true stage comparison. Surgical teams should develop responsibilities in this key area.

8.4.2.1 Stage at diagnosis

- Recording of staging continues to improve, but is offset by increased use of Tx and Nx
- 79 per cent had T and N category recorded.
- 22 per cent were N positive at diagnosis
- Analysis by sub-site of primary showed, for border of tongue, 67 of 299 cases to be node positive at diagnosis, compared to 23 of 128 cases of cheek mucosa cancer, and with 30 of 113 cases of anterior floor of mouth (not specified). This demonstrates a similar propensity to involve regional nodes.
- Of the 215 cases of oral cavity cancer which were node positive at diagnosis, there was a more even distribution of associated primary site. However, the commonest primary sites associated with regional metastasis were floor of mouth and retromolar trigone
- 1.0 per cent were M1, confirming the low propensity of oral cavity carcinomas to present with distant metastatic disease.

8.4.2. Oral Cavity

63 per cent of oral cavity cancers have stage at diagnosis recorded to allow categorisation into low and high stage disease (thus excluding Tx and Nx).

37 per cent of oral cancers have no staging recorded, or insufficient information to categorise stage. The previously noted dominance of late stage cancer (2004-2005 report) is not evident in this year's data, nor is a predominance of early stage cancer as suggested last year. No firm conclusion can be drawn due to the level of no stage recorded or insufficient TNM to categorise.

8.4.2.2 Comparison of stage at diagnosis and post-surgery staging

Of the 627 patients recorded as undergoing surgery, information on stage at diagnosis, with post surgical staging (i.e. based on resective pathology), was available for T category in 319 patients and N category in 297 patients.

- 51 per cent of patients undergoing surgery had post resective surgery staging details recorded.
- In T category, 20 patients were upstaged following surgery and 36 were downstaged (18 per cent change in stage).
- 31 patients were upstaged and 21 patients were downstaged (18 per cent change in stage). This is a rise in downstaging compared to last years data. The sample size, however, is too small and incomplete at this stage to draw any definitive conclusions.
- The number of patients upstaged following surgery seems low compared to published estimates of occult metastasis in squamous cell carcinoma of the oral cavity. Given the predominance of cancer of the tongue in the cases submitted it might be expected that higher percentage of upstaging would be seen.

8.4.2.3 Summary of recorded stage certainty

- 61.9 per cent (2006-2007 52.6 per cent) had T stage certainty factor recorded, 60.3 per cent (2006-2007 51.5 per cent) had N stage certainty factor recorded and 54.4 per cent (2006-2007 49.4 per cent) had M stage certainty factor recorded. [refer to reference report for details]
- This is an improvement this year in the recording of this item, a rise of 5 to10 per cent and the relevance of this item will continue to be raised in future workshops.
- C4 has shown the largest improvement reflecting those cases in which information was gained following surgical resection (recorded T C4 has risen from 5.4 per cent to 34.9 per cent)

For those cases undergoing surgical management, it is important that resective pathological staging is accurately recorded to allow true stage comparison. Surgical teams should take responsibility in this area and, in particular, should ensure that the certainty factor is also accurately recorded.

8.4.3 Oropharynx

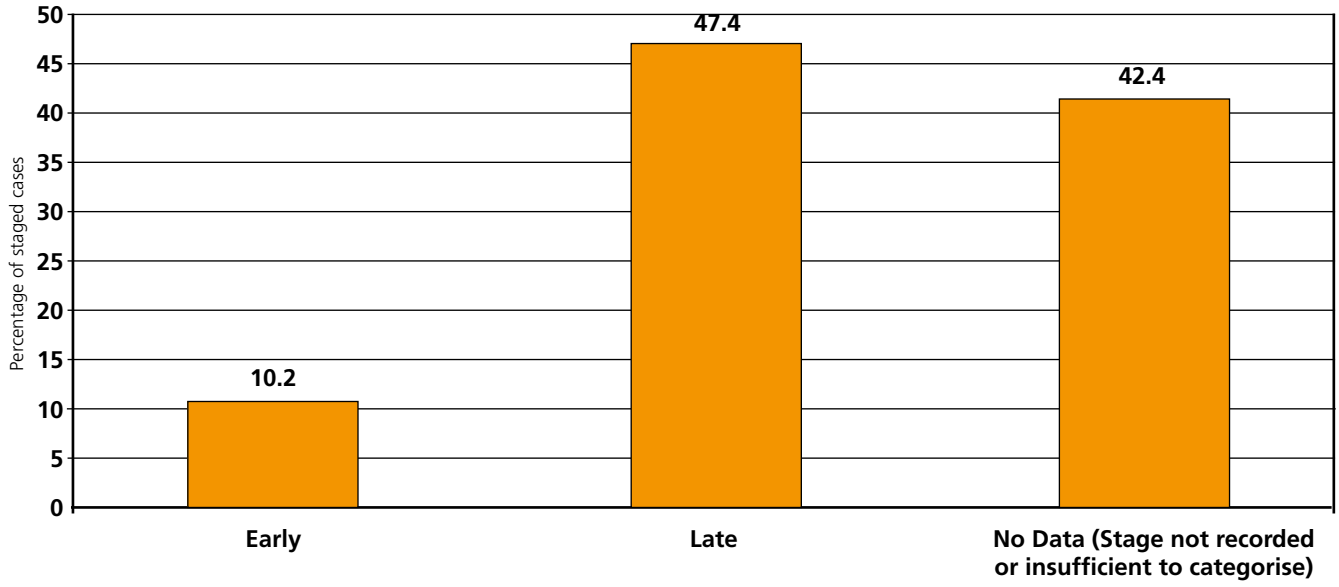
8.4.3.1 Stage at diagnosis

Figure 8.4.1.3.a: Oropharynx; Stage at diagnosis

Percentage of 1002 recorded cases							
N Category	T Category						Total
	T1	T2	T3	T4	TX	Not Recorded	
N0	4.1	5.9	2.8	3.1	0	0.2	16.1
N+	7.7	13.6	8.3	12.0	0.9	0.4	42.8
NX	0.3	0.5	0	0.3	14.7	0.1	15.9
Not recorded	0.8	1.4	0.4	1.1	0	21.6	25.2
Total	12.9	21.4	11.5	16.5	15.6	22.3	100

- 78 per cent had T and N category recorded.
- As expected by the expert panels a high percentage 43 per cent were N positive at diagnosis.
- Of the 429 cases of oropharynx cancer which were node positive at diagnosis, 231 of 469 tonsil cases were node positive at diagnosis, compared to 135 of 325 cases of base of tongue cancer, with 17 of 95 cases of soft palate cancer. This demonstrates the greater propensity of tonsil cancer compared to other oropharynx sites to involve regional nodes.
- 2.0 per cent were M1, confirming the low propensity of oropharynx cancers to present with distant metastatic disease.

Figure 8.4.3.1.b: Oropharynx; Stage at diagnosis



57.6 per cent of oropharynx cancers have stage at diagnosis recorded to allow categorisation into low and high stage disease (thus excluding Tx and Nx).

42.4 per cent of oropharynx cancers have no staging recorded, or insufficient information to categorise stage and considerable further work remains to meet universal stage recording.

8.4.3.2 Comparison of stage at diagnosis and post-surgery staging

Of the 307 patients recorded as undergoing surgery, information on stage at diagnosis, with post surgical staging (i.e. based on resective pathology), was available for T category in 116 patients and N category in 113 patients.

- 38 per cent of patients undergoing surgery had post resective surgery staging details recorded.
- In T category, 6 patients were upstaged following surgery and 9 were downstaged (13 per cent change in stage).
- 7 patients were upstaged and 12 patients were downstaged (17 per cent change in stage).

8.4.3.3 Summary of recorded stage certainty

- 53.4 per cent had T stage certainty factor recorded, 54 per cent had N stage certainty factor recorded and 49.6 per cent had M stage certainty factor recorded. [refer to reference report for details]
- At key points in the patient pathway, staging is a defining parameter which allows for more interpretation of outcome, which facilitates grouping a description of disease extent in a uniform manner, to allow valid comparison.

8.4.4 Hypopharynx

8.4.4.1 Stage at diagnosis

- With small numbers of cases a limited interpretation only can be made [refer to reference report for details]
- 77 per cent had T and N category recorded.
- As expected by the expert panels a high percentage 43 per cent were N positive at diagnosis
- 2.6 per cent were M1, suggesting a low propensity for hypopharynx cancers to present with distant metastatic disease.

8.4.4.2 Comparison of low to high stage disease by tumour site

Figure 8.4.4.2.a: Distribution of low and high stage disease by anatomic sub site. Low stage disease is Stage I and Stage II and high stage disease is Stage III and Stage IV (see UICC manual [9] for contributory T and N categories)

Cancer Site	PrimarySite	Low	High	Stage Unknown	Total
Larynx	Anterior surface epiglottis	7	3	4	**14**
	Glottis	287	111	281	**679**
	Supraglottis	53	136	94	**283**
	Subglottis	6	8	7	**21**
	Overlapping lesion or larynx unspecified	40	56	97	**193**
Larynx Total		**393**	**314**	**483**	**1190**

Cancer Site	PrimarySite	Low	High	Stage Unknown	Total
Oral Cavity	Lip Inner aspect	31	2	30	**63**
	Tongue - dorsal surface - anterior 2/3	13	21	29	**63**
	Tongue - border	144	107	126	**377**
	Tongue - ventral - inferior surface	33	23	14	**70**
	Lingual tonsil	0	4	7	**11**
	Gum – upper and lower	12	30	43	**85**
	Mouth - floor	73	86	65	**224**
	Palate - hard	16	21	23	**60**
	Overlapping lesion palate	1	2	2	**5**
	Cheek mucosa	40	36	52	**128**
	Mouth - vestibule (buccal sulcus and labial)	7	8	11	**26**
	Retromolar trigone	9	27	33	**69**
	Overlapping lesion of other and unspecified parts of mouth and mouth unspecified	8	7	12	**27**
Oral Cavity Total		**387**	**374**	**447**	**1208**
Oropharynx	Base of tongue	18	146	161	**325**
	Palate - soft - interior surface	22	22	51	**95**
	Uvula	2	3	6	**11**
	Tonsil	49	248	172	**469**
	Vallecula	1	6	5	**12**
	Lateral wall	1	15	7	**23**
	Posterior wall	6	16	8	**30**
	Overlapping lesion or unspecified oropharynx	1	17	19	**37**
Oropharynx Total		**100**	**473**	**429**	**1002**
Hypopharynx	Piriform Sinus	13	71	54	**138**
	Postcricoid region	4	19	23	**46**
	Aryepiglottic fold - hypopharyngeal aspect	1	3	5	**9**
	Hypopharynx - posterior wall	4	16	3	**23**
	Hypopharynx - overlapping lesion or unspecified	6	25	21	**52**
Hypopharynx Total		**28**	**134**	**106**	**268**
Nasopharynx	Roof	1	3	6	**10**
	Posterior wall	4	9	17	**30**
	Lateral wall - fossa of Rosenmuller	0	12	6	**18**
	Inferior - upper surface soft palate	0	1	1	**2**
	Overlapping lesion or unspecified	5	20	26	**51**
Nasopharynx Total		**10**	**45**	**56**	**111**

Cancer Site	PrimarySite	Low	High	Stage Unknown	Total
Salivary Glands	Parotid gland	34	39	134	**207**
	Submandibular/submaxillary gland	6	9	34	**49**
	Sublingual gland	0	0	3	**3**
Salivary Glands Total		40	48	171	**259**
Grand Total		**960**	**1071**	**2007**	**4038**

- In larynx cancer for glottic cancer low stage disease predominates (2.6 to 1), whilst in supraglottic cancer high stage disease is the more common (2.6 to 1).
- In oral cavity cancer for the tongue and anterior/ lateral floor of mouth and inner aspect of lip low stage disease predominates, whilst in the remaining sites high stage disease is more frequent.
- In oropharynx, hypopharynx and nasopharynx, late stage disease predominates as expected by the expert panels. The normal presentation is of a neck lump prior to the presentation of the primary cancer.
- The exception in oropharynx is soft palate where there were equivalent low and high stages.
- In major salivary gland cancer roughly equivalent low and high stage disease was found.
- However, no firm conclusion can be drawn due to the level of no stage recorded or insufficient TNM to categorise.

8.5 Cumulative submission by Network of patients with new head and neck primaries of the larynx and oral cavity by ratio of low to high stage disease January 2004 - October 2008

Figure 8.5.a: Submission by network of patients with new head and neck primaries of the larynx and oral cavity by ratio of low to high stage disease January 2004-October 2008

Cancer Network	Low	High	Unknown	Total	Low:High Ratio
3 Counties	56	24	57	**137**	2.3
Anglia	181	111	156	**448**	1.6
Arden	18	29	99	**146**	0.6
Avon Somerset & Wiltshire	37	28	124	**189**	1.3
Central South Coast	9	7	19	**35**	1.3
Derby Burton	98	101	17	**216**	1.0
Dorset	96	64	10	**170**	1.5
Essex	77	68	31	**176**	1.1
Greater Manchester and Cheshire	34	30	150	**214**	1.1
Greater Midlands	18	16	67	**101**	1.1
Humber & Yorkshire Coast	39	30	44	**113**	1.3
Kent & Medway	7	7	18	**32**	1.0
Lancashire & South Cumbria	17	13	79	**109**	1.3
Leicestershire, Northamptonshire & Rutland	125	115	99	**339**	1.1
Merseyside and Cheshire	278	209	126	**613**	1.3
Mid Trent	164	121	154	**439**	1.4
Mount Vernon	35	50	42	**127**	0.7
North East London	36	18	5	**59**	2.0
North London	2	3	32	**37**	0.7
North of England	310	292	315	**917**	1.1
North Trent	126	86	40	**252**	1.5
Pan Birmingham	234	205	71	**510**	1.1
Peninsula	179	146	113	**438**	1.2
South East London	7	16	8	**31**	0.4
South West London	141	109	28	**278**	1.3
Surrey, West Sussex & Hants	31	32	47	**110**	1.0
Sussex	38	28	103	**169**	1.4
Thames Valley	24	38	180	**242**	0.6
West London	24	11	16	**51**	2.2
Yorkshire	272	255	124	**651**	1.1
England Total	2713	2262	2374	**7349**	1.2
North Wales	15	26	79	**120**	0.6
South East Wales	60	79	94	**233**	0.8
South West Wales	28	15	102	**145**	1.9
Wales Total	**103**	**120**	**275**	**498**	**0.9**
England and Wales Total	**2816**	**2382**	**2649**	**7847**	**1.2**

In preparation for future risk adjustment, a comparison of pooled submission since the inception of the audit by Network of the ratio of low to high stage disease was made to understand variation in presentation of the stage of disease.

The higher the ratio, the greater the predominance of low stage disease.

The ratio varied between 2.3:1 and 0.4:1, with an average in England of 1.2:1 and in Wales of 0.9:1. This supports the initial presumption of a geographic variation in the stage of disease in presentation across England and Wales.

Caution should be made in interpreting data from networks whose submission rates or the level of recording stage are poor.

With this years addition to the cumulative data (2603 cases) there is continued support of the earlier finding of geographic variation in the presentation of disease by stage. A comparison of five networks with high levels of submission (shown below) demonstrates that the ratio in 2006–2007 is little changed when compared to 2007-2008

8.5.b Comparison of five Networks with large numbers of submissions. Comparing ratios of low to high stage disease in the third and fourth annual report

Cancer Network	06/07 Total	Low:High Ratio	07/08 Total	Low:High Ratio
North of England	636	1.1	917	1.1
Pan Birmingham	367	1.2	510	1.1
Peninsula	300	1.3	438	1.2
Yorkshire	514	1.1	651	1.1
Mersey and Cheshire	402	1.6	613	1.3

8.5.1 Submission by Network of patients who underwent surgery of the larynx and oral cavity where recording of pre treatment and post resective pathological staging is identified in the index period

8.5.1 Submission by Network of patients who underwent surgery of the larynx and oral cavity where recording of pre treatment and post resective pathological staging is identified in the index period

Cancer Network	T and N recorded pre-treatment	Number with surgery	T and N recorded post surgery
3 Counties	78	47	35
Anglia	214	81	9
Arden	23	26	5
Avon Somerset & Wiltshire	86	27	9
Central South Coast	28	27	1
Derby Burton	56	50	40
Dorset	97	40	36
Essex	116	37	28
Greater Manchester and Cheshire	20	33	0
Greater Midlands	57	10	1
Humber & Yorkshire Coast	29	30	0
Kent and Medway	0	1	0
Lancashire & South Cumbria	119	11	5
Leicestershire, Northamptonshire & Rutland	94	56	27
Merseyside and Cheshire	125	26	15
Mid Trent	111	140	71
Mount Vernon	92	53	16
North East London	48	22	19
North London	0	0	0
North of England	326	179	99
North Trent	97	46	31
Pan Birmingham	133	85	55
Peninsula	221	65	47
South East London	27	25	1
South West London	131	11	3
Surrey, West Sussex & Hants	61	0	0
Sussex	85	11	10
Thames Valley	46	83	2
West London	20	18	2
Yorkshire	165	91	69
England Total	**2705**	**1331**	**636**
North Wales	63	34	15
South East Wales	110	75	31
South West Wales	58	74	18
Wales Total	**231**	**183**	**64**
England and Wales Total	**2936**	**1514**	**700**

- Of the 2936 diagnoses where T and N staging category were recorded, 1514 underwent surgery. Of the 1514 surgical cases, all of which would be expected to have resective pathological staging (pTNM), 700 had post surgery T and N category recorded. This represents 46 per cent of the surgical treatment group.

- 8 Networks show high levels of post surgery T and N category and are to be congratulated.

- pTNM remains the gold standard in the staging of cancer. MDTs should be discussing all pathological staging and this is an important point in the patient pathway to record information. Networks and surgical teams should recognise the importance of this in any future analysis of treatment effectiveness and survival.

8.6 Are factors relevant to risk adjustment being recorded?

8.6.1 Distribution of performance status at point of treatment decision

Figure 8.6.1: Larynx; Oral cavity; Oropharynx; Hypopharynx; Distribution of performance status at point of treatment decision.

Performance status	Percentage of 1973 recorded values
0. Able to carry out all normal activity without restriction	35.6
1. Restricted in physically strenuous activity	17.5
2. Able to walk and capable of all self care but unable to carry out any work	7.5
3. Capable of only limited self care	3.3
4. Completely disabled	0.8
5. Not recorded	35.3
Total	**100.0**

- 3586 patients had at least one careplan (a careplan represents the point in the patient pathway where a plan of treatment is proposed and thus an appropriate point to assess and record a patient's fitness).

- 1973 patients had performance status recorded, which is 53.7 per cent of the total registrations in the four sub sites. This equates to 55 per cent of patients with a recorded careplan.

- The completion of performance status is slowly improving.

- To facilitate risk adjustment further training on performance status and improved completeness is required. The figures for the first three annual reports suggest that the majority of patients have a normal performance status.

- This year the inclusion of patients with oropharynx and hypopharynx cancers shows a very similar distribution of performance status. The same risk factors are implicated in all anatomical subsite cancers, possibly this finding questions the sensitivity of the performance status tool. Co-morbidity data recording may be a more sensitive mechanism to identify the impact of other conditions on outcomes.

8.6.2 Presence or absence of significant co-morbidity at index point of diagnosis (ACE-27)

8.6.2.1 Summary of recorded co-morbidity

- 3227 patients with larynx, oral cavity, oropharynx and hypopharynx cancer had at least one recorded careplan.

- 828 patients had co-morbidity index recorded. This is 25.6 per cent of patients with a recorded careplan, which is 22.5 per cent of total registrations.

Figure 8.6.2.1: Larynx; Oral cavity; Oropharynx; Hypopharynx; Summary of recorded co-morbidity.

Grade	Percentage of 828 recorded values
Grade 0 - No co-morbidity	44.8
Grade 1 - Mild decompensation	30.2
Grade 2 - Moderate decompensation	16.9
Grade 3 - Severe decompensation	8.1
Total	**100**

Co-morbidity has been shown to have an important impact in assessing risk and to be an important predictor of outcome. Further effort will be put into training workshops to encourage completeness. All MDTs are encouraged to collect co-morbidity data. The ACE 27 [10] proforma can be found in appendix 2.

The figures in this year's report demonstrate that predominately patients show no or mild decompensation.

However, the percentage of those with moderate or severe decompensation varies from 15.5 per cent in oropharynx to 38.7 per cent in hypopharynx. The latter must be interpreted with some caution at this point as the numbers for hypopharynx are relatively small. The expert panels noted that in oropharynx it is increasingly being recognised that a subpopulation of patients have a different causation via HPV infection and these generally present younger, have fewer co-morbidities and are of better performance status.

A summary of the progress so far on risk adjustment can be found in Section 10.

The influence of factors such as co-morbidity and performance status can have a significant effect upon treatment outcomes. Therefore all MDTs are to be encouraged to collect these data set items to facilitate future risk adjustment .

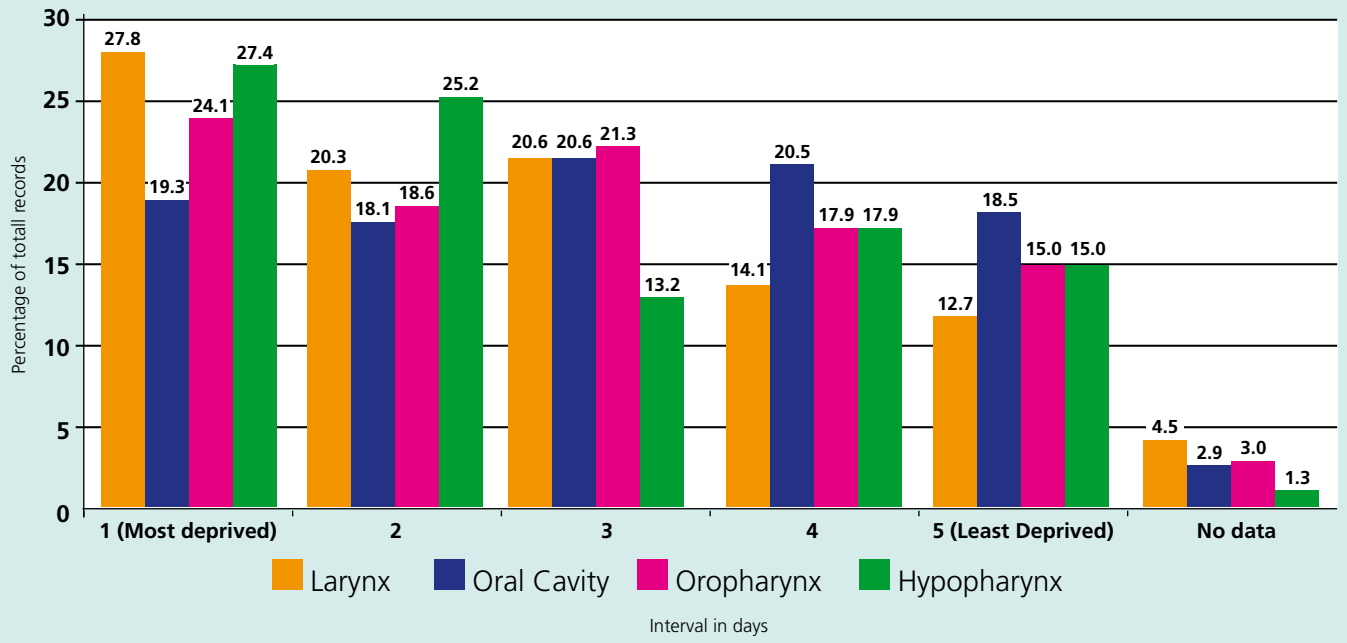
8.6.3 Deprivation analysis: Distribution of diagnosis, treatment and outcome by socio-economic Lower Super Output Areas, derived from the postcode in England and Wales

The Index of Multiple Deprivation 2007 (IMD 2007) was used as a measure of socio-economic deprivation and is applicable in England. The Welsh Index of Multiple Deprivation (WIMD 2008) was used as a measure of socio-economic deprivation and is applicable to Wales.

The lower the index score the greater the level of deprivation for each Lower Super Output Area (LSOA). For each country, these LSOAs were split into quintiles based on the same number of LSOAs (or as close to as possible) being in each quintile, thus the first quintile represents those who are most deprived. Each registration was assigned a quintile of deprivation.

8.6.3.1 Summary of registrations by deprivation in England and Wales

Figure: 8.6.3.1.a. Summary of registrations by deprivation in England

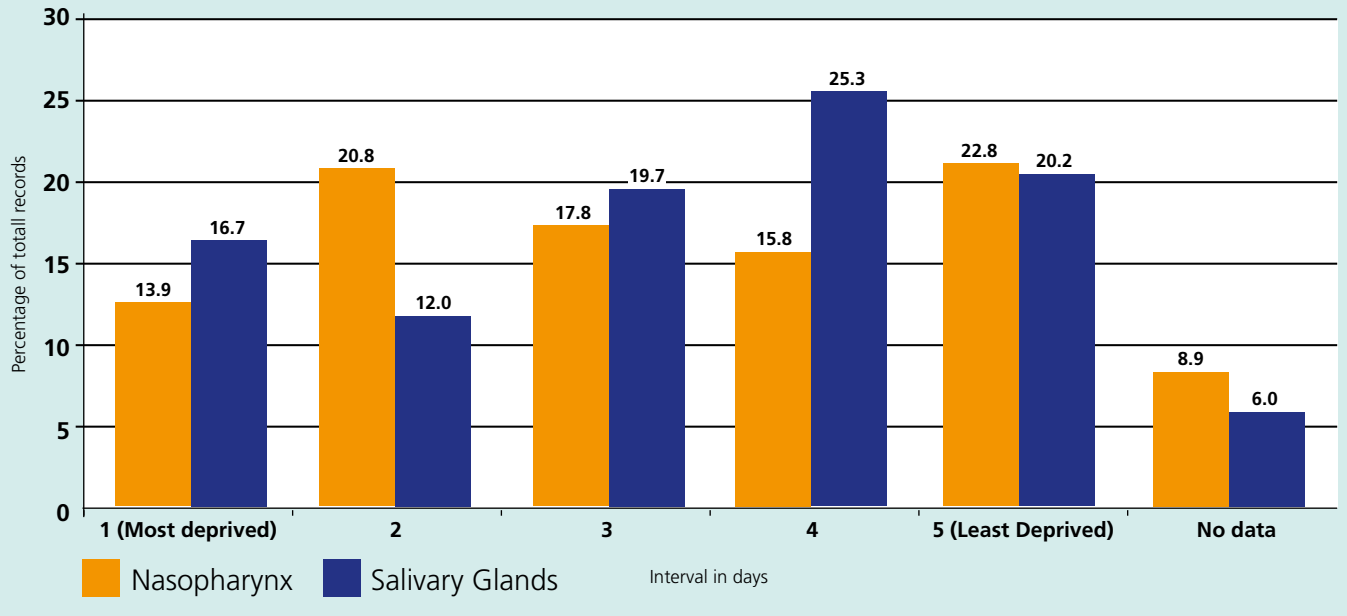


- The distribution of cases is more even across the deprivation quintiles for oral cavity and oropharynx.
- A greater number of larynx and hypopharynx registrations reside in areas of relative deprivation (quintiles 1 and 2).
- In Wales a less defined trend in larynx and a similar trend in hypopharynx is noted.

8.6.3.2 Deprivation and stage in England

Of the overall 3668 patients with larynx, oral cavity, hypopharynx and oropharynx cancer, 1995 had a

Figure: 8.6.3.1.b. Summary of registrations by deprivation in Wales



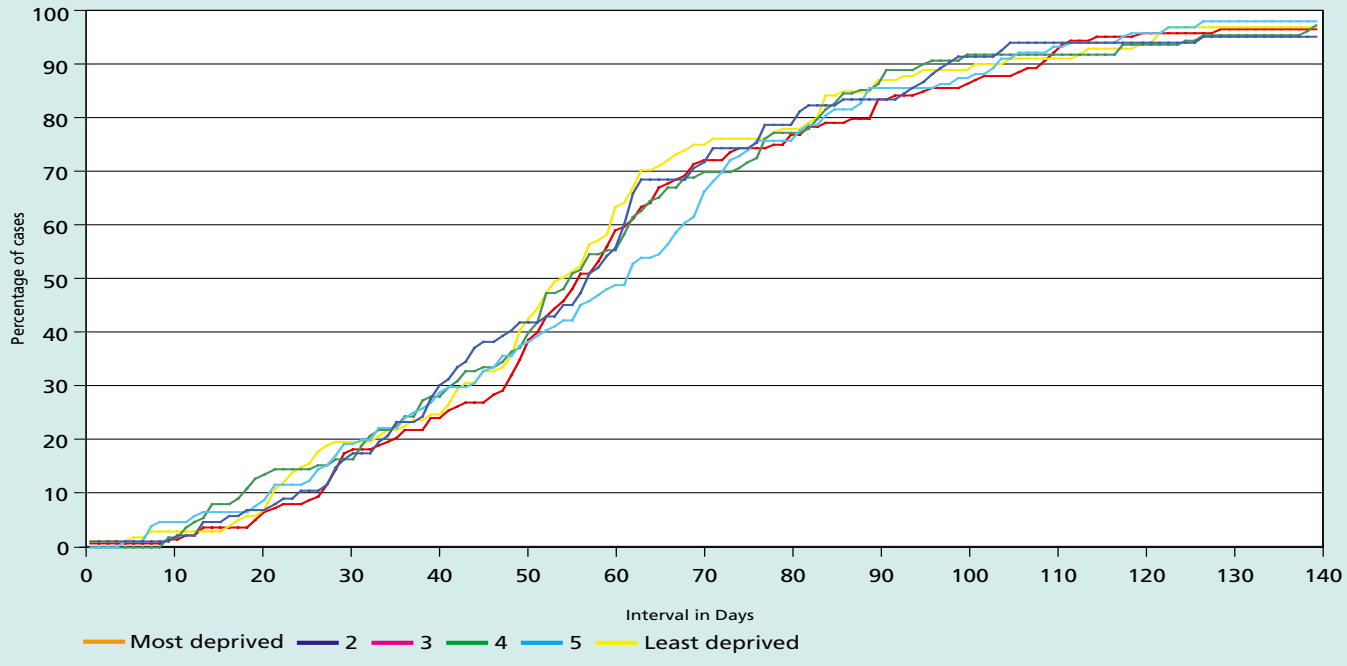
postcode that could be classified into a LSOA and had staging recorded to allow classification early or late stage disease. (632 larynx cancer, 724 oral cavity cancer, 514 oropharynx and 167 hypopharynx). At diagnosis in larynx and oral cavity cancer late stage disease is more likely in the most deprived, while amongst the least deprived low stage cancer is more common.

In oropharynx and hypopharynx late stage disease is more common across all quintiles, but there is no significant difference between the least and most deprived. This may be a reflection of the presentation pattern of this disease.

8.6.3.3 Deprivation and interval from onset of first symptom to referral in England

- It has been previously proposed that deprivation has a bearing on delayed presentation and delayed onward referral.
- The interval to first symptom has reduced significantly for oral cavity cancer in the last year, where in all deprivation quintiles it now appears as a shorter interval than in larynx cancer.
- The reasons for the above are not clear but may reflect a larger sample size or an improvement in patient access or pathway intervals.
- This year for the first time, larynx cancer appears to have significant delay in referral to first symptom in the least deprived group of patients. The reasons for this are not clear but may reflect the sample size or a variation in the population studied.

Figure: 8.4.5.4.a. Oropharynx - Interval from referral to first recorded treatment by socio-economic deprivation in England.



- The interval from referral to first recorded treatment by deprivation quintile for larynx, oral cavity and oropharynx shows near identical median values between the most deprived and least, which is comparable to previously reported figures for larynx and oral cavity.
- This is in contrast to a 20 day difference between the most deprived and least deprived evident in the first Annual Report.
- In hypopharynx, nasopharynx and major salivary gland cancer, a wide variation in referral to first recorded treatment by deprivation quintile is found. The expert panels attributed this variation to the small numbers in these sites. This area will be revisited in next year's annual report.

8.6.3.5 Proportion of registrations in each cancer network in England and Wales by quintile of deprivation January 2004-October 2008

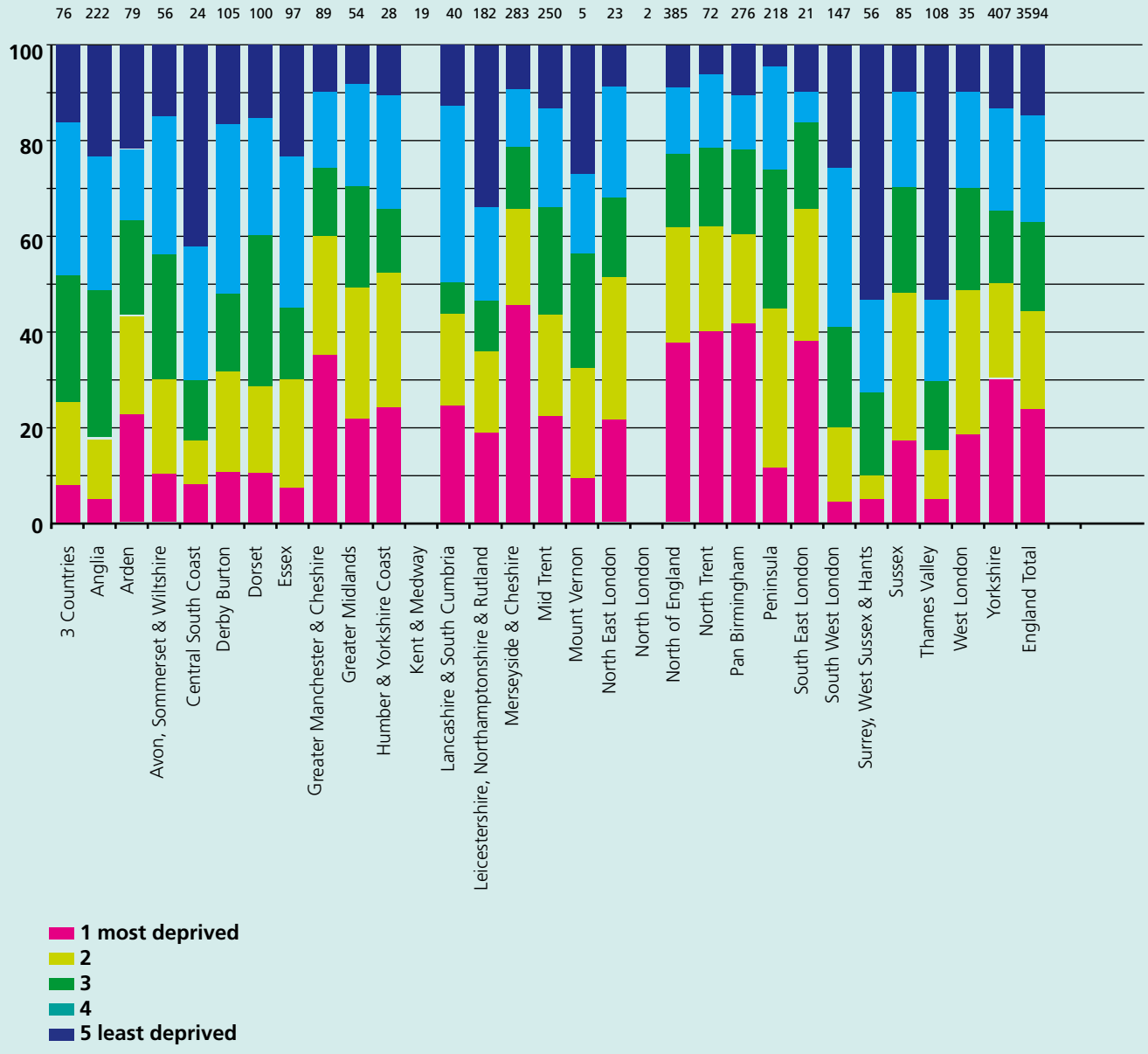
- A comparison between networks in England since the inception of the audit who have submitted greater than 20 larynx or oral cavity cases are shown in the rainbow charts. The total number

Figure 8.6.3.5.a: Larynx cancer registrations in England
Proportion of laryngeal registrations in each Cancer Network in England by quintile of deprivation, January 2004–October 2008

of cases submitted is shown at the top of the column.

- The small numbers in some networks mean that selection bias may influence the comparison.
- Differences in deprivation will be utilised in calculating risk adjustment in future reports.
- Differences in deprivation may influence the level of support particularly for social care required by each network for its head and neck services.
- In larynx cancer, the most deprived have a greater prevalence in the North of England, being 20 per cent above the England average in some networks. This position remains unchanged with the accumulation of additional data.
- In larynx cancer, the least deprived have a greater prevalence in the South of England, being 10 to 30 per cent below the England average in some networks.

Figure 8.6.3.5.b: Oral cavity cancer registrations in England
Proportion of oral cavity registrations in each Cancer Network in England by quintile of deprivation, January 2004–October 2008

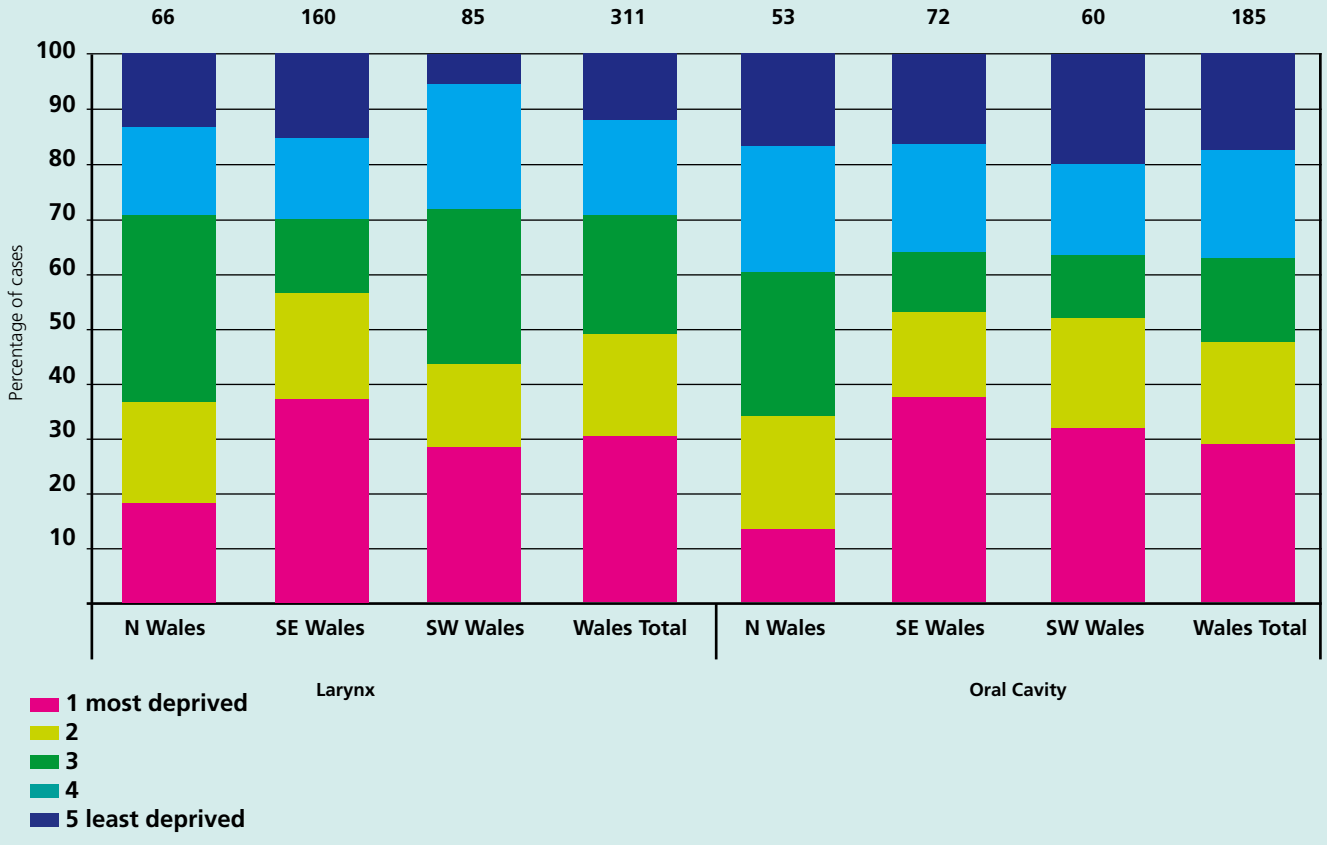


- In oral cavity cancer, the most deprived have a greater prevalence again in the North of England, being 10 to 15 per cent above the England average in some Networks.
- In oral cavity cancer, the least deprived have a greater prevalence in the South of England, being 15 to over 30 per cent below the England average in some Networks.

Figure: 8.6.3.5.b: Oral cavity cancer registrations in England

- In oral cavity cancer, the most deprived have a greater prevalence again in the North of England, being 10 to 15 per cent above the England average in some Networks.
- In oral cavity cancer, the least deprived have a greater prevalence in the South of England, being 15 to over 30 per cent below the England average in some Networks.
- In larynx and oral cavity in Wales, the most deprived have a greater prevalence in the South East of Wales, being 5 per cent above the Wales average however this has the greatest area of population density

Figure 8.6.3.5.b: Larynx, Oral cavity and Oropharynx registrations in Wales
Proportion of head and neck registrations in each Cancer Network in Wales by quintile of deprivation, January 2004–October 2008



8.7 Is care getting more timely?

8.7.1 The patient journey - diagnostic and staging process, waiting intervals

8.7.1.1 Source of referral to specialist team in England

8.7.1.1.1 All anatomic sites

Figure: 8.7.1.1.1.a. All anatomic sites; Source of referral to specialist team in England. (3551 cases)

Primary referral source	Two week wait from GP or dentist	Other	Not recorded	Total
GP	1530	586	23	2139
GDP / CDS	62	131	3	196
Emergency/A&E	2	82	2	86
Consultant referral	23	483	11	517
Self/Other	8	162	9	179
Unknown	33	249	152	434
Total	**1658**	**1693**	**200**	**3551**

The two week wait target for urgent cancer referral applies to England and figures above only include patients from England.

- There is a ratio of 2.6:1 in referral via the two week wait urgent referral pathway compared to other referral priorities, in referrals from general practitioners in those with diagnosed cancer. However, the audit has not sampled the total number of referrals from which these derived.
- In overall referrals from all sources there is a ratio of 0.98:1 via the two week wait urgent referral pathway compared to other referral priorities in those with diagnosed cancer. This is influenced by a significant number of consultant to consultant referral, indicating cooperation between specialist and non specialist colleagues.
- The pattern of referral from GPs for hypopharynx and oropharynx is similar to larynx.
- A comparison by Network of the ratio of referrals from general medical practitioners via the two week wait pathway shows a range from 1.2 to 18.0 where referrals were 50 or greater in number

Figure: 8.7.1.1.1.b All anatomic sites; Referrals from General Practitioners to specialist team in England by network and ratio of urgent two week wait referral route compared to other routes

Cancer Network	Number of referrals from GP	Ratio of patients referred by 2 week wait urgent cancer referral route to other routes
3 Counties	70	1.9
Anglia	68	3.9
Avon Somerset & Wiltshire	62	1.8
Dorset	66	1.8
Essex	75	2.6
Greater Manchester and Cheshire	66	2.0
Leicestershire, Northamptonshire & Rutland	190	3.4
Merseyside and Cheshire	95	18.0
Mid Trent	58	10.6
Mount Vernon	52	2.5
North of England	254	2.3
North Trent	61	1.2
Pan Birmingham	115	2.0
Peninsula	119	4.2
South West London	70	4.4
Sussex	68	1.4
Thames Valley	110	2.1
Yorkshire	172	1.9

- A comparison by network of the ratio of referrals from general medical practitioners via the two week wait pathway shows a range from 1.2 to 18.0 where referrals were 50 or greater in number. The higher the ratio the greater the number of cancers which were referred by the urgent two week wait referral path. There is a clear variation between networks.

- This may reflect different levels of knowledge or awareness amongst practitioners. These figures will be fed back to networks in the network report to review and will be reported in future years to confirm the variation.

8.7.1.1.2 Larynx

- There is a ratio of 2.35:1 in referral via the two week wait urgent referral pathway compared to other referral priorities, in referrals from general practitioners in those with diagnosed cancer. However, the audit has not sampled the total number of referrals from which these derived. It is noted however, that a significant number of non two week rule referrals occur via consultant to consultant referral, which indicates cooperation between colleagues, but also that referrals are not being channelled appropriately into the two week rule pathway.

- This compares in 2007 to 1.75:1,

8.7.1.1.3 Oral cavity – the role of the General Dental Practitioner

Figure: 8.7.1.1.3 Oral Cavity; Source of referral to specialist team in England (1099 cases)

Primary referral source	Two week wait from GP or dentist	Other	Not recorded	Total
GP	407	140	5	552
GDP / CDS	53	104	3	160
Emergency/A&E	1	22	0	23
Consultant referral	5	150	0	155
Self/Other	2	58	2	62
Unknown	11	97	39	147
Total	**479**	**571**	**49**	**1099**

The two week wait target for urgent cancer referral applies to England and figures above only include patients from England.

- There is a ratio of 2.9:1 in referral via the two week wait urgent referral pathway compared to other referral priorities, in referrals from general medical practitioners in those with diagnosed cancer, and a ratio of 0.51:1 for those referred under the two week wait from general dental practitioners (GDP) / Community Dental Services (CDS). There has been a small improvement in the number of cases sent in on the two week rule referral pathway from primary dental care services, but overall general dental practitioners do not appear to be embracing the two week rule referrals pathway in some networks and in others do not seem actively involved in the process. Cancer Networks should consider a strategy to enhance the role of the GDP in the cancer referral process.

- In 2007 the ratio was 2.16:1, for general medical practitioners and 0.3:1 for primary dental care services.

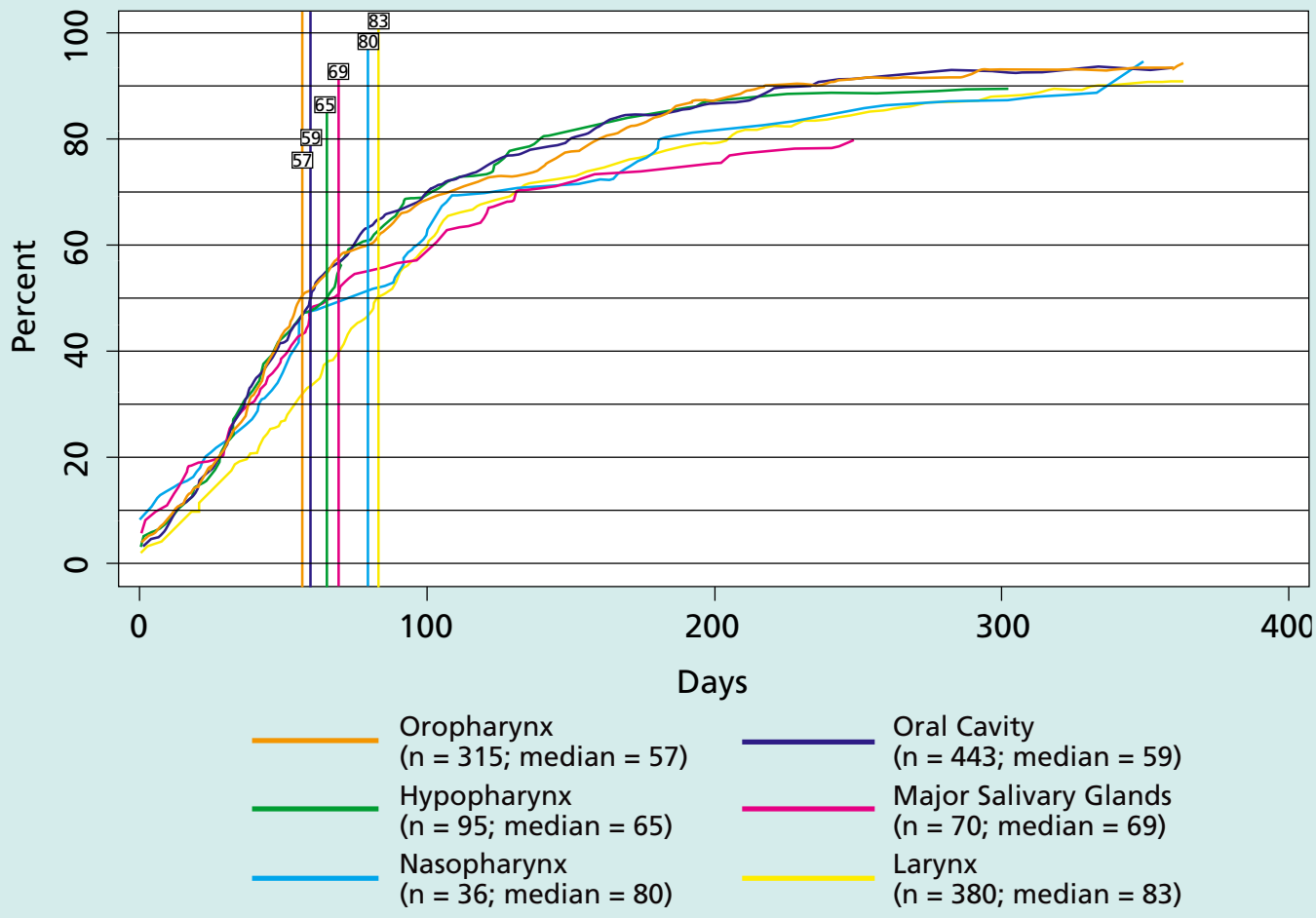
8.7.1.2 Summary as percentage of cases with both 'primary referral priority' and 'primary referral source' completed in England

8.7.1.2.1 Oral cavity

- 50.2 per cent of those diagnosed with oral cavity cancer are referred by their general practitioner while of the remaining 49.8 per cent, 14.1 per cent are referred from another consultant and 14.6 per cent from a general dental practitioner or the Community Dental Service however 9.5 per cent of these were not referred utilising an urgent referral pathway. The important role of general dental services in screening for oral cavity cancer is recognised, but further work is required to ensure referral urgency is appropriately applied.

8.7.1.3 Interval from first symptom to referral to specialist team

Figure: 8.7.1.3.a Interval from first symptom to referral to specialist team for index year November 2007 to October 2008.



- Patient recall of the onset of their first symptom to their point of referral is a crude indicator of patient awareness. The figures presented continue to suggest earlier presentation of oral cavity and oropharynx cancer (median interval 59 and 57 days) compared to other cancer sites (hypopharynx 65 days median interval and larynx 83 days). This confirms the trend previously seen in the first three years Annual Reports

The significance of delay in outcome and stage at presentation remains controversial.Increasing [11] [12] patient and practitioner awareness of suspicious symptoms should yield an early diagnosis, particularly in larynx cancer.

Practitioners should be encouraged to familiarise themselves with and utilise national referral guidelines. National referral guidelines (Referral Guidelines for Suspected Cancers) can be found at: www.dh.gov.uk/assetRoot/04/01/44/21/04014421.pdf.

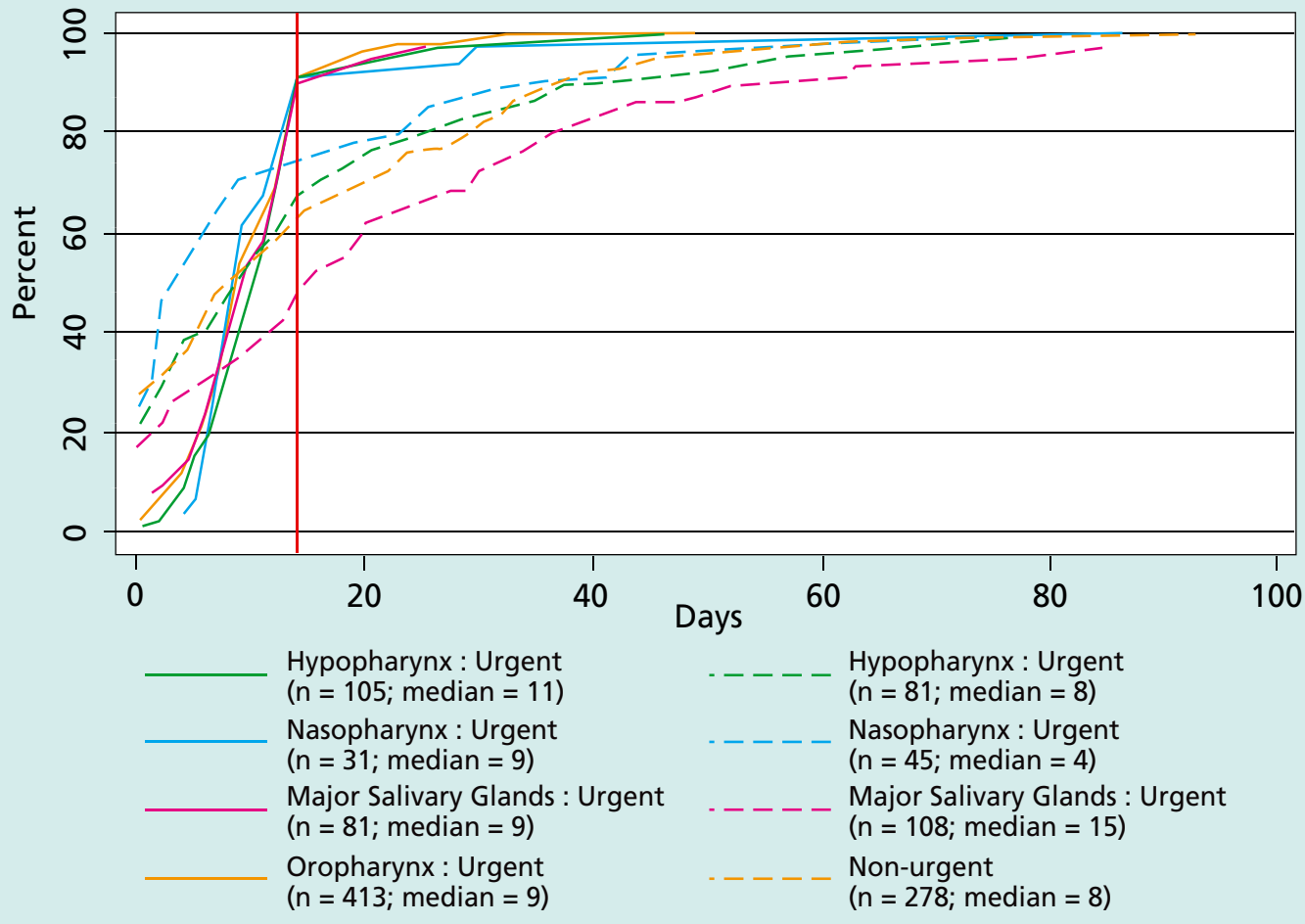
8.7.1.4 Interval from referral to first appointment in England

- The figure shows that for non two week wait referrals, 25 per cent have an interval from referral to first appointment of 0 days. This reflects self referrals, referrals to an Accident and Emergency Service and those seen on the day of phone or fax request.
- The two week wait rule for referral to first appointment was introduced in England in December 2000. This is designed to speed up the patient's entry into the cancer care pathway. The median for both larynx and oral cavity two week wait and other referrals is comfortably within the standard, showing that patients with suspicious symptoms independent of route of referral are seen promptly. Again, however 15 per cent of other referrals in the sample are waiting over one month for their first appointment, and would imply 10 per cent of two week wait patients are waiting over 14 days. The latter are not adjusted times and therefore do not take into account

patients choosing to wait over 14 days and those not attending first appointments. National cancer waiting times [13] , which take account of adjustments, show 100 per cent of those received within 24 hours and 93 per cent of those not received within 24 hours being seen within 14 days for "two week wait" patients.

- The introduction in December 2008 of "Going further on cancer waits" [14] , removes the ability for providers to adjust waiting times and therefore it would be expected in future reports that cancer wait times data would be equivalent.
- Understanding is growing of factors responsible for recognition of signs and symptoms in patients that encourage a visit to a doctor and dentist. Furthermore, the variation of the interval from first recognition of suspicious symptoms to diagnosis, as shown by this audit, beg questions of the psychological response to possible malignancy, not only by patients but also care-givers.

Figure: 8.7.1.4 Interval from referral to first appointment in England.



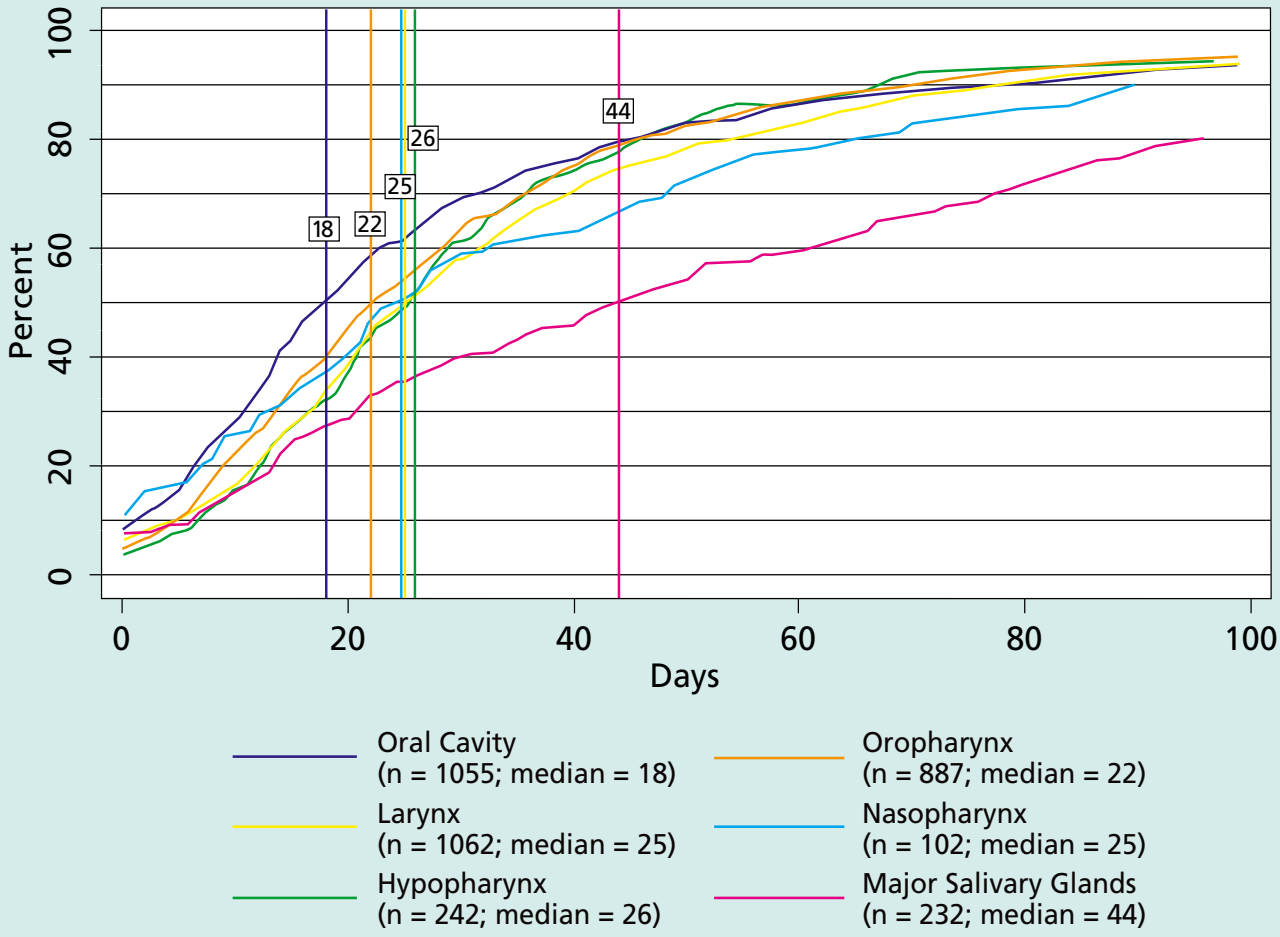
8.7.1.5 Interval from referral to diagnosis in England and Wales

A number of key events occur in the cancer care pathway, and the following three graphs reflect time intervals along that path.

The point of diagnosis reflects the date upon which a biopsy was taken rather than the date histology was reported. The date of the MDT meeting where care options were discussed is reflected in the date MDT management was planned. The careplan agreed date is the date upon which the treating clinician and patient agree that care pathway. The date of 'primary care notification' is the date that communication was sent to the primary care practitioner.

Anxiety promoted by uncertainty is acknowledged as the major psychological distress experience by patients following referral to specialist services for diagnostic investigation. This anxiety often reaches levels where clinical intervention is indicated. Reducing the interval between referral and diagnosis will attenuate 'case' level anxiety.

Figure: 8.7.1.5 Interval from referral to diagnosis in England and Wales.



- The apparent more rapid diagnosis of oral cavity cancers may be explained by the fact that many of these diagnoses can be achieved via local anaesthetic out-patient biopsy, whereas for laryngeal and pharyngeal cancers the requirement for general anaesthesia may induce additional delays.
- In both larynx and oral cavity cancer, patients may present initially with precancerous lesions that are carefully followed up over extended periods. This can, therefore, mean that their ultimate diagnosis of cancer from referral may not occur until a significant time has elapsed. This is likely to explain why the graph shows that only 95 per cent of patients reach a diagnosis by 100 days and then plateaux.
- For major salivary cancers the median interval from referral to diagnosis is significantly greater at 44 days. This may reflect the fact that obtaining an adequate biopsy may be difficult. However the pathology of malignant salivary tumours is notoriously difficult and cases are often referred for a tertiary opinion. Furthermore the majority of salivary lumps are benign and diagnostic pathology may be delayed until definitive surgery has been performed. Consideration should be given in all salivary lumps to perform definitive surgery at the earliest opportunity.

8.7.1.5.1 Time from biopsy to reporting

- A considerable improvement in the volume of data submitted for this item has occurred
- There are several methods of obtaining a biopsy in order to reach a diagnosis. The most appropriate method will be determined by the clinical presentation. This figure is a combination of data from cytological and histological specimens; these specimen types have different implications in terms of the complexity of interpretation and the types of diagnoses that can be made. Organisations should consider this complexity when reviewing pathways.

- The expert panels considered whether this represented delay in a small number of organisations or a variation within providers. The chart below reports by provider a breakdown for all cancer sites of an interval from biopsy to reporting of 10 days or less and greater than 10 days. Only those organisations contributing data on over 5 cases are presented and it should be noted non-submitters interval to reporting could be considerably poorer than the organisations presented.
- The chart is colour coded to show quartiles as follows: red displays those trusts with greater than or equal to 50 per cent of cases which have taken more than 10 days, amber displays those trusts with less than 50 per cent but greater than or equal to 25 per cent which have taken more than 10 days, finally green displays those trusts where less than 25 per cent of cases have taken more than 10 days.

Figure: 8.7.1.5.1 Time from biopsy to reporting by trust, for those trusts reporting greater than 5 cases

Hospital Trust	Period of wait (days)				
	< 10	< 10	> 10	> 10	Total
	N	%	N	%	N
Barking Havering and Redbridge University Hospitals NHS Trust	34	94	2	6	36
Blackpool, Fylde and Wyre Hospitals NHS Foundation Trust	23	77	7	23	30
Bradford Teaching Hospitals NHS Foundation Trust	32	55	26	45	58
Brighton and Sussex University Hospitals NHS Trust	14	93	1	7	15
Chesterfield Royal Hospital NHS Foundation Trust	23	88	3	12	26
City Hospitals Sunderland NHS Foundation Trust	82	95	4	5	86
Clatterbridge Centre for Oncology NHS Foundation Trust	4	67	2	33	6
Colchester Hospital University NHS Foundation Trust	12	48	13	52	25
County Durham and Darlington NHS Foundation Trust	23	100	0	0	23
Derby Hospitals NHS Foundation Trust	53	93	4	7	57
East and North Hertfordshire NHS Trust	10	71	4	29	14
East Sussex Hospitals NHS Trust	22	76	7	24	29
Gloucestershire Hospitals NHS Foundation Trust	12	80	3	20	15
Guy's and St Thomas' NHS Foundation Trust	26	76	8	24	34
Heart of England NHS Foundation Trust	37	93	3	8	40
Hereford Hospitals NHS Trust	10	83	2	17	12
Hull and East Yorkshire Hospitals NHS Trust	38	88	5	12	43
Ipswich Hospital NHS Trust	7	88	1	13	8
Lancashire Teaching Hospitals NHS Foundation Trust	12	57	9	43	21
Luton and Dunstable Hospital NHS Foundation Trust	41	91	4	9	45
Norfolk and Norwich University Hospitals NHS Foundation Trust	27	87	4	13	31
North Bristol NHS Trust	16	84	3	16	19
Northampton General Hospital NHS Trust	42	95	2	5	44
Oxford Radcliffe Hospitals NHS Trust	11	100	0	0	11
Plymouth Hospitals NHS Trust	24	92	2	8	26
Poole Hospital NHS Foundation Trust	72	75	24	25	96
Portsmouth Hospitals NHS Trust	9	53	8	47	17

Hospital Trust	Period of wait (days)				
	< 10	< 10	> 10	> 10	Total
	N	%	N	%	N
Royal Cornwall Hospitals Trust	12	100	0	0	12
Royal Devon and Exeter NHS Foundation Trust	34	79	9	21	43
Salford Royal NHS Foundation Trust	14	100	0	0	14
Sandwell and West Birmingham Hospitals NHS Trust	16	94	1	6	17
Sheffield Teaching Hospitals NHS Foundation Trust	38	93	3	7	41
South Devon Healthcare NHS Foundation Trust	38	88	5	12	43
South Tees Hospitals NHS Trust	80	98	2	2	82
Southend University Hospital NHS Foundation Trust	35	90	4	10	39
St George's Healthcare NHS Trust	19	70	8	30	27
Stockport NHS Foundation Trust	7	100	0	0	7
Tameside Hospital NHS Foundation Trust	34	87	5	13	39
The Newcastle Upon Tyne Hospitals NHS Foundation Trust	69	78	20	22	89
The North West London Hospitals NHS Trust	7	47	8	53	15
The Royal Marsden NHS Foundation Trust	39	78	11	22	50
The Royal West Sussex NHS Trust	9	90	1	10	10
The Royal Wolverhampton Hospitals NHS Trust	4	50	4	50	8
The Shrewsbury and Telford Hospital NHS Trust	20	71	8	29	28
United Lincolnshire Hospitals NHS Trust	35	76	11	24	46
University Hospital Birmingham NHS Foundation Trust	67	92	6	8	73
University Hospitals of Leicester NHS Trust	70	91	7	9	77
Whipps Cross University Hospital NHS Trust	8	100	0	0	8
Wirral University Teaching Hospital NHS Foundation Trust	23	82	5	18	28
Worcestershire Acute Hospitals NHS Trust	31	91	3	9	34
York Hospitals NHS Foundation Trust	71	96	3	4	74
WELSH NETWORK (WALES)	66	97	2	3	68
TOTAL	**1562**	**85**	**277**	**15**	**1839**

- The results show that both hypotheses are correct. Several organisations had over 40 per cent of cases having an interval from biopsy to reporting of over 10 days and few achieved a hundred per cent of 10 days and under.
- To improve the patient pathway process mapping may identify areas where delays in the whole pathway could be reduced (from taking of a biopsy, through to its reporting). Local MDTs should review regularly performance in the patient pathway.
- Manpower issues within pathology and in particularly head and neck pathology remain.

8.7.1.6 The multi-disciplinary team (MDT) and its functions

Figure: 8.7.1.6.a Summated analysis of multi-disciplinary discussion for index year.

Discussed	Percentage All Sites
Yes	93
No	7
Not recorded	1

Figure: 8.7.1.6.b. The multi-disciplinary team (MDT) and its functions by anatomic site.

	Percentage by site					
Discussed	Larynx	Oral Cavity	Oropharynx	Hypopharynx	Nasopharynx	Major Salivary Gland
Yes	93	93	91	96	93	88
No	6	6	8	3	5	12
Not recorded	1	1	1	1	2	0

Note: Although this table reflects the number of patients discussed at MDT and this report makes reference to the MDT meeting, we refer to the standard definition of MDT from IOG. The data collected for the head and neck cancer audit does not indicate the understanding of what constitutes MDT.

- Overall 93 per cent of patients were confirmed as having been discussed at an MDT meeting. This is a significant improvement from 74.2 per cent last year. The expected standard (proposed in the SWAHN audit 1997-1999) [15] suggested this should reach 100 per cent
- It is a standard in the Improving Outcomes Guidance that all patients are discussed in an MDT [16]
- However the not recorded category has reduced significantly from 20 per cent to 1 per cent.
- These results show that there has been a further increase in the number of patients whose management has been planned outside of an MDT. (5.8 per cent last year, 3.8 per cent 06 – 07) and has risen to 7 per cent this year recorded as not discussed at MDT
- It is encouraging that the assurance of discussion at an MDT has risen, but with this more comprehensive data there is also the concern that 7 per cent of patients are recorded as having their management planned outside an MDT. For major salivary cancer this is much higher at 12 per cent and this may reflect failure to capture discussion following surgical intervention and the acquisition of definitive histology. In larynx, oral cavity and oropharynx where there are large numbers of cases, it remains of concern that this number of patients has been identified as not having this key discussion
- The MDT is a key point of registration of a cancer diagnosis

100% of diagnoses should be discussed at a MDT, currently in England and Wales only 93% are recorded as having been discussed

- The expert panels considered whether the figures reported above were a reflection on a number of organisations failing to record information, or partial recording across a wider range of providers
- The chart below reports by provider the information supplied to the audit on MDT discussion. Care should be taken in assessing percentages where only small case numbers were submitted.

Note, percentages are based on care plans submitted not total patients submitted.

Figure: 8.7.1.6.c Analysis of multi-disciplinary discussion for index year by provider trust

Submitting Hospital	Discussed						
	No	No	Yes	Yes	Unknown	Unknown	Total
	N	%	N	%	N	%	N
Aintree University Hospitals NHS Foundation Trust	0	0	42	100	0	0	42
Barking Havering and Redbridge University Hospitals NHS Trust	1	2.8	35	97.2	0	0	36
Barnet and Chase Farm Hospitals NHS Trust	0	0	0	0	0	0	0
Barnsley Hospital NHS Foundation Trust	0	0	1	100	0	0	1
Barts and The London NHS Trust	0	0	5	100	0	0	5
Basildon and Thurrock University Hospital NHS Foundation Trust	0	0	8	100	0	0	8
Blackpool, Fylde and Wyre Hospitals NHS Foundation Trust	11	29.7	26	70.3	0	0	37
Bradford Teaching Hospitals NHS Foundation Trust	2	3.3	58	96.7	0	0	60
Brighton and Sussex University Hospitals NHS Trust	2	11.8	15	88.2	0	0	17
Burton Hospitals NHS Foundation Trust	0	0	4	100	0	0	4
Cambridge University Hospitals NHS Foundation Trust	0	0	108	100	0	0	108
Central Manchester University Hospitals NHS Foundation Trust	0	0	0	0	0	0	0
Chelsea and Westminster Hospitals Foundation Trust	0	0	0	0	0	0	0
Chesterfield Royal Hospital NHS Foundation Trust	1	3.2	30	96.8	0	0	31
City Hospitals Sunderland NHS Foundation Trust	1	1.1	92	98.9	0	0	93
Clatterbridge Centre for Oncology NHS Foundation Trust	0	0	13	100	0	0	13
Colchester Hospital University NHS Foundation Trust	0	0	26	100	0	0	26
County Durham and Darlington NHS Foundation Trust	0	0	25	100	0	0	25
Countess Of Chester Hospital NHS Foundation Trust	0	0	0	0	0	0	0
Derby Hospitals NHS Foundation Trust	2	3.3	59	96.7	0	0	61
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	0	0	21	100	0	0	21
Ealing Hospital NHS Trust	0	0	0	0	0	0	0
East and North Hertfordshire NHS Trust	1	1.4	69	98.6	0	0	70
East Kent Hospitals NHS Trust	0	0	0	0	0	0	0
East Lancashire Hospitals NHS Trust	0	0	0	0	0	0	0
East Sussex Hospitals NHS Trust	5	14	30	86	0	0	35
Epsom and St Helier University Hospitals NHS Trust	0	0	0	0	0	0	0
Gloucestershire Hospitals NHS Foundation Trust	0	0	36	100	0	0	36
Great Western Hospitals NHS Foundation Trust	5	83.3	1	16.7	0	0	6
Guy's and St Thomas' NHS Foundation Trust	1	2.9	34	97.1	0	0	35
Heart of England NHS Foundation Trust	0	0	41	100	0	0	41

Submitting Hospital	Discussed						
	No	No	Yes	Yes	Unknown	Unknown	Total
	N	%	N	%	N	%	N
Heatherwood and Wexham Park Hospitals NHS Foundation Trust	0	0	22	100	0	0	22
Hereford Hospitals NHS Trust	2	15.4	11	84.6	0	0	13
Hillingdon Hospital NHS Trust (Mount Vernon Cancer Centre)	0	0	5	100	0	0	5
Homerton University Hospital NHS Trust	0	0	0	0	0	0	0
Hull and East Yorkshire Hospitals NHS Trust	0	0	63	100	0	0	63
Imperial College Healthcare NHS Trust	0	0	1	100	0	0	1
Ipswich Hospital NHS Trust	0	0	6	100	0	0	6
Lancashire Teaching Hospitals NHS Foundation Trust	7	10.4	57	85.1	3	4.5	67
Luton and Dunstable Hospital NHS Foundation Trust	0	0	46	100	0	0	46
Maidstone and Tunbridge Wells NHS Trust	0	0	0	0	0	0	0
Medway NHS Trust	0	0	0	0	0	0	0
Mid Staffordshire NHS Foundation Trust	0	0	3	100	0	0	3
Mid-Essex Hospital Services NHS Trust	1	2.9	34	97.1	0	0	35
Milton Keynes Hospital NHS Foundation Trust	0	0	0	0	0	0	0
Norfolk and Norwich University Hospitals NHS Foundation Trust	5	4.5	103	93.6	2	1.8	110
North Bristol NHS Trust	21	33.3	42	66.7	0	0	63
North Cheshire Hospitals NHS Trust	0	0	0	0	0	0	0
North Cumbria University Hospitals NHS Trust	0	0	24	100	0	0	24
Northampton General Hospital NHS Trust	1	1.5	66	98.5	0	0	67
Northern Devon Healthcare NHS Trust	2	100	0	0	0	0	2
Nottingham University Hospitals NHS Trust	1	0.7	127	94.8	6	4.5	134
Oxford Radcliffe Hospitals NHS Trust	7	5	129	92.8	3	2.2	139
Plymouth Hospitals NHS Trust	8	13.8	50	86.2	0	0	58
Poole Hospital NHS Foundation Trust	0	0	96	100	0	0	96
Portsmouth Hospitals NHS Trust	0	0	22	100	0	0	22
Queen Victoria Hospital NHS Foundation Trust	0	0	0	0	0	0	0
Royal Cornwall Hospitals Trust	21	37.5	35	62.5	0	0	56
Royal Devon and Exeter NHS Foundation Trust	6	10.7	47	83.9	3	5.4	56
Royal Liverpool and Broadgreen University Hospitals NHS Trust	0	0	3	100	0	0	3
Royal Surrey County Hospital NHS Trust	0	0	0	0	0	0	0
Royal United Hospital Bath NHS Trust	0	0	2	100	0	0	2
Salford Royal NHS Foundation Trust	0	0	1	33.3	2	66.7	3
Salisbury NHS Foundation Trust	0	0	0	0	0	0	0

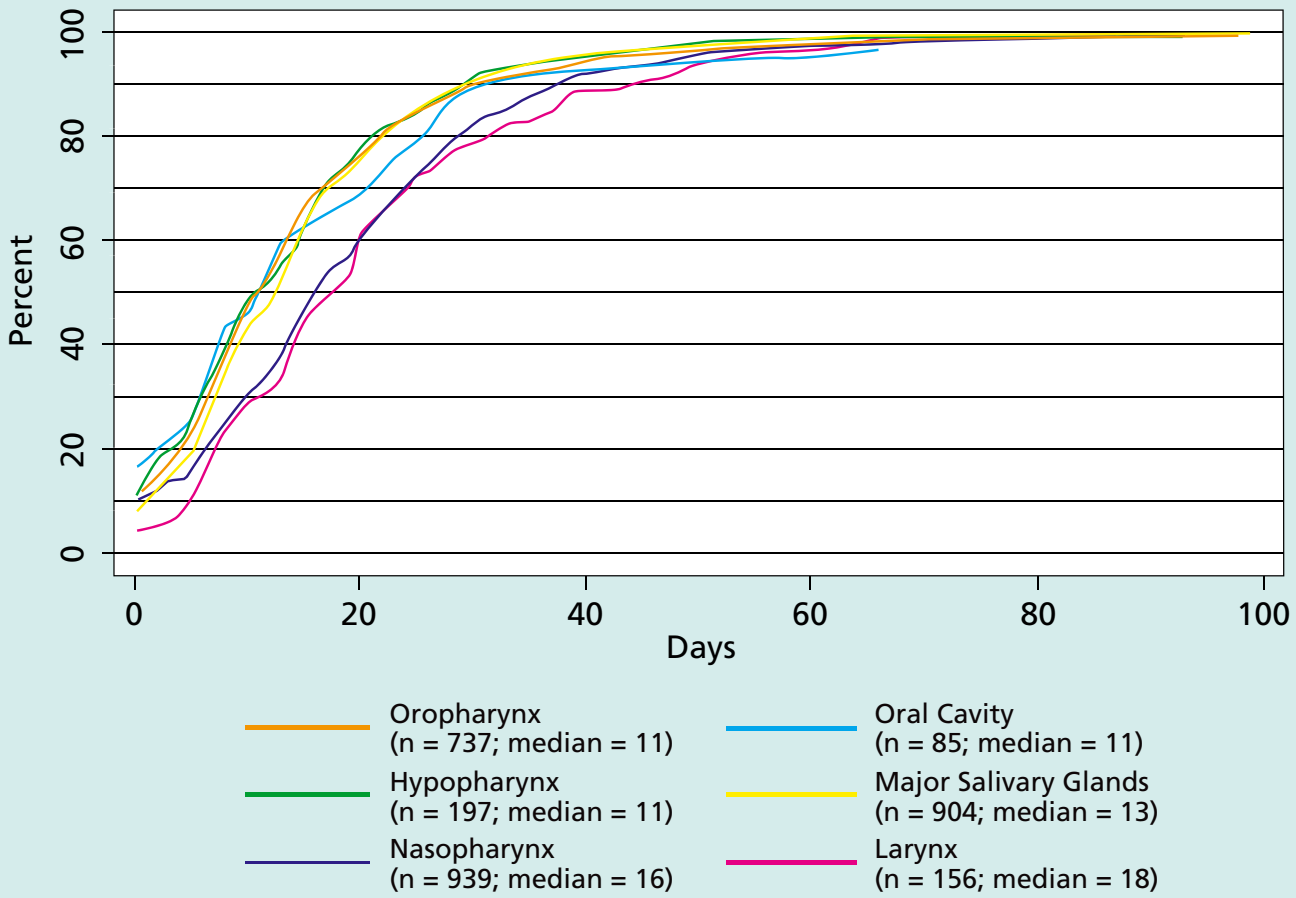
Submitting Hospital	Discussed						
	No	No	Yes	Yes	Unknown	Unknown	Total
	N	%	N	%	N	%	N
Sandwell and West Birmingham Hospitals NHS Trust	0	0	23	100	0	0	23
Sheffield Teaching Hospitals NHS Foundation Trust	0	0	51	100	0	0	51
South Devon Healthcare NHS Foundation Trust	6	13	40	87	0	0	46
South Tees Hospitals NHS Trust	2	2	100	98	0	0	102
Southampton University Hospitals NHS Trust	2	8.7	21	91.3	0	0	23
Southend University Hospital NHS Foundation Trust	0	0	45	100	0	0	45
St George's Healthcare NHS Trust	0	0	79	100	0	0	79
St Helen's and Knowsley Teaching Hospitals NHS Trust	0	0	0	0	0	0	0
Stockport NHS Foundation Trust	0	0	3	100	0	0	3
Tameside Hospital NHS Foundation Trust	2	25	6	75	0	0	8
Taunton and Somerset NHS Foundation Trust	0	0	2	100	0	0	2
The Leeds Teaching Hospitals NHS Trust	0	0	41	100	0	0	41
The Newcastle Upon Tyne Hospitals NHS Foundation Trust	1	0.7	137	99.3	0	0	138
The North West London Hospitals NHS Trust	0	0	25	100	0	0	25
The Pennine Acute Hospitals NHS Trust	0	0	3	100	0	0	3
The Rotherham NHS Foundation Trust	0	0	1	100	0	0	1
The Royal Marsden NHS Foundation Trust	0	0	56	100	0	0	56
The Shrewsbury and Telford Hospital NHS Trust	0	0	29	100	0	0	29
The Royal West Sussex NHS Trust	0	0	10	100	0	0	10
The Royal Wolverhampton Hospitals NHS Trust	15	55.6	12	44.4	0	0	27
Trafford Healthcare NHS Trust	0	0	0	0	0	0	0
United Lincolnshire Hospitals NHS Trust	0	0	75	100	0	0	75
University College London Hospitals NHS Foundation Trust	0	0	45	100	0	0	45
University Hospital Birmingham NHS Foundation Trust	9	8.7	95	91.3	0	0	104
University Hospital of North Staffordshire NHS Trust	0	0	7	100	0	0	7
University Hospital of South Manchester NHS Foundation Trust	0	0	4	100	0	0	4
University Hospitals Coventry and Warwickshire NHS Trust	0	0	48	94.1	3	5.9	51
University Hospitals of Leicester NHS Trust	0	0	84	100	0	0	84
University Hospitals of Morecambe Bay NHS Trust	4	100	0	0	0	0	4
Warrington and Halton Hospitals NHS Foundation Trust	0	0	0	0	0	0	0
West Middlesex University Hospital NHS Trust	0	0	4	100	0	0	4
Whipps Cross University Hospital NHS Trust	0	0	9	100	0	0	9

Submitting Hospital	Discussed						
	No	No	Yes	Yes	Unknown	Unknown	Total
	N	%	N	%	N	%	N
Wirral University Teaching Hospital NHS Foundation Trust	8	38.1	13	61.9	0	0	21
Worcestershire Acute Hospitals NHS Trust	0	0	52	100	0	0	52
Worthing and Southlands Hospitals NHS Trust	6	85.7	1	14.3	0	0	7
Wrightington, Wigan and Leigh NHS Foundation Trust	0	0	0	0	0	0	0
York Hospitals NHS Foundation Trust	2	2.5	78	97.5	0	0	80
WELSH NETWORK (WALES)	61	16.8	298	81.9	5	1.4	364
Total	**232**	**6.6**	**3271**	**92.7**	**27**	**0.8**	**3530**

- 54 organisations who submitted over 10 cases to the audit discussed over 85 per cent of cases (unadjusted for dates of diagnosis after 1.10.08) at MDT providing assurance of an aspect of their patient care and should be commended.
- 4 organisations who submitted over 10 diagnoses stated significant numbers of patients as not having being discussed at MDT. Cancer leads may wish to consider whether this reflects poor data quality or issues about the function and availability of the MDT. Whilst it is possible that for a small tumour, excision biopsy may be curative, it would still be expected that these cases would be discussed at MDT.
- Analysis by trust of MDT discussion will be a regular feature of future reports being a universally accepted best practice in head and neck cancer care.

Patient expectations are that all care discussions are being made at a MDT, and head and neck cancer teams need to provide assurance around this important aspect of care delivery. 54 organisations have provided this.

Figure: 8.7.1.7.1.a. Interval from diagnosis to MDT ('triage' date)



8.7.1.7 Interval from diagnosis to decision to treat

8.7.1.7.1 Interval from diagnosis to MDT ('triage' date)

- The median interval from diagnosis to MDT varies from 11 – 18 days.
- There has been a further small reduction in this interval for larynx and oral cavity patients.
- The interval from diagnosis to MDT reflects transfer of the biopsy to the laboratory, processing of the specimen and its reporting, receipt of the report and booking to the next MDT. An interim step can be a return to outpatients when an unexpected diagnosis arises.
- 10 per cent of patients with laryngeal cancer and 20 per cent with oral cavity cancer have their MDT management planned in more than 30 days from the biopsy being taken. The difference between larynx and oral cavity is evident again in this year's report. The reasons for this difference remain unclear.
- To examine whether there is variation in interval within organisations or variation in different providers the chart below compares those diagnoses where the interval from diagnosis is less than 30 days and those of 30 days or longer.

Figure: 8.7.1.7.1.a. Percentage of patients with interval to diagnosis with MDT (triage date) of less than 30 days

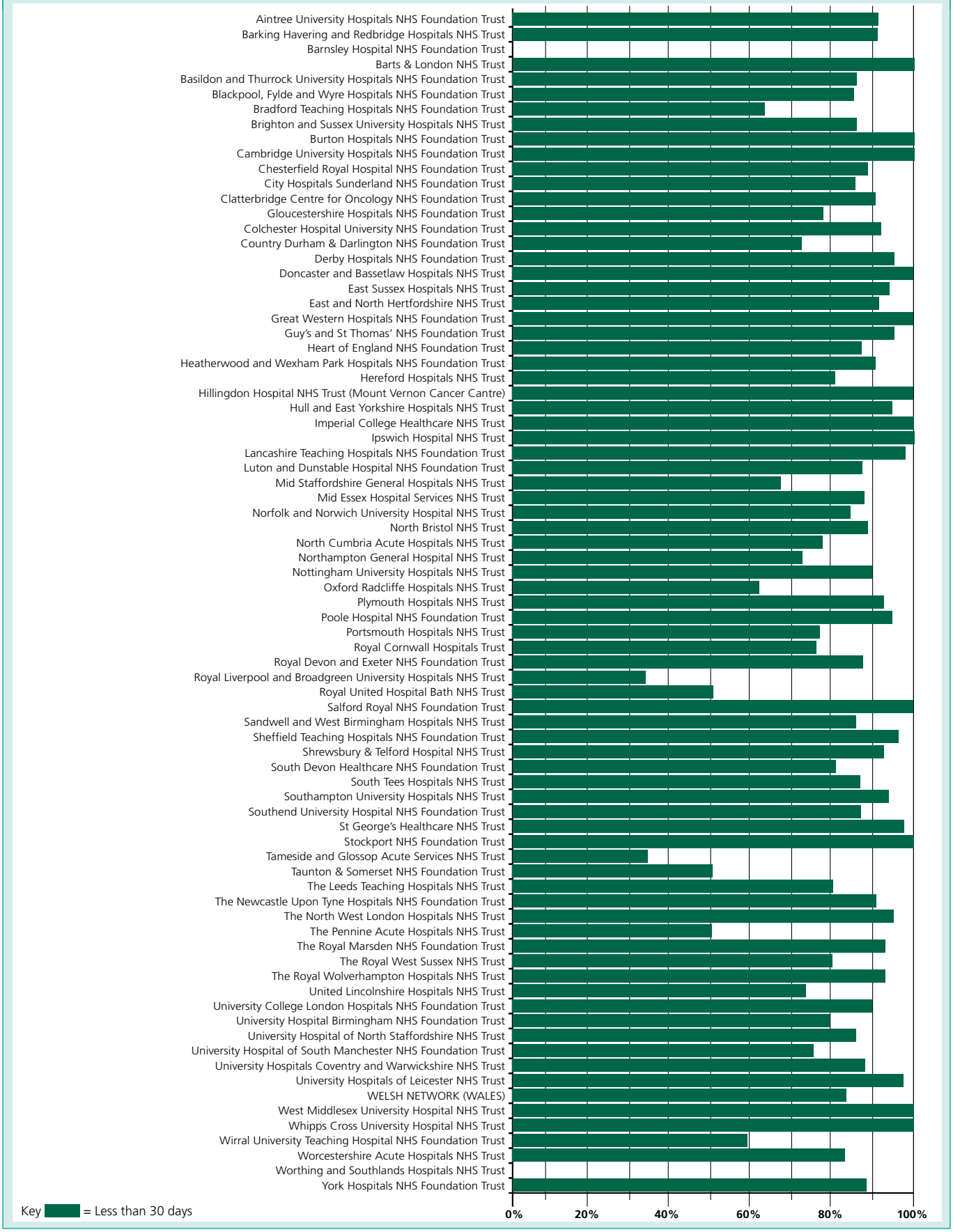


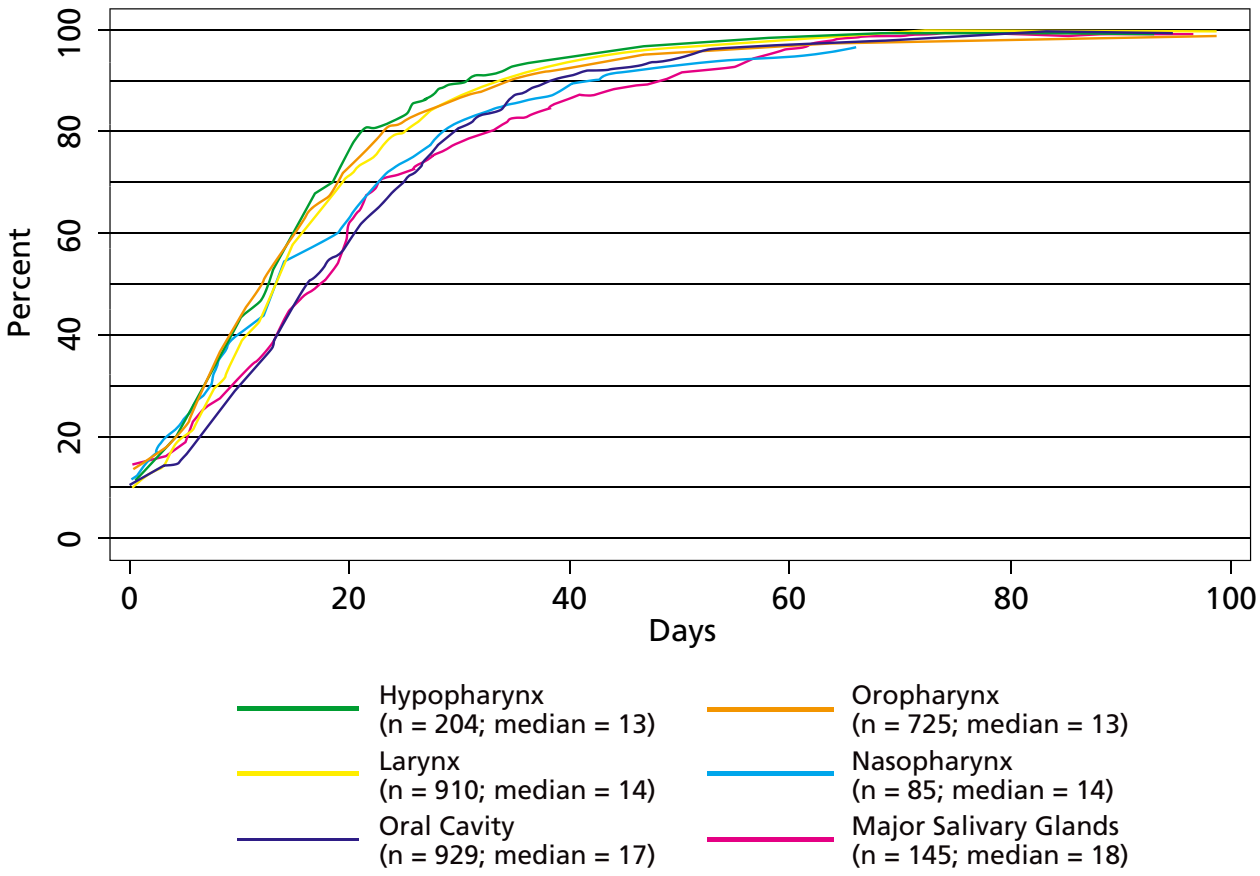
Figure: 8.7.1.7.1.b Interval diagnosis to MDT by provider trust of less than 30 days

- In a minority of organisations (17 per cent) all patients have an interval from diagnosis to MDT of less than 30 days, whilst in 22 per cent of organisations over one fifth of patients exceed 30 days.
- Local teams should regularly monitor patient's pathway intervals and work with service improvement leads where regular delay is seen for both "two week wait" patients and those of other priorities.
- This has changed little from previous years reports.

The interval between diagnosis and treatment is critical for patients' psychological response, especially the hope of a possible cure against the burden of the treatment process. Sensitive access of information by the health care team to patients may assist their response.

8.7.1.7.2 Interval from diagnosis to date care plan agreed

Figure: 8.7.1.7.2 Interval from diagnosis to date care plan agreed



- The median interval from diagnosis to date careplan agreed for larynx patients is 14 days, for oral cavity patients it is 17 days. These figures represent small improvements on last year's figures.
- In 16 per cent of patients this interval is greater than 30 days. The expert panels wondered whether this reflected teams with fortnightly MDTs, rather than the expected weekly meetings.
- This chart appears to demonstrate that the majority of careplans are agreed within a short interval of the MDT meeting.

8.7.1.8 Number and percentage with histological confirmation prior to cancer careplan

Figure: 8.7.1.8.a. Number of cases with histological confirmation prior to cancer careplan

Number of cases	Larynx	Oral cavity	Oropharynx	Hypopharynx	Nasopharynx	Major Salivary Gland	ALL
Yes	335	336	227	87	21	33	1039
No	68	113	77	21	5	34	318
Total	**403**	**449**	**304**	**108**	**26**	**67**	**1357**

Figure: 8.7.1.8.b. Percentage with histological confirmation prior to cancer careplan

As percentage of cases with both dates recorded	Larynx	Oral cavity	Oropharynx	Hypopharynx	Nasopharynx	Major Salivary Gland	ALL
Yes	83.1	74.8	74.7	80.6	80.8	49.3	76.6
No	16.9	25.2	25.3	19.4	19.2	50.7	23.4
Total	100	100	100	100	100	100	100

- 1960 patients can be associated with a date of pathology report, and 1357 of these patients have a careplan agreed date
- Of these, 1039 (76.6 per cent) have histological confirmation recorded before the careplan.
- It should be noted that the analysis this year is based on the date pathology is reported rather than the date a biopsy was taken (as used in the 3rd Annual Report) Colleagues are encouraged to record the field date pathology report to improve data quality for this item
- In head and neck cancer, it would be expected that all patients would have histological confirmation of a tumour prior to the agreement of a careplan.
- There is a significant risk in proceeding to a cancer careplan without written histological confirmation of diagnosis, as rarely other conditions such as tuberculosis can mimic cancer.

8.7.1.9 Number and percentage with staging information recorded at time of cancer careplan

The percentage with staging information recorded at the time of cancer careplan reflects the percentage of patients with a careplan (indicated by record of management planned date or non-blank careplan agreed date) with recorded T, N or M diagnostic staging. This is a stricter definition than used in the third Annual Report, with an entry required in each of the T, N and M categories to be included.

3530 patients have a careplan date (recorded entry in careplan agreed date, or recorded entry in management planned date).

2143 have diagnostic T, N and M staging recorded.

The tables summarise those 3530 records with a careplan date:

Figure: 8.7.1.9.a. Number of cases with staging information recorded at time of cancer careplan

Number	Larynx	Oral Cavity	Oropharynx	Hypopharynx	Nasopharynx	Major salivary gland	Total
Yes	641	686	560	111	44	101	**2143**
No	380	413	311	115	57	111	**1387**
Total	1021	1099	871	226	101	212	**3530**

Figure: 8.7.1.9.b. Percentage with staging information recorded at time of cancer careplan

Number	Larynx	Oral cavity	Oropharynx	Hypopharynx	Nasopharynx	Major Salivary Gland	Total
Yes	62.8	62.4	64.3	49.1	43.6	47.6	**60.7**
No	37.2	37.6	35.7	50.9	56.4	52.4	**39.3**
Total	100	100	100	100	100	100	**100**

- Overall, of those patients with a recorded careplan, 60.7 per cent had complete recorded staging information. The criteria for inclusion this year have been tightened and the 60 per cent figure will be used as a baseline in future report.
- Staging of tumours is a critical part of the treatment pathway as well as being a key determinant of outcome, and is a key medical responsibility.
- All MDTs should continue to be encouraged to complete and validate staging information and validate outcome. It is important that the information is recorded on T category, N category and M category for complete staging. Whilst the incidence of distant metastasis in head and neck cancer is small a value for the M category should still be entered and should not be defaulted to "blank" or "Mx".

The expert panels are unanimous that all MDTs must ensure the recording of accurate staging information in 100 per cent of patients.

8.7.1.10 Percentage having chest imaging by chest x-ray (CXR) or chest computerised tomography (CT) prior to cancer careplan

Of 3540 patients with care plans, 2459 patients have an imaging event recorded (70 per cent). 1838 patients have both a record of chest imaging by chest x-ray or chest CT and a cancer careplan agreed date.

Figure: 8.7.1.10.a. Number and percentage of cases having chest imaging by chest x-ray (CXR) or chest computerised tomography (CT) prior to cancer careplan

Chest imaging performed	All sites	Percentage
Same day or before careplan	1601	65.1
Imaging after careplan	237	9.6
Total with chest imaging	1838	74.7
No chest imaging recorded	621	25.3
Total	2459	100

- Chest imaging data is recorded for 74.7 per cent of patients with an imaging event recorded (1838 of 2459). This represents 61 per cent of patients with a care plan and 46 per cent of patients overall.
- Where both imaging and careplan data is recorded, 65.1 per cent have chest imaging by x-ray or CT prior to careplan.
- When analysed by anatomic site for chest imaging prior to cancer careplan, larynx, hypopharynx, and nasopharynx showed similar results (72 to 75 per cent having chest imaging prior), whilst oral cavity and oropharynx .showed a lower result (60 to 63 per cent). The lowest figure was for salivary gland (40 per cent).
- The difference reported by subsite may reflect patient pathways where for example an examination under general anaesthetic occurs with a pre-assessment process that requests chest imaging as part of the patient work up.
- This output was intended to reflect best practice where due to the recognised incidence of second primary lung cancers [17], chest imaging should occur prior to a cancer careplan in all patients.
- The level of completeness has improved for this item, but assurance is only provided for less than two thirds of all patients in the annual report. MDTs should be strongly encouraged to collect this information.

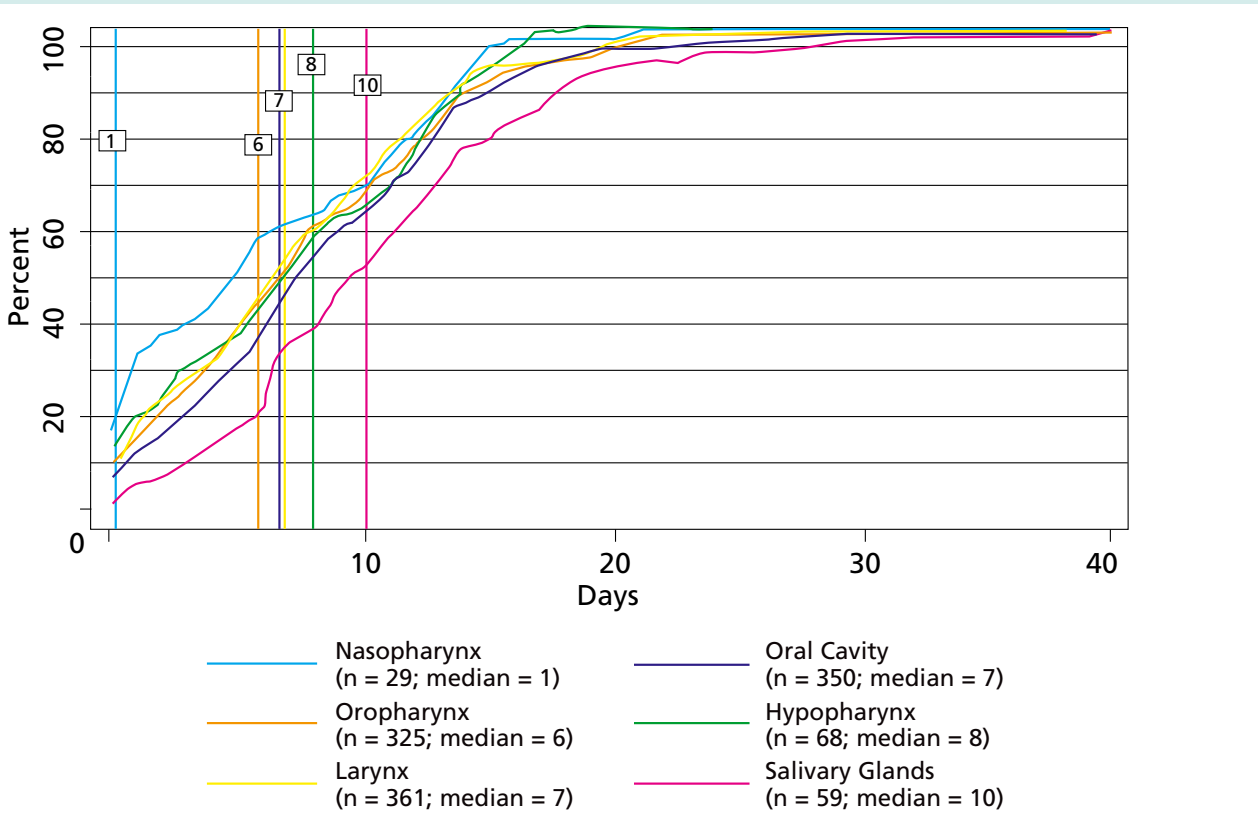
Synchronous malignancies of the chest can occur and have a significant impact on treatment options. Teams are encouraged to confirm that chest imaging has occurred in all head and neck cancer patients prior to planning treatment.

8.7.1.10.1 Percentage with reported chest imaging by chest x-ray (CXR) or chest computerised tomography (CT) prior to MDT

- From the imaging cohort of 1838 patients 1038 patients had a date of chest imaging report recorded with an MDT discussion date
- Of those with chest imaging report recorded 81.6 per cent of patients had an imaging report date prior to an MDT
- There was a range of reporting occurring after MDT varying by anatomic subsite from 13 per cent to 26 per cent
- It remains unclear as to whether this reflects poor data quality or that image reporting is occurring at or beyond the first MDT, or alternatively whether the MDT is acting as a reminder of the requirement to check imaging
- MDTs are encouraged to assess and report this item

8.7.1.11 Interval from imaging request to date imaging performed (CT/MRI) contributory to pre-treatment staging complying with the Royal College of Radiologists' guidelines

Figure: 8.7.1.11 Interval from imaging request to date imaging performed (CT/MRI) contributory to pre-treatment staging complying with the Royal College of Radiologists' guidelines.



- Progression of a patient along the cancer care pathway requires prompt imaging. Most in the 1194 patients with recorded imaging had their imaging in less than fourteen days from request.
- The median interval varied from 5.5 days (nasopharynx) to 10 days (salivary gland)
- This year a similar number (20) (18 patients 2006-2007) of patient pathways, show delays. The figure below demonstrates the imaging requests where a delay greater than 4 weeks occurred.
- A substantial number of organisations have not provided imaging data and therefore no firm conclusions can be made on the timeliness of imaging.

8.7.1.11.1 Imaging types where interval from imaging requests from data imaging is performed is four weeks or more

Figure: 8.7.1.11.1 Imaging types where interval is four weeks or more

Imaging type	ALL
X-ray	0
CT scan	9
MRI scan	8
Ultrasound (USS)	2
Other	1
Total	**20**

- In examining delays to CT/MRI/USS scan this delay was found to apply to sixteen organisations. In 14, a single image was delayed more than four weeks, but in 2 trusts 3 patients had delays exceeding four weeks.
- It might have been expected that with the considerable effort that has occurred in the NHS in England to reduce "delays to test" cancer patients should have benefited from general improvements. However this delay has not reduced further in this year's annual report.
- A radiologist should be a core member of an MDT and this integration process should accelerate access to imaging.
- This information will continue to be looked at robustly in the future and organisations are encouraged to submit data to allow true comparison and assurance of timely pathways for patients.

8.7.1.12 Interval from diagnosis to first definitive treatment

- Of 2062 patients with the date of first treatment recorded the median time to surgery was 28 days whilst to teletherapy as a primary treatment the median was 42 days. This continues to show that access to radiotherapy services appears delayed.
- The majority of laryngeal cancer patients' first treatment is primary radiotherapy, with a median interval of 41 days from the point of diagnosis. For the smaller numbers who undergo surgery the median interval from diagnosis to first recorded treatment is 23 days. These show some reduction compared to the previous years data.

Figure: 8.7.1.12.a All sites; Interval from diagnosis to first definitive treatment

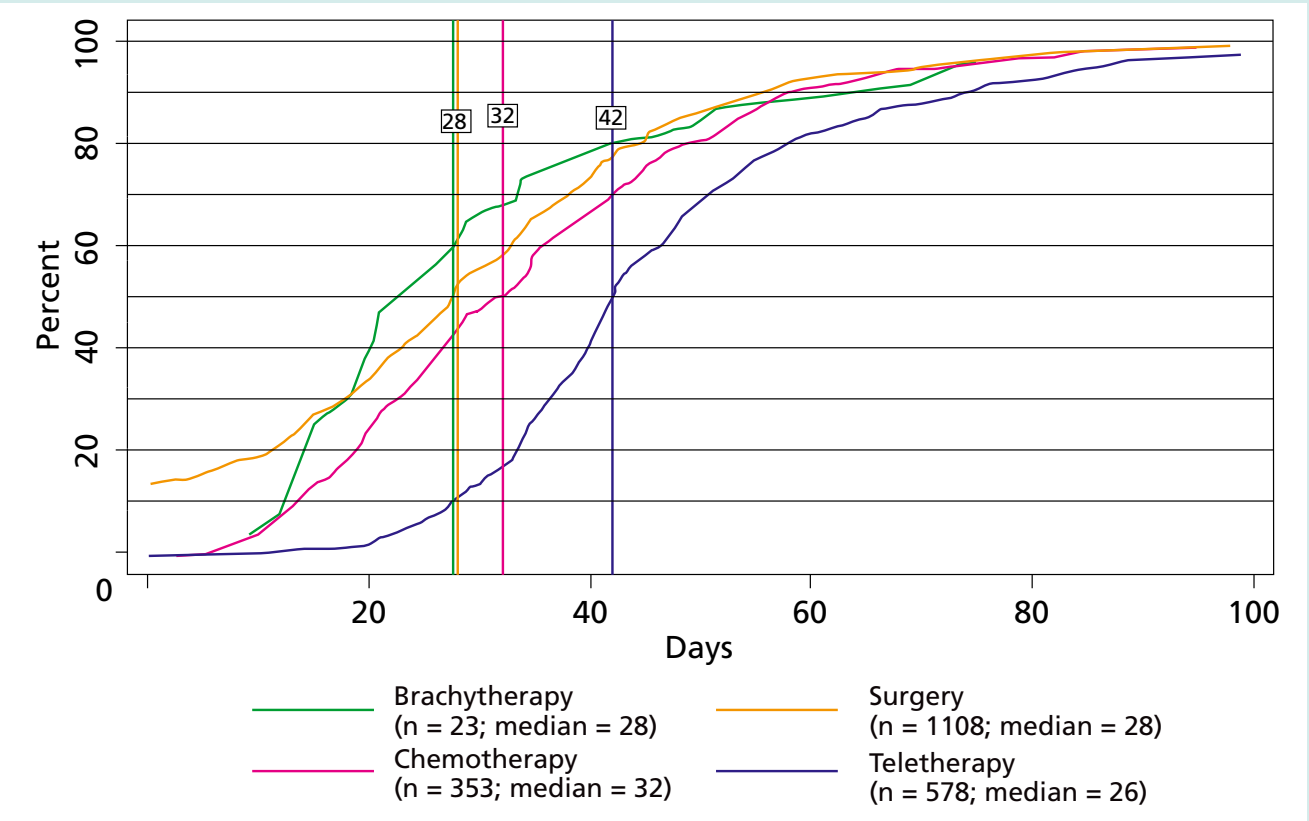


Figure: 8.7.1.12.b. Larynx; Interval from diagnosis to first definitive treatment

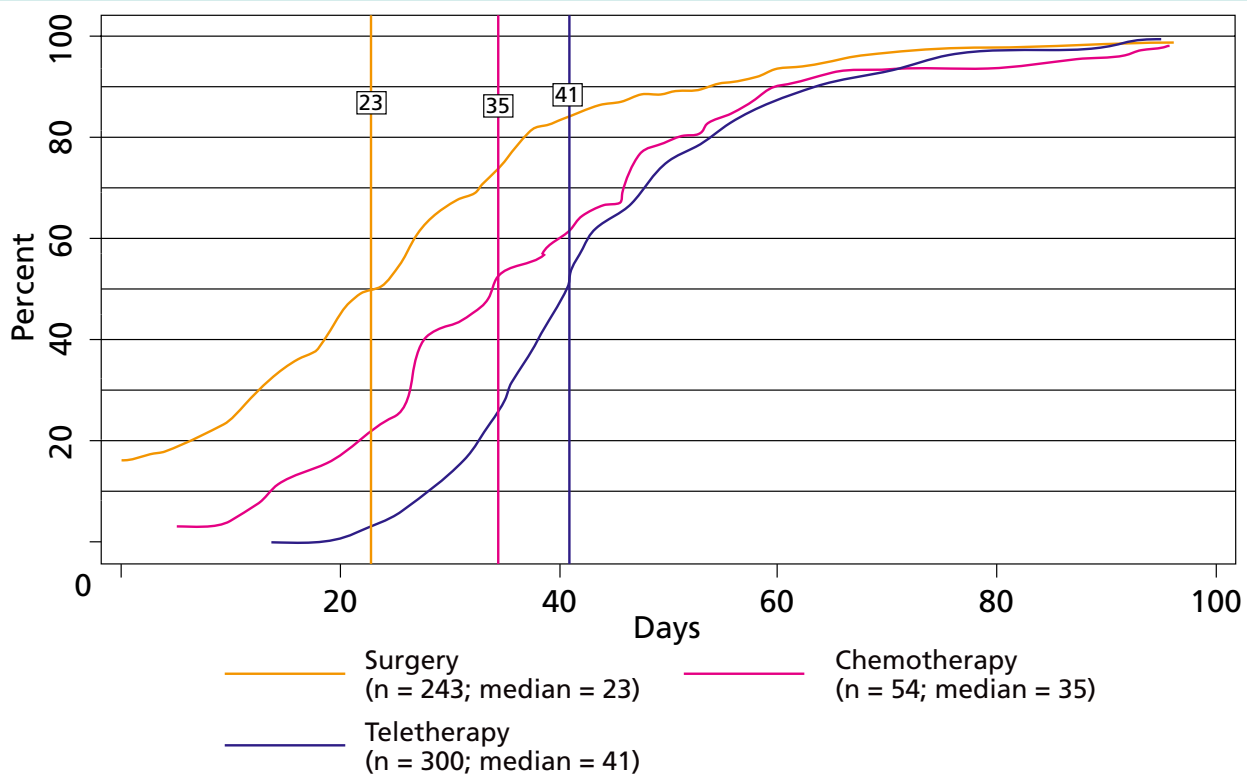
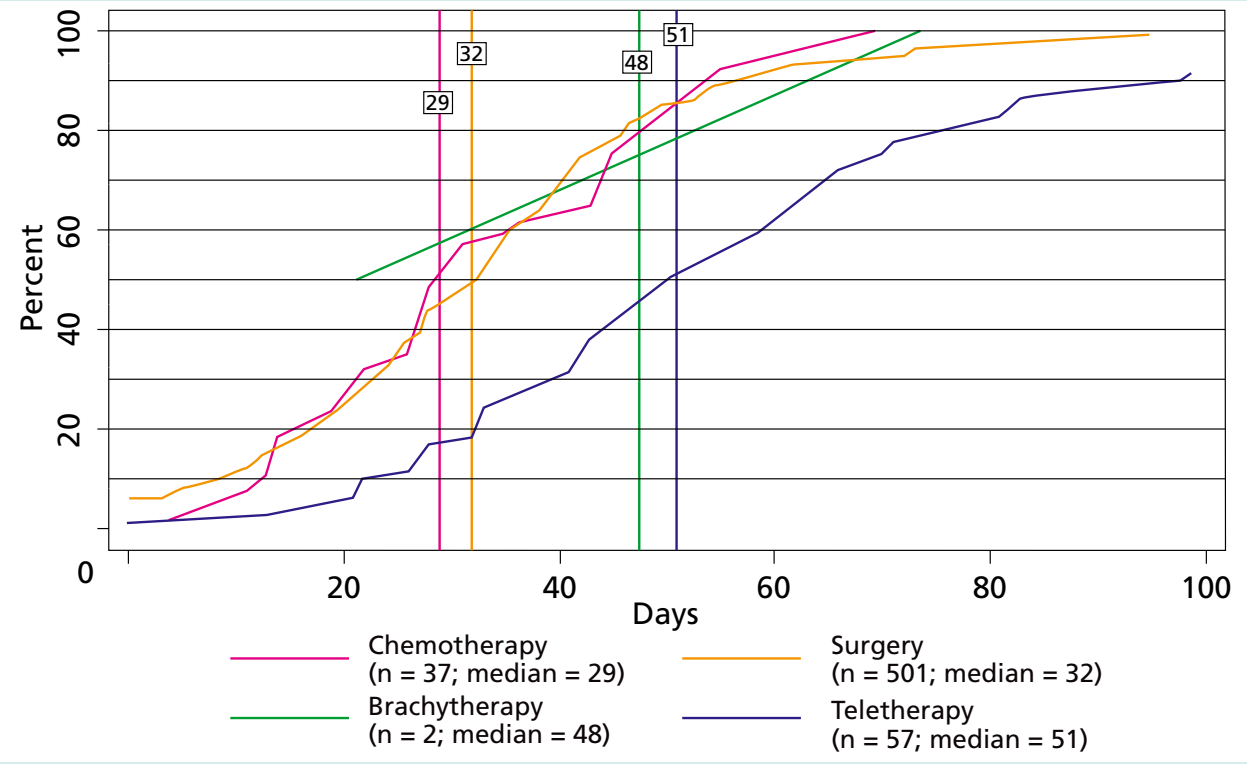


Figure: 8.7.1.12.c. Oral Cavity; Interval from diagnosis to first definitive treatment



The majority of oral cavity cancer patients first treatment is surgery, with a median interval of 32 days from the point of diagnosis. For the smaller numbers who undergo primary radiotherapy, the median interval from diagnosis to first recorded treatment is 51 days.

The results shown above highlight that for all cancer sites patients wait a similar interval for radiotherapy. 50 per cent of patients are waiting for more than 41 days to commence radiotherapy, which may reflect resource limitations. The conclusion, that resource limitations particularly apply to radiotherapy, is supported by shorter access times for surgery in comparison for all sub-sites which share the initial common pathway to treatment decision.

Best practice suggests that primary radiotherapy should commence within 28 days of diagnosis [18].

8.7.1.12.1 Interval from diagnosis to first definitive treatment by trust and by type of treatment

As reported previously in the third Annual Report there is considerable variation between organisations as well as within organisations in the interval from diagnosis to treatment.

A number of inconsistencies arose within the analysis and therefore a chart by named trust has not been included. Small numbers may skew the values obtained and potentially also allow patient identification.

An overview of the results obtained shows:-

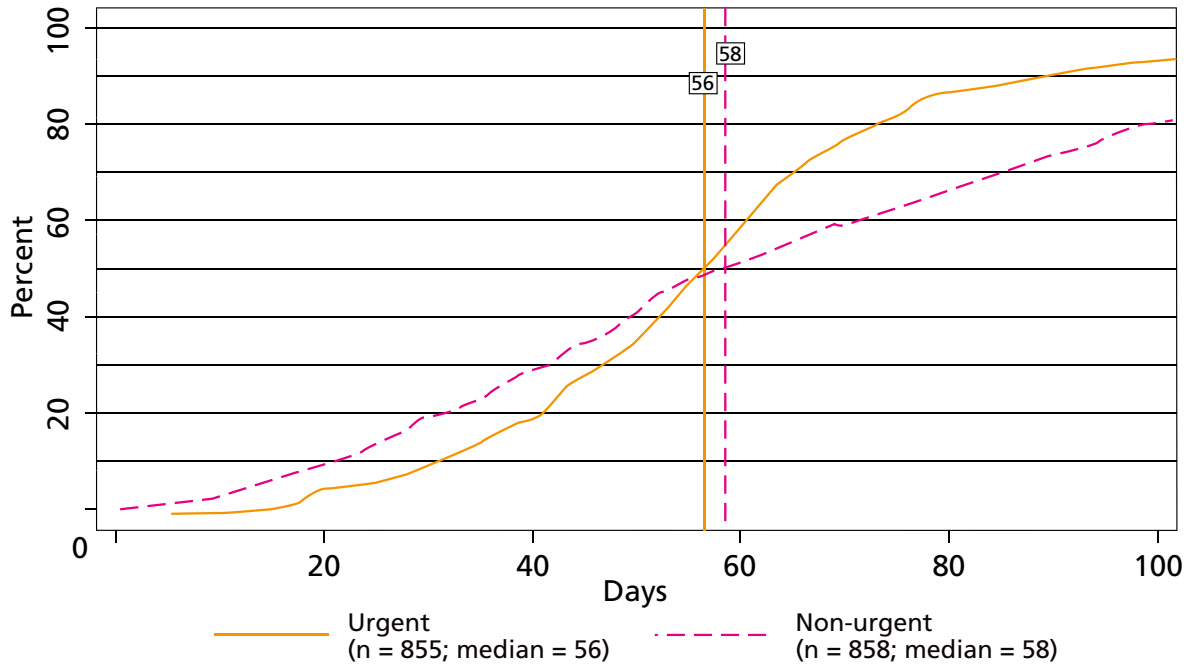
- The results demonstrate significant variation within organisations, but confirms the previously identified problem in accessing radiotherapy services
- For surgery considerable variation is again seen, and MDTs should be encouraged to process map the pathway to minimise access times.
- MDTs may benefit from monitoring this interval prospectively between audits, and considering both patients on 2 week wait paths and those on non 2 week wait paths. The 31 day treatment target is from care plan agreed to start of definitive treatment but does not include the interval from diagnosis to care plan agreed.
- The fifth Annual Report will examine time intervals for treatment in recurrence

8.7.1.13 Interval from referral to first definitive treatment in England

The 62 day target came into effect in England on 1 January 2006 and sets an expectation that patients referred under the two week wait will commence treatment in under 62 days. For patients on a non-urgent referral pathway a new target was introduced in December 2008 requiring all patients to have an interval of less than 31 days from cancer care plan agreed to the start of definitive treatment.

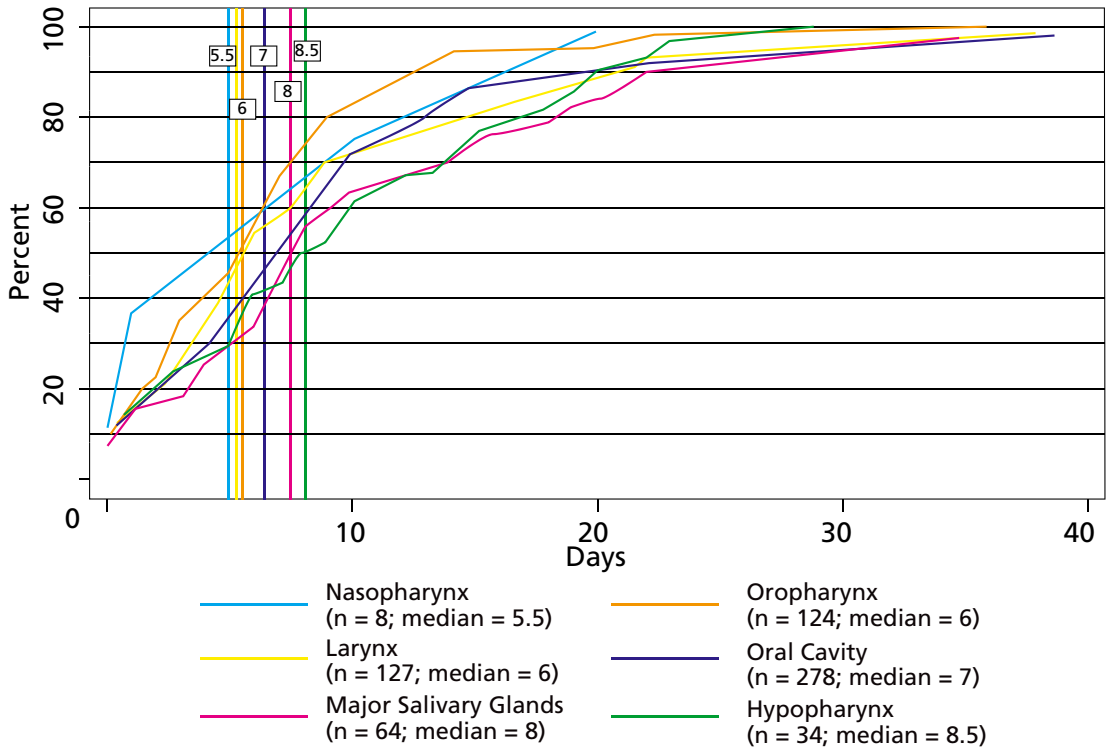
- The median interval for all sites not referred via the two week rule was 58 days, but for two week wait patients it was 56 days.
- The median interval for urgent two week rule patients varied from a median of 49 days in oral cavity to 72 days in nasopharynx.
- For non-urgent patients the median varied from 53.5 days in hypopharynx to 86.5 days in major salivary cancer.
- In major salivary gland cancer the extended median may be partially due to the fact that the majority of salivary neoplasms are benign. Clinical teams should give priority to treating all salivary neoplasms in a timely fashion to ensure malignancies are treated appropriately.
- Whilst the median now falls less than 62 days for larynx, oral cavity, oropharynx and hypopharynx patients, considerable work remains to achieve this standard for all patients from date of referral to start of treatment. It should be noted that the intervals reported for "two week rule patients" are unadjusted (for cancellations, did not attends and deferred treatments etc). In the fifth Annual Report the index period will reflect the "going further on cancer waits" where two week rule patients have no adjustments made and thus concordance of results with cancer wait times would be expected.

Figure: 8.7.1.13 Interval from referral to first definitive treatment in England



The two week wait target for urgent cancer referral applies to England and figures above only include patients from England

Figure: 8.7.1.14. Interval from surgical resection to reporting on resective specimen



- The median interval to reporting varied from a median of 6 days in larynx and oropharynx to 8.5 days in hypopharynx. The analysis looked at 635 cases.
- The median interval for larynx (6 days) and oral cavity (7 days) has significantly reduced form the third Annual Report of 8 and 11 days respectively.
- This reflects considerable effort by pathology colleagues to accelerate patients' pathways.
- In all sites more than 90 per cent of patients were reported within 20 days, which is encouraging. It is assumed that the practice of issuing an interim report where decalcification is required for complete reporting has helped achieve this target.

8.7.1.15 Interval from date of surgery to post-operative radiotherapy

The first recorded surgery date was considered. The first recorded radiotherapy after the surgery date was then compared to it, and the interval derived.

- 254 cases (of 1475 undergoing surgery with curative intent) were identified where an interval from date of surgery to the commencement of post operative radiotherapy could be calculated
- The median interval to post-operative radiotherapy was 56.5 days for all sites. This is a similar figure to the third Annual Report.
- A variation in interval was noted with a lower median interval for oropharynx (49 days) compared to larynx (56 days) and oral cavity (60 days). It should be noted the sample size is small in salivary and hypopharynx.
- This part of the pathway reflects completion of post surgical healing, confirmation of resective pathology and preparation to proceed to start radiotherapy including production of a mould and planning.
- Tumour biology and previous work suggest that there should be less than 6 weeks (42 days) to commencement of radiotherapy following surgery [19]. The results presented suggest delay to commencing radiotherapy following oropharyngeal surgery and greater delays to both oral and laryngeal surgery.
- Further work is required to assess the contributory elements to this process.
- Pre-booking of adjuvant radiotherapy at the time of decision to treat may assist in reducing this interval.

Figure: 8.7.1.15.a Interval from date of surgery to post-operative radiotherapy-all sites

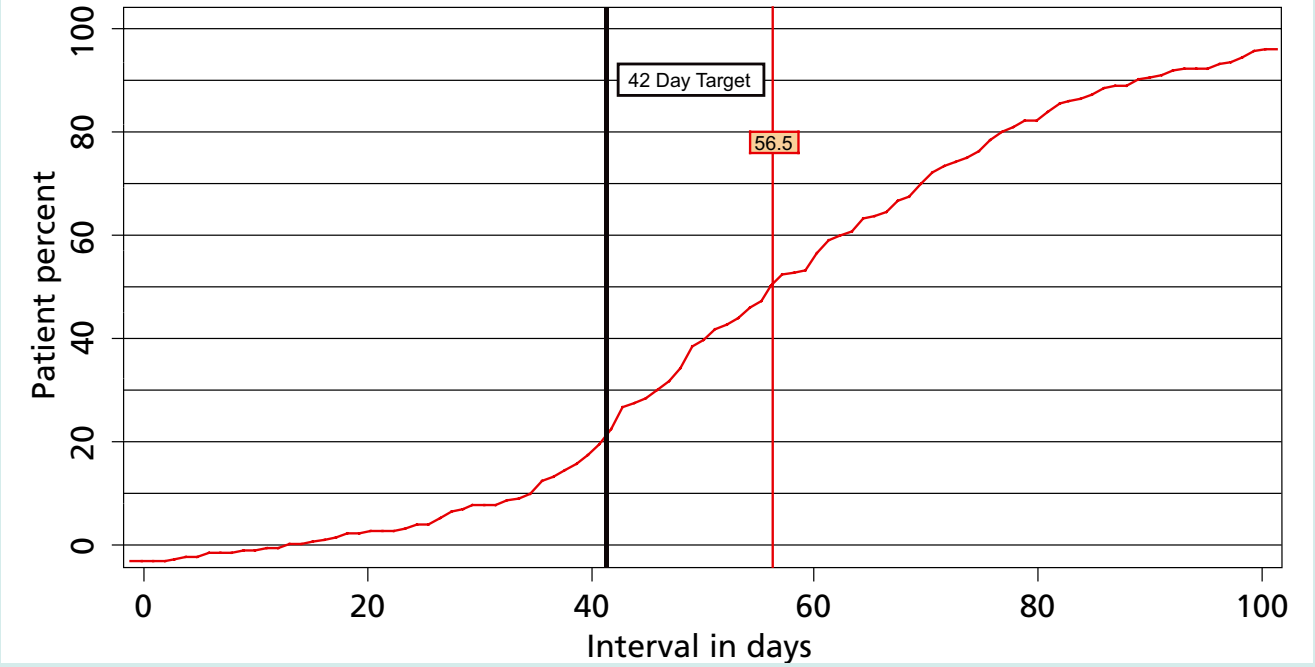
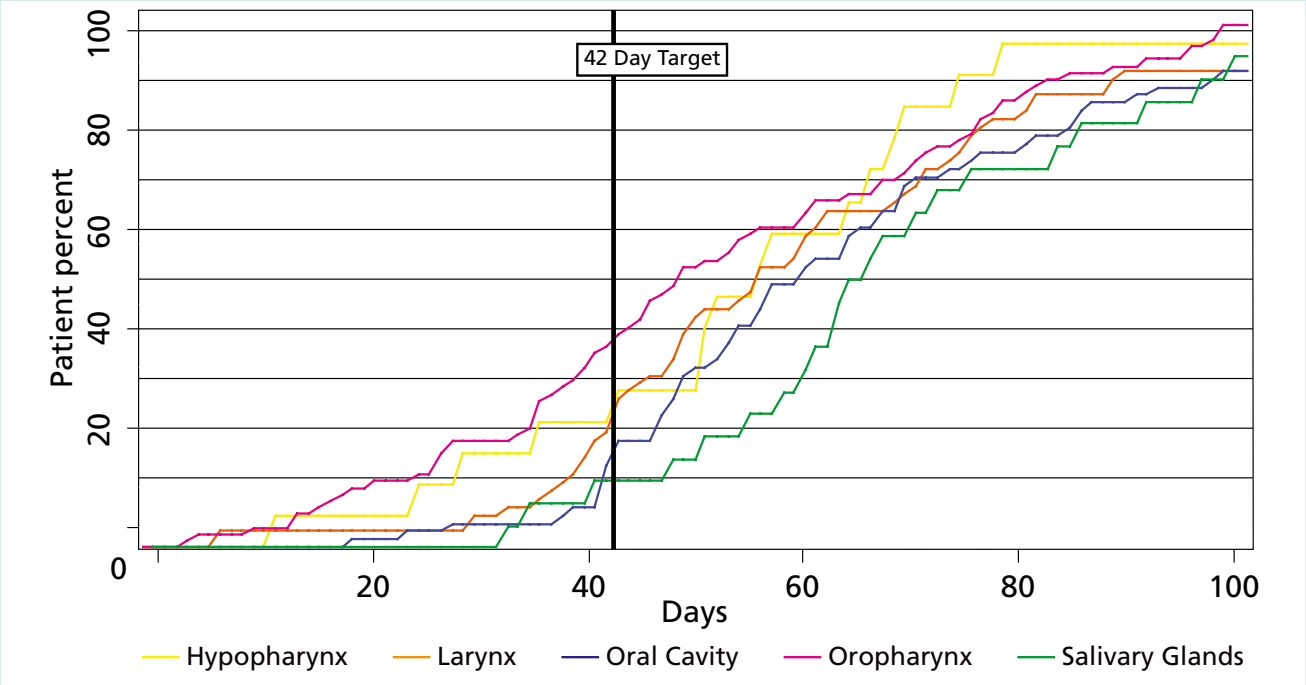


Figure: 8.7.1.15.b. Interval from date of surgery to post-operative radiotherapy-by anatomic site



8.8 Evidence of improvement/assurance in quality of care (increasing the proportion of patients who receive appropriate specialist opinion and treatment)

8.8.1 Care provided - squamous cell carcinoma larynx

- Of the 1023 cases with a careplan, 813 (79.4 per cent) have a careplan with recorded treatment. This indicates either recorded treatment or a recorded careplan indicating palliative or supportive care.
- The established treatment for the majority of patients with laryngeal cancer in England and Wales is radiotherapy and this matches the results shown above.
- The previously noted increased number of early staged patients having received surgery as their first definitive treatment, matching to a rising popularity of endolaryngeal resection is not so evident with this years increased submission. Only one third of early laryngeal lesions were treated surgically.
- In advanced disease where appropriate, radical surgery (laryngectomy) with adjuvant radiotherapy is the curative treatment of choice. In those not suitable for surgery, organ sparing protocols are being reported in the literature [20], but the evidence remains uncertain.

8.8.1.1 Surgery

- The intent was curative for 205 of the 316 cases with recorded surgery (62 per cent). This does not take into account patients where no intent was recorded or where palliative surgery (14 cases) was carried out.

8.8.1.2 Percentage by category of clearance for surgical resection margins

- Of the 205 records with curative intent, 129 (63 per cent) of records contained this information, a further improvement in recording.
- In the 92 cases where microlaryngeal resection of early lesions was carried out, 47 per cent had margins recorded but as expected fewer cases had margins greater than 5 mm. A recent consensus meeting on endolaryngeal management of early larynx cancer [21] concluded that margins may be much narrower than for open surgery and thus obviate the classification used in data collection.

Figure: 8.8.1 Care provided - squamous cell carcinoma larynx

First recorded treatment	Early stage	Late stage	Not staged*	Total
Surgery	97	120	94	**311**
Radiotherapy	181	56	172	**409**
Chemotherapy	1	36	13	**50**
Chemoradiotherapy	2	6	8	**16**
Specialist palliative care				**0**
Supportive care/no specific treatment or Not recorded	112	96	196	**404**
Total				**1190**

*Not staged – insufficient T, N, M for categorising early / late

8.8.1.3 Percentage receiving each category of surgical procedure (including surgery to neck, surgical voice restoration)

- In the 97 cases undergoing total laryngectomy 56 cases (58 per cent) had margins recorded. Where open surgery was performed, 40 cases had margins over 1mm clear, and 22 more than 5 mm clear. However the expert panels noted that 10 cases had involved margins, which is a poor prognostic factor as the goal in open surgery is to obtain clear margins. The number not recorded however obviates any other significant conclusions.

- Of 331 patients undergoing surgery, 229 (69 per cent) have at least one surgical procedure recorded.

Main categories of operation (patients may be counted in more than one category):

Figure 8.8.1.3. Percentage receiving each category of surgical procedure (including surgery to neck surgical voice restoration).

Larynx patients – surgery summary	Number	Percentage of 229 with surgical procedure recorded
Microlaryngeal resection	94	41
• of these 94 patients the number having neck dissection	6	
Laryngectomy	98	43
• of these 98 the number having supraglottic laryngectomy	1	
• of these 98, the number having neck dissection	57	
• of these 98, number having primary surgical voice restoration	9	
More extensive resection	18	8
Neck dissections	79	34
• (including those mentioned with laryngectomy and more extensive resection)*		
Comprehensive neck dissection	39	
Modified neck dissection	10	
Selective neck dissection	30	

*More extensive resection describes where a portion of the hypopharynx or oropharynx is removed beyond that normally included in a total laryngectomy

- Endolaryngeal microsurgical resection accounted for 41 per cent of surgical procedures this is a similar percentage to last year's figure (44 per cent). The audit notes that on the information submitted there is no evidence of a rise in the popularity of this mode of treatment, and will continue to monitor this trend with interest.
- 43 per cent of surgical procedures were laryngectomies, with 98 per cent of these being total laryngectomies with only 9 per cent recorded as having primary surgical voice restoration. However 19.4 per cent were reported as having pre operative SALT counselling on surgical voice restoration. The expert panels felt again that this was not representative of current clinical practice.
- The Expert Panel members would expect that the majority of patients (in excess of 80 per cent) undergoing this procedure would be counselled by a speech and language therapist pre-operatively and be offered primary surgical voice restoration. The availability of speech and language therapists may be a confounding factor but the absence of full data collection above (Figure: 8.6.5.a) limits the ability to resolve this. See also section 9.2.1.
- The fifth annual collection period will continue to examine surgical voice restoration, which is hoped will encourage speech and language colleagues to more actively participate in the audit.
- A small number of more extensive procedures are identified for very advanced tumours.

It is important that all components of a surgical procedure are recorded to provide a true reflection of the breadth and complexity of surgical management. Surgical voice restoration appears currently under-represented in the surgical procedures submitted

8.8.1.4 Radiotherapy with curative intent

The established treatment for the majority of patients with laryngeal cancer in England is radiotherapy, and this matches to the results shown above.

- 378 cases have recorded radical (curative or adjuvant) radiotherapy. This is 68 per cent of the 558 with recorded radiotherapy.
- The majority of patients have radiotherapy as primary treatment or as a planned adjuvant treatment within their initial cancer careplan. However, some patients, having undergone primary surgery, may be advised to proceed to post-operative radiotherapy based on adverse features evident in their resective histology report. Of the 83 patients having post surgical radiotherapy, 15 had undergone microlaryngeal resection, and 27 total laryngectomy. The former would suggest that margins at laser excision were close or incomplete and the latter could be influenced by both poor prognostic indicators in the primary specimen or neck.
- The Expert Panel members have concern that there may be deficiencies in capturing radiotherapy data. This still accounts for a small number of patients and thus will be looked at in future reports when sufficient cases have been captured.
- The availability of radiotherapy episode statistics (National Radiotherapy Dataset Project) data from 2009 [22], will be an opportunity for the National Head and Neck Cancer Audit to acquire radiotherapy data more readily

8.8.1.5 Chemotherapy

In the view of the Expert Panel members, there is currently available only limited evidence supporting the notion that chemotherapy in isolation improves long-term survival in laryngeal cancer [23] [24]. There is, however, variable evidence suggesting the benefits of concurrent chemoradiation, [25] and again it will be of interest to assess the benefits as they accrue with time.

- The intent was curative, adjuvant or neo-adjuvant for 55 of the 101 cases with recorded chemotherapy (54 per cent).
- Of those receiving chemotherapy 50 had subsequent radiotherapy within 60 days

8.8.1.6 Palliative treatment

Of those presenting with advanced disease only small numbers would be expected to get true palliative treatment. It will be of interest in the future to assess what benefit they accrue, and whether they have received this as part of a clinical trial.

- 44 patients have recorded palliative treatment, 3.7 per cent of the total 1190 registrations, 5.4 per cent of the 813 with recorded treatment.
- The 44 cases break down as: 14 cases of palliative surgery, 26 cases of palliative radiotherapy and 4 cases with palliative chemotherapy. (2 patients had palliative chemo-radiotherapy treatment).
- There were no cases of referral to a specialist palliative care team

Specialist palliative care practitioners should be essential members of the core MDT team. Current processes of data capture may not pick up this activity as the provision can occur in a variety of non hospital organisations e.g. community and hospice care.

Data collection of care delivered along the whole patient pathway is a key requirement to understand the whole package of care. Networks are encouraged to facilitate this data collection.

8.8.1.7 No specific treatment

- 404 larynx cases have no recorded surgery, chemotherapy or radiotherapy
- 14 of these cases have 'supportive' as their careplan intent.
- 13 of the other cases have 'active monitoring' as the careplan intent.

8.8.1.8 Where careplan agreed matches careplan delivered

- 813 of the 1190 registrations have a recorded careplan (68.3 per cent).
- 520 of 813 patients have a treatment record matching the careplan (64 per cent)
- MDTs are encouraged to record all treatments provided

8.8.2 Care provided - squamous cell carcinoma oral cavity

- Of the 1102 cases with a careplan, 752 (68.2 per cent) have a careplan with recorded treatment. This indicates either recorded treatment or a recorded careplan indicating palliative or supportive care
- The established treatment for the majority of patients with oral cavity cancer in England and Wales is primary surgery, and this matches the results shown above.
- Of the 752 with recorded treatment, 64 per cent have sufficient staging data to allow categorisation into early and late disease. Chemotherapy and chemoradiotherapy although in small numbers are almost exclusively found in the treatment of late stage disease.

8.8.2.1 Surgery

- The intent of treatment was curative surgery for 477 of the 627 cases with recorded surgery (71 per cent).

8.8.2.2 Percentage by category of clearance for surgical resection margins

308 cases had surgical resection margins recorded.

- Using the Royal College of Pathologists guidelines [26], there was evidence in only 15 per cent of cases of an acceptable clear margin
- Only 40 per cent of resective pathology records show details on margins of normal tissue around the tumour, which limits the conclusions that can be drawn
- Adequate resective margins are a predictor of both local recurrence and surgical adequacy
- Of the records completed, a third of them demonstrate margins greater than 5mm.

Figure 8.8.2 Care provided - squamous cell carcinoma oral cavity

First recorded treatment	Early stage	Late stage	Not staged*	Total
Surgery	238	172	189	**599**
Radiotherapy	15	27	34	**76**
Chemotherapy	4	20	14	**38**
Chemoradiotherapy (same day)	2	6	8	**16**
Specialist palliative care				**1**
Supportive care/no specific treatment or Not recorded	130	147	209	**486**
Total	**387**	**374**	**447**	**1208**

*Not staged – insufficient T, N, M for categorising as early / late

8.8.2.3 Percentage receiving each category of surgical procedure (including surgery to neck and flap repair)

Figure: 8.8.2.3 Percentage receiving each category of surgical procedure (including surgery to neck and flap repair).

Oral cavity patients - surgery summary	Count	Percentage of 626 patients with surgical procedure recorded
Floor of mouth excision	90	14.4
of these 90, the number having neck dissection	53	
Buccal mucosa excision	53	8.5
of these 53 the number having neck dissection	15	
Patients having tongue procedures	227	36.2
of these 227, the number having neck dissection	130	
patients having total glossectomy	9	
patients having partial glossectomy	117	
patients having excision lesion of tongue	101	
Total maxillectomy	1	0.2
Partial maxillectomy	19	
Neck dissections (including those mentioned with procedures above)	262	41.8
Comprehensive neck dissection (includes those listed previously)	71	
Modified neck dissection (includes those listed previously)	30	
Selective neck dissection (includes those listed previously)	161	
Reconstruction mouth	115	18.3
with flap	40	
with primary closure	5	
with buccal flap	1	
with pectoralis major	3	
with radial forearm	65	
with other		
with SSG	1	
Reconstruction mouth by cancer site		
tongue	41	
lip	3	
gum	5	
mouth floor	20	
palate	1	
cheek mucosa	12	
mouth vestibule	2	
retromolar trigone	4	
Reconstruction mandible	15	2.4
with rib	1	
with fibula	11	
with iliac crest	3	

- Surgery followed by adjuvant radiotherapy – determined by histological findings is the most common treatment modality for oral squamous cell carcinoma.
- Management of the N0 neck remains a contentious issue, but may be influenced by the requirement to enter the neck for reconstructive options.
- Of those patients undergoing floor of mouth excision only 59 per cent are recorded as having a neck dissection. The expert panels felt that this was a low figure compared to expected practice, but may reflect data quality issues.
- The expert panels suggested that further work should be done to assess whether more complex operations could be recorded in a reduced number of fields and changes will be considered for the 2009–2010 collection period.

It is important that all components of a surgical procedure are recorded to provide a true reflection of the breadth and complexity of surgical management.

8.8.2.4 Radiotherapy

- 176 cases have recorded radical (curative or adjuvant) radiotherapy. This is 89 per cent of the 197 cases with recorded radiotherapy.
- 1 case of lateral border of tongue cancer was recorded as receiving brachytherapy.
- The majority of patients have radiotherapy as primary treatment or as a planned adjuvant treatment within their initial cancer careplan. Some patients, having undergone primary surgery, may be advised to proceed to post-operative radiotherapy based on adverse features in their resective histology report. The Expert Panel members have concern that there may be deficiencies in capturing radiotherapy data. This accounts for a small number of patients and thus will be looked at in future reports when sufficient cases have been captured.

A general theme of the analysis is that the second phase of treatment is not being well captured. This may reflect MDT data capture processes. Teams are encouraged to capture all parts of the patients' careplan.

8.8.2.5 Chemotherapy

In the view of the Expert Panel members, there is no currently available evidence supporting the notion that chemotherapy in isolation improves long-term survival in oral cavity cancer. There is, however, some evidence suggesting the benefits of concurrent chemoradiation, and again it will be of interest to assess the benefits as they accrue with time.

- The intent was curative, adjuvant or neo-adjuvant for 39 of the 73 cases with recorded chemotherapy (53 per cent).
- Of those receiving chemotherapy 36 had subsequent radiotherapy within 60 days

8.8.2.6 Palliative treatment

- 33 patients have recorded palliative treatment, 2.7 per cent of the total 1208 registrations, 4.3 per cent of the 765 with recorded treatment.
- The 33 cases break down as: 1 case of palliative surgery, 21 cases of palliative radiotherapy and 11 cases with palliative chemotherapy (one patient had palliative chemoradiation).
- 1 patient was recorded as having been referred to a specialist palliative care team

8.8.2.7 No specific treatment

- 487 oral cavity cases have no recorded surgery, chemotherapy or radiotherapy.
- 31 of theses have 'supportive' as their careplan intent.
- 13 of the other cases have 'active monitoring' as their careplan intent.

8.8.2.8 Percentage of patients where careplan agreed matches careplan delivered

- 1102 of the 1208 registrations have a recorded careplan (91.2 per cent).
- 535 patients of 1102 (representing 1181 care plans) have a treatment record matching the careplan (48.5 per cent).
- MDTs are encouraged to record all treatments provided

Note: Each patient can have more than one careplan. Only the first careplan has been considered in this analysis.

8.8.3 Care provided - squamous cell carcinoma oropharynx

- 1002 cases of oropharynx cancer were registered onto the DAHNO application.
- 874 cases (87 per cent of total registered) have a careplan
- Of the 874 cases with a careplan, 714 (81.6 per cent) have a careplan with recorded treatment. This indicates either recorded treatment or a recorded careplan indicating palliative or supportive care
- Of the total 1002 patients it would be expected that 8 – 10 per cent of them would not have reached the point in their pathway where a careplan would be agreed, taking this into account around 95 per cent of patients have a careplan recorded, a significant improvement in capturing data further along the patient pathway.
- The treatment for patients with oropharynx cancer in England and Wales has seen a shift away from surgery towards chemoradiotherapy. There is a suggestion that there is geographical variation in treatment provided and this will be studied in more detail in future reports.
- A sub group of patients have been identified where human papilloma virus (HPV) is linked as a causative factor [27] and treatment protocols are being adjusted in light of this.
- Of the 714 with recorded treatment, 60 per cent have sufficient staging data to allow categorisation into early and late disease.

8.8.3.1 Surgery

- The intent of treatment was curative surgery for 170 of the 307 cases with recorded surgery (55 per cent).

8.8.3.2 Percentage by category of clearance for surgical resection margins

96 cases had surgical resection margins recorded.

- Using the Royal College of Pathologists guidelines, there was evidence in only 1.6 per cent of cases, of an acceptable clear margin.
- Of note is that 31 of the 96 patients with surgical margins recorded had an involved surgical margin. This reflects the technical difficulty of three dimensional resection in the oropharynx. However it is noted that a significant number of patients did not have this information recorded.
- Adequate resective margins are a predictor of both local recurrence and surgical adequacy.
- Surgery followed by adjuvant radiotherapy – determined by histological findings has traditionally been the commonest treatment modality for oropharynx squamous carcinoma.
- However there is a reported rising trend in the use of chemoradiotherapy particularly in younger individuals [28] [29] where HPV infection may be a contributory causative factor. Overall in this cohort the number treated by non surgical methods is greater than those treated by surgery. This trend will be studied in future reports and as submissions grow a comparison in different age and sex groups will be made.

Figure 8.8.3. Care provided - squamous cell carcinoma oropharynx

First recorded treatment	Early stage	Late stage	Not staged*	Total
Surgery	35	132	107	**274**
Radiotherapy	31	71	98	**200**
Chemotherapy	7	112	62	**181**
Chemoradiotherapy (same day)	0	39	6	**45**
Specialist palliative care				**1**
Supportive care/no specific treatment or Not recorded	27	121	153	**301**
Total	**100**	**475**	**427**	**1002**

*Not staged – insufficient T, N, M for categorising as early / late

Figure: 8.8.3.3 Percentage receiving each category of surgical procedure (including surgery to neck and flap repair)

Oropharynx patients - surgery summary	Count	Percentage of 307 patients with surgery
Tongue procedures	20	7
of these 20, the number having neck dissection	10	
Total glossectomy	2	
Partial glossectomy	10	
Mandible procedures	8	3
of these 8, the number having neck dissection	7	
Mandibulectomy or excision of lesion	7	
Comprehensive neck dissection (includes those listed previously)	57	19
Modified neck dissection (includes those listed previously)	27	9
Selective neck dissection (includes those listed previously)	34	11
All neck dissections	118	38
Reconstruction oropharynx	9	3
with flap	5	
with primary closure	0	
with pectoralis major	0	
with radial forearm	3	

8.8.3.4 Radiotherapy with curative intent

- 437 cases have recorded radical (curative or adjuvant) radiotherapy. This is 94 per cent of the 463 cases with recorded radiotherapy.
- The majority of patients have radiotherapy as primary treatment or as a planned adjuvant treatment within their initial cancer careplan. The high incidence of adjuvant radiotherapy may be related to the difficulty in achieving good surgical margins in this complex anatomical region.

8.8.3.5 Percentage having chemotherapy

- In the view of the Expert Panel members, there is no currently available evidence supporting the notion that chemotherapy in isolation improves long-term survival in oropharynx cancer. There is, however, evidence suggesting the benefits of concurrent chemoradiation, and again it will be of interest to assess the benefits as they accrue with time.
- The intent was curative, adjuvant or neo-adjuvant for 232 of the 375 cases with recorded chemotherapy (59 per cent).
- 160 patients had chemoradiotherapy (radiotherapy commencing within 60 days of chemotherapy). This represents 43 per cent of the 375 patients recorded as receiving chemotherapy.
- These 375 cases of chemotherapy are 53 per cent of the 714 patients with some recorded treatment and 37 per cent of the 1002 recorded cases
- The 375 cases with a chemotherapy record breakdown by intent is: 124 curative, 117 neo-adjuvant, 40 adjuvant, 21 palliative and 75 with unknown intent and 47 not coded.
- A review where it appeared that patients had chemotherapy (chemotherapy followed by radiotherapy within 60 days) as sole treatment in oropharynx cancer, identified that some were given as part of a chemo radiotherapy regimen, but the majority were given chemotherapy alone or as induction chemotherapy but there were deficiencies in capturing the complete patient pathway.

8.8.3.6 Palliative treatment by type

- 50 patients have recorded palliative treatment, 5 per cent of the total 1002 registrations, 7 per cent of the 714 with recorded treatment.
- The 50 cases break down as: 3 cases of palliative surgery, 26 cases of palliative radiotherapy and 21 cases with palliative chemotherapy (1 patient had palliative chemoradiation).
- 1 patient was recorded as having been referred to a specialist palliative care team

8.8.3.7 Percentage receiving no specific treatment (including active monitoring category)

- 305 oropharynx cases have no recorded surgery, chemotherapy or radiotherapy.
- 13 of theses have 'supportive' as their careplan intent.
- 4 of the other cases have 'active monitoring' as their careplan intent.

8.8.3.8 Percentage of patients where careplan agreed matches careplan delivered

- 874 of the 1002 registrations have a recorded careplan (87.2 per cent).
- 358 patients of 874 (representing 925 care plans) have a treatment record matching the careplan (41 per cent).
- Where the careplan was not matched the most common occurrence was a proposed combined therapy, where only one of the treatments was recorded. This most likely reflects poor data quality but could reflect changes to planned management in surgery patients due to resective pathology findings or morbidity from therapy.
- MDTs are encouraged to record all treatments provided

Note: Each patient can have more than one careplan. Only the first careplan has been considered in this analysis.

8.8.4 Care provided - squamous cell carcinoma hypopharynx

- 268 cases of hypopharynx cancer were registered onto the DAHNO application.
- 228 cases (85 per cent of total registered) have a careplan
- Of the 228 cases with a careplan, 185 (81 per cent) have a careplan with recorded treatment. This indicates either recorded treatment or a recorded careplan indicating palliative or supportive care
- Of the total 268 patients it would be expected that 8 – 10 per cent of them would not have reached the point in their pathway where a careplan would be agreed, taking this into account around 93 per cent of patients have a careplan recorded, a significant improvement in capturing data further along the patient pathway.
- The established treatment for the majority of patients with hypopharynx cancer in England and Wales is primary surgery, and this matches the results shown above.
- Of the 185 with recorded treatment, 64 per cent have sufficient staging data to allow categorisation into early and late disease. Chemotherapy and chemoradiotherapy although in small numbers are almost exclusively found in the treatment of late stage disease

Figure 8.8.4. Care provided - squamous cell carcinoma hypopharynx

First recorded treatment	Early stage	Late stage	Not staged*	Total
Surgery	5	43	23	**71**
Radiotherapy	13	23	24	**60**
Chemotherapy	2	25	16	**43**
Chemoradiotherapy (same day)	1	6	2	**9**
Specialist palliative care				**0**
Supportive care/no specific treatment or Not recorded	7	37	41	**85**
Total	**28**	**134**	**106**	**268**

*Not staged – insufficient T, N, M for categorising as early / late

8.8.4.1 Surgery

- Intent of treatment was curative surgery for 46 of the 79 cases with recorded surgery (58 per cent).

Figure: 8.8.4.2 Percentage receiving each category of surgical procedure (including surgery to neck and flap repair).

Hypopharynx patients - surgery summary	Count	Percentage of 79 patients with surgery
Total pharyngectomy	3	3.8
of these 3, the number having neck dissection	0	
Partial pharyngectomy	11	13.9
of these 11, the number having neck dissection	9	
Pharyngo-laryngectomy	7	8.9
of these 7, the number having neck dissection	5	
of these 7, the number having primary closure	4	
of these 7, the number having free jejunum	3	
Total laryngectomy	18	22.8
of these 18, the number having neck dissection	12	
Laser removal of lesion		
Comprehensive neck dissection (includes those listed previously)	13	
Modified neck dissection (includes those listed previously)	6	
Selective neck dissection (includes those listed previously)	9	
All neck dissections	28	35.4

8.8.4.2 Percentage receiving each category of surgical procedure (including surgery to neck, and flap repair)

- In late disease where applicable radical surgery followed by post operative radiotherapy is the treatment of choice [30] [31], with organ sparing regimes as an alternative Nearly half (39 cases) of the patients in the surgery group had extensive surgery (total and partial pharyngectomy, total laryngectomy and pharyngolaryngectomy). These individuals require extensive rehabilitation and support.

- In a select group of patients presenting with early disease transoral laser excision may [32] be an alternative treatment modality to radiotherapy

8.8.4.3 Percentage having radical radiotherapy

- 100 cases have recorded radical (curative or adjuvant) radiotherapy. This is 81 per cent of the 123 cases with recorded radiotherapy.

- Those with radical radiotherapy make up 51 per cent of the 197 with some recorded treatment, and 37 per cent of the total 268 cases.

- The 46 other cases with recorded radiotherapy break down as: 23 with palliative intent and 13 not known and 10 with no intent recorded.

8.8.4.4 Percentage having chemotherapy

- 77 patients had chemotherapy, of which 18 recorded chemoradiotherapy and 5 patients had palliative radiotherapy

- Chemotherapy was given in 29 per cent of the 197 patients with recorded treatment

8.8.4.5 Palliative treatment by type

- 32 patients have recorded palliative treatment, 12 per cent of the total 268 registrations, 16 per cent of the 197 with recorded treatment.

- The 32 cases break down as: 4 case of palliative surgery, 23 cases of palliative radiotherapy and 5 cases with palliative chemotherapy
- There was no referral to a specialist palliative care team

8.8.4.6 Percentage receiving no specific treatment (including active monitoring category)

- 83 hypopharynx cases have no recorded surgery, chemotherapy or radiotherapy.
- 11 of theses have 'supportive' as their careplan intent.
- 1 of the other cases have 'active monitoring' as their careplan intent.

8.8.4.7 Percentage of patients where careplan agreed matches careplan delivered

- 228 of the 268 registrations have a recorded careplan (85.1 per cent).
- 117 patients of 228 (representing 243 care plans) have a treatment record matching the careplan (51 per cent).

8.9 Patient outcomes

8.9.1 One year, two year and three year survival

The audit is working to provide data for survival analyses.

A case file was obtained from the Office for National Statistics (ONS) of patients registered in the audit for which ONS had evidence of the registrant having died, from death certification.

Overall of the 4038 cases submitted 296 (7.3 per cent) were deceased within one year from diagnosis. This includes deaths from all causes i.e. crude death rate

Of the 1190 larynx cancers recorded 75 were deceased within 1 year of diagnosis.

Of the 1208 oral cavity registrants 90 had died within one year of diagnosis.

These deaths may be related to a number of causes such as aggressive disease or deaths from non cancer causes. It was not unexpected that hypopharynx had the highest crude death rate at 15 per cent as the disease predominantly presents late in individuals with significant other smoking and alcohol related co-morbidities

8.9.2 Locoregional recurrence within one year and two years of diagnosis

The audit is working to provide data for analysis of recurrence. A key requirement is details on current status for patients at regular intervals following completion of treatment. This allows assessment of disease specific survival and interval to recurrence.

8.9.3 Number of treatment-related deaths (to include death within 30 days of surgery and / or within the same admission)

- Overall, head and neck surgery appears a safe procedure.

Performing complex procedures in a predominantly elderly population with significant co-existent co-morbidities will, however, inevitably lead to some deaths in the peri-operative period.

8.9.1 Number of deaths in the index period within one year of diagnosis

	Larynx	Oral cavity	Oropharynx	Hypopharynx	Nasopharynx	Salivary Glands	Total
Number of deaths	75	90	67	41	8	15	296
Total number of cases	1190	1208	1002	268	111	259	4038
Proportion died	6.3	7.5	6.7	15.3	7.2	5.8	7.3

Further cycles of the audit will assist in providing nationally derived estimates of risk to patients and MDT's.

8.10 Clinical trials

Percentage entered into national clinical trials at cancer careplan has not been calculated.

In head and neck cancer, there is a paucity of national and international clinical trials. This remains an important area for development as trials become available.

Figure 8.10.3.a. Number of treatment-related deaths (to include death within 30 days of surgery and / or within the same admission).

Description	Larynx	Oral cavity
Number of reported deaths within 30 days of diagnosis or with discharge destination 'death' after any admission	15	9
Number of reported deaths within 30 days of surgery or with discharge destination 'death' after surgery	4	8
Of these patients , the number whose death followed diagnostic surgery	0	0
Of these patients, the number whose death followed recorded surgery with curative intent	3	6
Of the others, number whose death followed recorded surgery with no treatment intent recorded	1	2
Total number of patients with recorded curative surgery	205	471

9. What increased knowledge do we have on multi-professional care ?

9.1 Percentage having dental assessment

The Expert Panel members believe that it is important to maintain good dental health throughout treatment

- A dental assessment is recorded for less than 6.9 per cent of the 4038 registrations (245 patients), and 7.9 per cent of the 3540 of patients with care plans. This is likely to reflect poor data quality.
- This is 8.9 per cent of the 2758 cases with some record of treatment.

More detail on pre- treatment dental assessment in each anatomic subsite can be found in the reference report

It is disappointing that again the volume of data has not increased and MDTs are recommended to collect this data.

9.2 Pre-operative / pre-treatment speech and swallowing assessment

Dental health during and after treatment for head and neck cancer is a significant contributor to patient well being. MDTs are strongly encouraged to provide information to confirm that care is being provided.

- A pre-treatment speech and swallowing assessment is recorded for 2.9 per cent of the registrations (71patients) with oral cavity, oropharynx and hypopharynx cancer
- A further 39 of those having a speech and swallowing assessment had this after treatment had commenced.
- Ovreall 6.9 per cent of the 1605 cases with some record of treatment in these subsites had a record of speech and swallowing assessment.
- The submission of this item needs to be encouraged by all MDTs to more accurately reflect the care being provided

More detail on pre- treatment speech and language assessment in each anatomic subsite can be found in the reference report

9.2.1 Surgical voice restoration in laryngectomy patients

- The introduction of Phase II data items has allowed a more comprehensive data collection on surgical voice restoration (SVR)
- Information on the data to be collected can be found in appendix 1b
- Of the 98 patients reported as having a laryngectomy, 97 were total laryngectomy and potentially eligible for surgical voice restoration. It would be expected that over 80 per cent of patients undergoing total laryngectomy would be eligible for SVR
- 19 patients (19.6 per cent) have entries in the SVR section . This is a commencement of a process of audit and awareness of these items needs to be increased. It would be expected ultimately this would be reflective of all patients undergoing laryngectomy
- Of the 19 entries 17 are recorded as having seen a Speach and Language Therapist (SALT) pre-operatively for counselling on SVR, and 11 as having been offered primary or secondary SVR
- Patient representatives feel it is imperative that speech and swallowing and dietetic support is available to all patients with laryngeal cancer from diagnosis. The lack of appropriate professional support should be seen as a priority requirement. For those undergoing laryngectomy the speech therapist plays an important role in supporting choice in the method of restored speech [33] [34]

Introduction of comprehensive collection of information on surgical voice restoration provides an opportunity to give assurance to patients and commissioners that appropriate speech and language support is being delivered to patients undergoing laryngectomy.

Active involvement of speech and language colleagues in the audit process is to be encouraged by all MDTs

9.3 Percentage having any dietetic assessment and pre-operative / pre-treatment (includes radio and chemotherapy) dietetic assessment.

- 524 patients had a dietetic assessment (13 per cent of 4038 total registrations, 19 per cent of 2758 cases with a treatment)
- Over 67 per cent of those having a dietetic assessment had this prior to any treatment.
- The recording of this item has improved but further work is needed in this area.
- In larynx and oral cavity 108 patients (7.2 per cent of those with recorded treatment) were recorded as seen by a dietician following completion of primary treatment.
- Phase II data items allow a broader assessment of dietary support provided to head and neck cancer patients. It aims to encompass both pre-treatment nutritional status as well as types of nutritional support provided
- The returns of this additional information are too small for analysis, but will be re-assessed in the fifth Annual Report
- Information on the data to be collected can be found in appendix 1b

Dietetic support is important through all parts of the patient pathway, particularly in those undergoing any form of treatment where the morbidity of the treatment can be reduced by appropriate intervention. MDTs are encouraged to confirm the dietetic care provided

Whilst the Expert Panel members believe that this is not a true reflection of current practice, they are aware of countrywide shortages in allied health professional posts to support cancer MDTs. The Expert Panel members realise this has significant resource implications, but their view is that speech and language therapists (SALT) and dietetic input is mandatory in all stages of laryngeal cancer. [35] They hope all MDTs strive to achieve this input. Resource bids would be supported by accurate data collection to quantify deficit and its correct capture onto the DAHNO application would identify the national profile of provision.

9.4 Clinical Nurse Specialist

9.4.1 Clinical Nurse specialist support in larynx cancer

- The introduction of Phase II data items has allowed for the first time an assessment of care provided by Clinical Nurse Specialists in larynx cancer patients
- Information on the data to be collected can be found in appendix 1b
- Of the 1190 patients with larynx cancer 291 were recorded as having been referred to a Clinical Nurse Specialist, which is 24.5 per cent of all registrations and 28.5 of those with a care plan record. It would be expected ultimately this would be all patients
- Of the 291 referred, 55 per cent were from an MDT member and the remainder principally not coded
- 172 of the 291 (59.1 per cent) with a Clinical Nurse Specialist record identified a Clinical Nurse Specialist or designate being present at the breaking of bad news. This is a key point in the commencement of the cancer journey, and best practice supports the involvement of a Clinical Nurse Specialist or designate in this process. [36] [37]
- 208 of the 291 (71.5 per cent) with a Clinical Nurse Specialist record reported that the patient had been seen by a Clinical Nurse Specialist prior to the commencement of treatment

9.4.2 Clinical Nurse specialist support in oral cavity cancer

- Of the 1208 patients with oral cavity cancer 304 were recorded as having been referred to a Clinical Nurse Specialist, which is 25.1 per cent of all registrations and 27.6 of those with a care plan record. It would be expected ultimately this would be all patients
- Of the 304 referred, 50.7 per cent were from an MDT member and the remainder principally not coded
- 159 of the 304 (52.3 per cent) with a Clinical Nurse Specialist record, identified a Clinical Nurse Specialist or designate being present at the breaking of bad news. This is a key point in the commencement of the cancer journey, and best

practice supports the involvement of a Clinical Nurse Specialist or designate in this process.

- 196 of the 304 (64.5 per cent) with a Clinical Nurse Specialist record reported that the patient had been seen by a Clinical Nurse Specialist prior to the commencement of treatment

The collection of information on care by Clinical Nurse Specialists is an opportunity to give assurance to patients and commissioners that appropriate Clinical Nurse Specialist support is being provided.

Active involvement of Clinical Nurse Specialists in the audit process is to be encouraged by all MDTs

- Patient representatives feel it is imperative that a Clinical Nurse Specialist is available to all patients with cancer from diagnosis. The lack of appropriate professional support should be seen as a priority requirement. For all patients and particularly those undergoing treatment (curative or palliative) the Clinical Nurse Specialist plays an important role in supporting choice of treatment [38].

Whilst the Expert Panel members believe that this is not a full reflection of current practice, they are aware of countrywide shortages in Clinical Nurse Specialists to support cancer patients. The Expert Panel members realise this has significant resource implications, but their view is that Clinical Nurse Specialists are mandatory in all stages cancer. They hope all MDTs strive to achieve this input. Resource bids would be supported by accurate data collection to quantify deficit and its correct capture onto the DAHNO application would identify the national profile of provision.

Phase II of the National Head and Neck Cancer Audit has extended sections on surgical voice restoration, dietetic and clinical nurse specialist care provision. It is hoped that active involvement of all health professionals who care for head and neck cancer patients will be encouraged by MDTs to provide a comprehensive record of the multi-professional care provided.

10. Casemix adjusment

Following completion of the third Annual Report, it was agreed by the Head and Neck Clinical Reference Group that work should be undertaken to construct a casemix adjustment model using cumulative submissions of larynx and oral cavity data. The initial focus was to consider if age adversely affected timeliness of delivery of care.

The work presented below was prepared by Ceri White from the Welsh Cancer Intelligence and Surveillance Unit

10.1 Casemix adjustment using logistic regression

The aim of logistic regression is to predict future outcomes using a number of explanatory variables. We wanted to determine whether delays between diagnosis and treatment differ significantly between Cancer Networks in England and Wales.

OUTCOME: There is a delay between diagnosis and treatment (defined as over 31 days) for the elderly (defined as over 70 years). These have been coded as yes (1) or no (0) for those cases that have surgery or radiotherapy information.

The analysis is split into delays in radiotherapy and delays in both surgery and radiotherapy (any treatment) for laryngeal cancers and oral cavity cancers. Included are those that have a surgery start date or radiotherapy start date for the period January 2004 – November 2007. [refer to reference report for details].

Fewer patients have surgery for laryngeal cancer compared to oral cavity cancer but the opposite is true for radiotherapy. The logistic regression analysis uses only those cases that have treatment information as we do not know for those cases that have no treatment information whether it was because they specifically had no treatment information or if the treatment information was missing.

Note that the logistic regression is based on very small numbers. The baseline Cancer Network is that which contains the most number of cases in the analysis, Northern. (Other networks have a higher number of total cases but Northern is the network that has the most complete treatment information in the analysis).

10.2 Delay between diagnosis and radiotherapy

Those cases that have no information are either due to there being no treatment information for that Cancer Network or all outcomes predict the outcome completely. Note that for laryngeal cancer, the overall p-value is 0.09 indicating no significant evidence of an effect between cancer network. There is one individual Cancer Network, Surrey, West Sussex and Hants with a borderline significant result, p=0.04 (95 per cent CI: 1.06, 8.42). Note the large confidence intervals indicating very small numbers of cases in the analysis. The interpretation is as follows: Compared with Northern Cancer Network, 3 Counties Cancer Network has a 90 per cent greater odds of there being a delay between diagnosis and radiotherapy in the elderly. This is non significant with p=0.26 and a large 95 per cent CI between 0.62 and 5.88. For oral cavity cancer, the overall p-value is highly non-significant with very large 95 per cent CI for the Cancer Networks analysed due to the small number of cases in the analysis.

Other univariate logistic models were fitted (for "sex", "early or late stage" and "deprivation quintile") but none produced significant results to be included in the final model for larynx or oral cavity cancer.

10.3 Delay between diagnosis and treatment (surgery or radiotherapy)

Interpretation: There is a 67 per cent greater odds of delay between diagnosis and treatment in the elderly for laryngeal cancer in 3 Counties compared with Northern Cancer Network (a decrease when compared with just radiotherapy delay). There are two Cancer Networks with significant results, one for an increased risk and one for a decreased risk. For oral cavity cancer, there is a 9 per cent greater odds of a delay between diagnosis and treatment in the elderly compared with Northern.

Other univariate logistic models were fitted (for "sex", "early or late stage" and "deprivation quintile"). A fitted model for diagnosis to any treatment is shown. [refer to reference report for details]. For laryngeal cancer, the odds have decreased (from 1.67 to 1.54) for 3 Counties Cancer Network compared with Northern when stage is included in the model. For oral cavity cancer, 3 Counties now has a lower odds compared with Northern when sex is included in the model – this Cancer Network had greater odds than Northern before sex was included in the model.

10.4 Sensitivity analysis

For the above model for laryngeal cancer, one extra case was included as having a delay (as opposed to no delay) between diagnosis and treatment in the elderly for the initial three Cancer Networks. The differences are shown in figure 10.4.a below:

The figure above shows that for 3 Counties, the odds have increased from 54 per cent (compared with Northern to 87 per cent when adding just 1 extra delayed case into the analysis.

10.5 Recommendation:

From the large confidence intervals in the analysis and the large changes in results by just having one extra patient having a delay between diagnosis and treatment, it is recommended not to pursue casemix adjustment at present until further treatment information is available to enable robust calculations.

11. New anatomic sites - nasopharynx and salivary

11.1 Background

Presentation of information on nasopharynx and major salivary gland cancer is included in the National Head and Neck Cancer Annual Report for the first time

Nasopharyngeal carcinoma and major salivary gland cancer are rare cancers in the head and neck [39]. They have different causations [40] [41] and behaviours in comparison to larynx, oral cavity, oropharynx and hypopharynx where smoking and alcohol are known significant causative factors

As they are rare tumours cumulative information will be required to reach conclusions on their treatment and outcome

A summary of the findings so far are presented in outline below: [refer to reference report for more in depth detail].

In nasopharynx, as expected, overlapping lesions predominated, as it is frequently difficult to determine the site of origin. It should be noted that nasopharynx is the least frequent site described.

In major salivary gland cancer 80 per cent of cases were identified in the parotid salivary gland.

Figure 11.2.a: Number of registered new head and neck primaries.

Site	Subsite	Number
Nasopharynx	Overlapping lesion nasopharynx	51
	Posterior wall	30
	Lateral wall	18
	Roof	10
	Inferior-upper surface soft palate	2
Nasopharynx Total		**111**
Major salivary glands	Parotid	207
	Submandibular	49
	Sublingual	3
Major Salivary Glands Total		**259**

11.3 Nasopharynx

Extent of disease at presentation

- With very small numbers of cases a limited interpretation only can be made
- 66 per cent had T and N category recorded. [refer to reference report for details]
- As expected by the expert panels a high percentage 43 per cent were N positive at diagnosis
- 2.7 per cent were M1, suggesting a low propensity for nasopharynx cancers to present with distant metastatic disease.

11.4 Major salivary gland

Extent of disease at presentation

- With small numbers of cases a limited interpretation only can be made
- 55 per cent had T and N category recorded.
- 11 were N positive at diagnosis [refer to reference report for details]
- 1.5 per cent were M1, suggesting a low propensity for salivary gland cancers to present with distant metastatic disease.

11.5 Co-morbidity in Nasopharynx and major salivary gland cancer

- In nasopharynx cancer again the majority showed no or mild decompensation though the numbers were small. A recent publication has identified that co-morbidity is not a factor in risk adjustment in this cancer site .
- In major salivary gland there is a more even distribution across decompensation grades.

11.6 Care provided - squamous cell carcinoma nasopharynx

- The management of squamous carcinoma of the nasopharynx differs from other head and neck sites, with radiotherapy, often given in conjunction with chemotherapy being the recognised treatment modality [43]
- 111 cases of nasopharynx cancer were registered onto the DAHNO application.
- 101 cases (91 per cent of total registered) have a careplan

- Of the 101 cases with a careplan, 69 (68 per cent) have a careplan with recorded treatment. This indicates either recorded treatment or a recorded careplan indicating palliative or supportive care
- Of the total 111 patients it would be expected that 8 – 10 per cent of them would not have reached the point in their pathway where a careplan would be agreed, taking this into account around 100 per cent of patients have a careplan recorded, a significant achievement in capturing data along the patient pathway.

11.6.1 Percentage having radical radiotherapy

- 40 cases have recorded radical (curative or adjuvant) radiotherapy. This is 93 per cent of the 43 cases with recorded radiotherapy.
- Those with radical radiotherapy make up 62 per cent of the 69 cases with some recorded treatment, and 36 per cent of the total 111 cases.
- The 12 other cases with recorded radiotherapy break down as: 3 with palliative intent and 4 not known and 5 with no intent recorded.

11.6.2 Percentage having chemotherapy (including categories such as 'adjuvant' and 'neo adjuvant')

- 43 patients had chemotherapy, of which 18 recorded chemoradiotherapy and 8 patients had palliative chemotherapy
- Chemotherapy was given in 62 per cent of the 69 patients with recorded treatment

11.6.3 Percentage having palliative treatment by type (i.e. radiotherapy, chemotherapy)

- 11 patients have recorded palliative treatment, 10 per cent of the total 111 registrations, 16 per cent of the 67 with recorded treatment.
- The 11 cases break down as: 3 cases of palliative radiotherapy and 8 cases with palliative chemotherapy
- There was no referral to specialist palliative care

11.6.4 Percentage receiving no specific treatment (including active monitoring category)

- 44 nasopharynx cases have no recorded surgery, chemotherapy or radiotherapy.
- 2 of theses have 'supportive' as their careplan intent.

11.6.5 Percentage of patients where careplan agreed matches careplan delivered

- 101 of the 111 registrations have a recorded careplan (91 per cent).
- 35 patients of 101 (representing 103 care plans) have a treatment record matching the careplan (31.5 per cent).

Note: Each patient can have more than one careplan. Only the first careplan has been considered in this analysis.

11.7 Care provided - carcinoma major salivary gland

- 259 cases of major salivary gland cancer were registered onto the DAHNO application.
- 212 cases (81 per cent of total registered) have a careplan
- Of the 212 cases with a careplan, 164 (77 per cent) have a careplan with recorded treatment. This indicates either recorded treatment or a recorded careplan indicating palliative or supportive care
- Of the total 259 patients it would be expected that 8 – 10 per cent of them would not have reached the point in their pathway where a careplan would be agreed, taking this into account around 89 per cent of patients have a careplan recorded.

11.7.1 Percentage having surgical resection with curative intent

- The intent of treatment was curative surgery for 90 of the 137 cases with recorded surgery (66 per cent).
- Those with curative surgery make up 55 per cent of the 164 with some recorded treatment, and 42 per cent of the total 212 cases with recorded care plans.
- The 47 cases with intent other than curative break down as: 2 with palliative intent, 23 with diagnostic intent, 22 with intent not known

11.7.2 Percentage receiving each category of surgical procedure (including surgery to neck)

- Cancers of the major salivary glands encompass a wide variety of pathologies [44], varying in behaviour from low to high grade patterns. Treatment is

Figure: 11.7.2.a. Percentage receiving each category of surgical procedure (including surgery to neck).

Major salivary gland patients - surgery summary	Count	Percentage of 137 patients with surgery
Total parotidectomy	48	35.0
of these 48, the number having neck dissection	20	
Partial parotidectomy (superficial)	43	31.4
of these 43, the number having neck dissection	2	
Submandibular gland excision	16	11.7
of these 16, the number having neck dissection	6	
Comprehensive neck dissection (includes those listed previously)	9	
Modified neck dissection (includes those listed previously)	6	
Selective neck dissection (includes those listed previously)	21	
All neck dissections	36	26.3

tailored to match the pathology and extent of disease at presentation

- The majority of patients with major salivary gland cancer undergo surgery. This may be as an initial diagnostic procedure where a lump is excised via a superficial parotidectomy and subsequently found to be malignant. Depending on the pathology found this may be followed by post-operative radiotherapy or by total parotidectomy
- In the submandibular gland again surgery is the commonest modality. Initial removal of the gland may be both diagnostic and curative but this will vary with the pathological diagnosis
- Neck dissection was performed in one third of cases undergoing salivary gland removal

11.7.3 Percentage having radical radiotherapy

- 41 cases have recorded radical (curative or adjuvant) radiotherapy. This is 66 per cent of the 62 cases with recorded radiotherapy.
- Those with radical radiotherapy make up 25 per cent of the 164 with some recorded treatment, and 16 per cent of the total 259 cases.
- The 21 other cases with recorded radiotherapy break down as: 10 with palliative intent and 9 not known and 2 with no intent recorded.

11.7.4 Percentage having chemotherapy

- 5 patients had chemotherapy, of which 2 recorded chemoradiotherapy and 1 patients had palliative chemotherapy
- Chemotherapy was given in 3 per cent of the 164 patients with recorded treatment
- In the view of the Expert Panel members, there is no currently available evidence supporting the notion that chemotherapy in isolation improves long-term survival in salivary gland cancer, and limited evidence of its value in adjunctive use [45].

11.7.5 Percentage having palliative treatment by type (i.e. radiotherapy, chemotherapy, surgery)

- 13 patients have recorded palliative treatment, 5 per cent of the total 259 registrations, 7.9 per cent of the 164 with recorded treatment.
- The 13 cases break down as: 2 case of palliative surgery, 10 cases of palliative radiotherapy and 1 case with palliative chemotherapy
- There was no referral tp specialist palliative care

11.7.6 Percentage receiving no specific treatment (including active monitoring category)

- 73 salivary gland cases have no recorded surgery, chemotherapy or radiotherapy.
- 1 of these cases have 'supportive' as their careplan intent.
- 1 of the other cases have 'active monitoring' as their careplan intent.

11.7.7 Percentage of patients where careplan agreed matches careplan delivered

- 212 of the 259 registrations have a recorded careplan (81.9 per cent).
- 97 patients of 212 (representing 230 care plans) have a treatment record matching the careplan (45.8 per cent).

12 National Comparative Head and Neck Cancer Audit and the future

12.1 What do trusts / networks need to do to improve care / assure of care delivery?

- The Head and Neck Cancer Audit should continue to be a priority for Trusts and Cancer Networks in 2009-2011, to promote clinical governance and provide assurance to patients and carers of the quality of services provided
- In response to the fourth Annual Report each Cancer Network should oversee an annual review of case ascertainment in contributing trusts and the completeness of submission of key items required for risk adjustment, and facilitate improvement plans to achieve this for the fifth Annual Report submission year now in progress
- With the stimulus of the fourth Annual Report, Cancer Networks should reflect on where variation in access identified in trust identifiable data has occurred, compare with other access information and examine the cancer pathways and their components that underpin these to improve timely pathways for all head and neck cancer patients
- Following receipt of the local trust report, each should develop an action plan based on the findings in the fourth report, particularly noting any areas of continuing weak performance compared to previous years reports
- Each trust should facilitate non medical personnel to contribute to the audit process in head and neck cancer, and ensure that adequate support to achieve this is available. This will support assurance in the fourth report of the key elements of care provided by non medical staff,which are a priority for patient groups.

12.2 Building cumulative knowledge in larynx and oral cavity

Over 7700 larynx and oral cavity cancer cases have been submitted since the inception of the audit. Cumulative information on age and sex distribution can be found in section 8.4.1 of the reference report, and this now acts as a further authoritative source of information of the incident population.

Head and neck cancer is a relatively uncommon cancer when compared to the incidence of tumours such as lung, colon and breast. It is now some time since the concept of evidence based medicine became an accepted paradigm, but the traditional research model of ad hoc studies persists despite well recognised limitations.

High quality clinical databases offer an alternative approach, with the potential to bring research closer to practice and audit, and to use it in a manner that allows complex questions about the delivery of head and neck cancer care to be answered for the benefit of our patients. This accumulated data could be used either for non-randomised analyses or to generate hypotheses and provide ready access to clinicians prepared to participate in randomised trials.

A proposal is being developed to allow this, and the National Head and Neck Cancer Audit team would welcome ideas and suggestions to develop this concept further.

12.3 Future direction for the National Head and Neck Cancer Audit and links to the National Cancer Intelligence Network (NCIN) agenda

The National Head and Neck Cancer Audit is working closely with the evolving NCIN Head and Neck Site Specific Clinical Reference Group (HaNSSCRG), with common membership across a number of groups.

The NCIN, launched in 2008 brings together cancer registries, clinical champions, researchers and other interested parties (including the Office for National Statistics; National Clinical Audit Support Programme; NHS Information Centre) under the auspices of the National Cancer Research Institute (NCRI). Collection, analysis and publication of high quality data on clinical outcomes will be one of the key drivers for implementation of the English Cancer Reform Strategy.

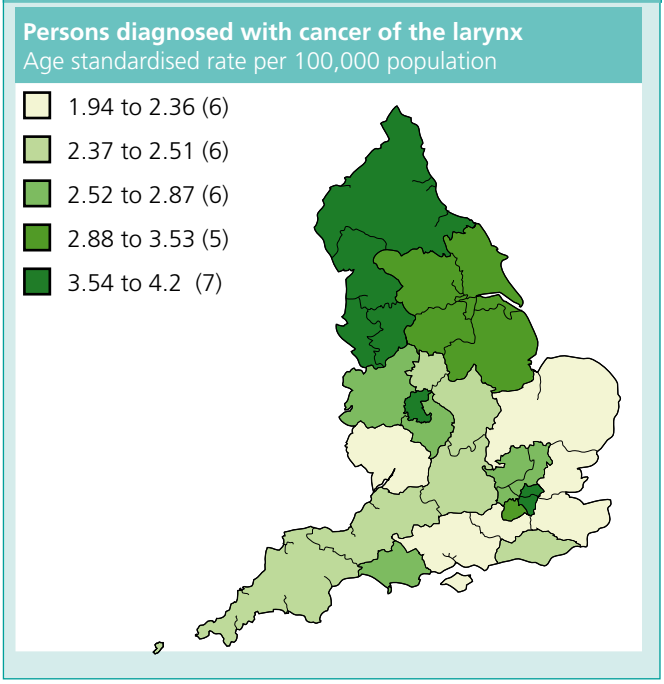
More information on the NCIN can be found at www.ncin.org.uk In Wales, the Assembly Government supports the need to benchmark performance and clinical outcomes and expects MDTs to continue to participate in UK audits supported by the Cancer Information Framework, the national cancer information system CANISC, Informing Healthcare and the Welsh Cancer Intelligence and Surveillance Unit.

12.4 Incidence and mortality rates from cancer registry data

The recently published e- atlas for cancer [46], showed only an overview of head and neck cancer for a summation of selected anatomic sites. At the request of the National Head and Neck Cancer Audit team the Oxford Cancer Intelligence Unit (OICU) has used a similar methodology and developed by English cancer network maps for head and neck cancer rates at the 3 digit level (eg C32 to describe larynx) for both age standardised incidence and age standardised mortality.

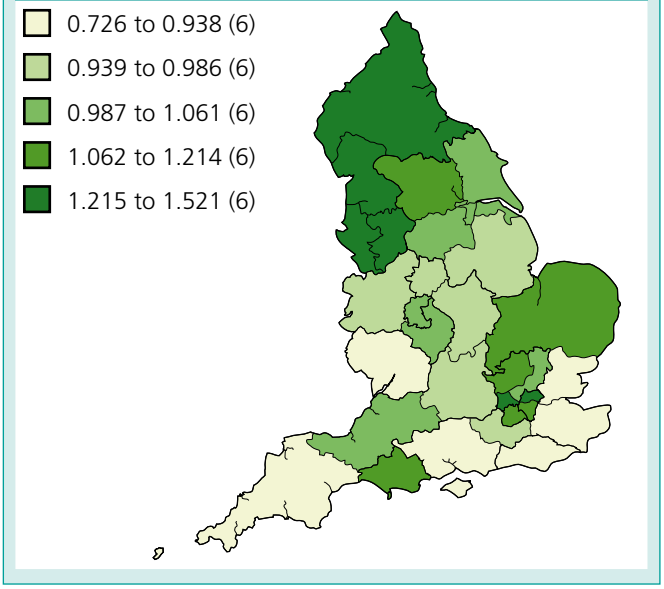
Two maps are presented as samples below. For a wider number of sites please refer to the reference report.

Figure 12.4.a Age standardised incidence rates for larynx cancer by English Cancer Network 2002 -2006



- Across English Cancer Networks in the five year period 2002 to 2006, age standardised incidence of larynx cancer (all sites) varied from 1.94 to 4.2 per 100,000 of the population
- The incidence was in general higher in the North and Central London and lower in the South East

Figure 12.4.b Age standardised mortality rates for oral cavity cancer by English Cancer Network 2001 -2005



- Across English Cancer Networks in the five year period 2001 to 2005, age standardised mortality of oral cavity cancer (ICD sites C02, C03, C04 and C06 excludes mucosal aspect of lip and hard palate) varied from 0.73 to 1.52 per 100,000 of the population
- Mortality was in general higher in the North East, Cumbria and Lancashire and lower in the South East

The integration of information from a variety of sources to increase the knowledge base on head and neck cancer remains a common goal of the National Head and Neck Cancer Audit and the NCIN Head and Neck Site Specific Clinical Reference Group.

Appendix

APPENDIX 1

DATA SET FOR DAHNO PHASE II

1a Phase II data set

The full dataset can be found at the following web page :-

www.ic.nhs.uk/canceraudits

1b Items in Speech and Language and Swallowing, Surgical Voice Restoration(SVR), Dietetic and Clinical Nurse Specialist care

The following items are those required for phase II of for the National Head and Neck Cancer Audit for care provided by the above professionals:-

Dietetics, Speech and Language Therapy and Clinical Nurse Specialist dataset items

Persons diagnosed with cancer of the larynx
Age standardised rate per 100,000 population

	Data Item
HN 11	Symptoms first noted date
HN 20	Primary care communication sent date
HN 22	Cancer dental assessment date
HN 23	Speech and swallowing assessment date
S	**Swallowing**
S2	Normalcy of diet
SVR	**Surgical Voice Restoration**
SVR1	Contact date
SVR3	SVR Contact professional involvement
SVR5	SVR Contact purpose
SVR6	Functional swallowing ability
SVR8	SVR Communication post operative method
SVR9	SVR Communication primary method
SVR10	SVR Communication other method
SVR 11	SVR Post operative voicing
SVR 12	SVR Valve removal reason
HN 19	Contact date
D	**Nutritional Support**
D10	Patient estimated weight
D1	Person observation (weight)
D2	Date weight measured
D3	Person observation (height)
D4	Date height measured
D5	Contact date (post treatment)
D6	Date nutrition support instigated
D7	Type nutrition support instigated
D8	Date nutrition support remains in place
D9	Date nutrition support withdrawn
CNS	**Clinical Nurse Specialist**
CNS 1	Source of referral
CNS 2	Cancer referral decision date
CNS 3	Reason for referral
CNS 4	Contact date
CNS 5	Date patient advised of cancer diagnosis
CNS 6	Professionals present at breaking of bad news
CNS 7	Date of CNS intervention
CNS 8	Type of CNS intervention
CNS 9	Date of discharge from CNS

Appendix 2

Adult Co-morbidity Evaluation (ACE-27) UK Values

The following form was developed as an extract from the National Cancer Dataset v4.0. We acknowledge that the intellectual property rights remain with Washington University in St. Louis, Campus Box 8013, 660 So. Euclid Avenue, St Louis MO 63110. It originates from and was developed with the permission of Washington University in St Louis.

Appendix 2 Adult Co-morbidity Evaluation (ACE-27) UK Values

Cogent comorbid ailment	Grade 3 Severe Decompensation	Grade 2 Moderate Decompensation	Grade 1 Mild Decompensation
Cardiovascular System			
Myocardial Infarct	MI ≤ 6 months	MI > 6 months ago	Old MI by ECG only, age undetermined
Angina / Coronary Artery Disease	Unstable angina	Chronic exertional angina Recent (≤ 6 months) Coronary Artery Bypass Graft (CABG) or Percutaneous Transluminal Coronary Angioplasty (PTCA) Recent (≤ 6 months) coronary stent	ECG or stress test evidence or catheterization evidence of coronary disease without symptoms Angina pectoris not requiring hospitalization CABG or PTCA (>6 mos.) Coronary stent (>6 mos.)
Congestive Heart Failure (CHF)	Hospitalized for CHF within past 6 months Ejection fraction < 20%	Hospitalized for CHF >6 months prior CHF with dyspnea which limits activities	CHF with dyspnea which has responded to treatment Exertional dyspnea Paroxysmal Nocturnal Dyspnea (PND)
Arrhythmias	Ventricular arrhythmia ≤ 6 months	Ventricular arrhythmia > 6 months Chronic atrial fibrillation or flutter Pacemaker	Sick Sinus Syndrome
Hypertension	DBP>130 mm Hg Severe malignant papilledema or other eye changes Encephalopathy	DBP 115-129 mm Hg DBP 90-114 mm Hg while taking antihypertensive medications Secondary cardiovascular symptoms: vertigo, epistaxis, headaches	DBP 90-114 mm Hg while not taking antihypertensive medications DBP <90 mm Hg while taking antihypertensive medications Hypertension, not otherwise specified
Venous Disease	Recent PE (≤ 6 mos.) Use of venous filter for PE's	DVT controlled with Coumadin or heparin Old PE > 6 months	Old DVT no longer treated with Coumadin or Heparin
Peripheral Arterial Disease	Bypass or amputation for gangrene or arterial insufficiency < 6 months ago Untreated thoracic or abdominal aneurysm (>6 cm)	Bypass or amputation for gangrene or arterial insufficiency > 6 months ago Chronic insufficiency	Intermittent claudication Untreated thoracic or abdominal aneurysm (< 6 cm) s/p abdominal or thoracic aortic aneurysm repair

Cogent comorbid ailment	Grade 3 Severe Decompensation	Grade 2 Moderate Decompensation	Grade 1 Mild Decompensation
Respiratory System			
	Marked pulmonary insufficiency Restrictive Lung Disease or COPD with dyspnea at rest despite treatment Chronic supplemental O2 CO2 retention (pCO2 > 6.7 kPa) Baseline pO2 < 6.7 kPa FEV1 (< 50%)	Restrictive Lung Disease or COPD (chronic bronchitis, emphysema, or asthma) with dyspnea which limits activities FEV1 (51%-65%)	Restrictive Lung Disease or COPD (chronic bronchitis, emphysema, or asthma) with dyspnea which has responded to treatment FEV1 (66%-80%)
Gastrointestinal System			
Hepatic	Portal hypertension and/ or esophageal bleeding ≤ 6 mos. (Encephalopathy, Ascites, Jaundice with Total Bilirubin > 34mmol/l)	Chronic hepatitis, cirrhosis, portal hypertension with moderate symptoms "compensated hepatic failure"	Chronic hepatitis or cirrhosis without portal hypertension Acute hepatitis without cirrhosis Chronic liver disease manifested on biopsy or persistently elevated bilirubin (>51mmol/l)
Stomach / Intestine	Recent ulcers ≤ 6 months requiring ≥ 6 units of blood transfusion	Ulcers requiring surgery or transfusion of < 6 units of blood	Diagnosis of ulcers treated with meds Chronic malabsorption syndrome Inflammatory bowel disease (IBD) on meds or h/o with complications and/or surgery
Pancreas	Acute or chronic pancreatitis with major complications (phlegmon, abscess, or pseudocyst)	Uncomplicated acute pancreatitis Chronic pancreatitis with minor complications (malabsorption, impaired glucose tolerance, or GI bleeding)	Chronic pancreatitis w/o complications
Renal System			
End-stage renal disease	Creatinine > 265 umol/l with multi-organ failure, shock, or sepsis Acute dialysis	Chronic Renal Insufficiency with creatinine > 265 umol/l Chronic dialysis	Chronic Renal Insufficiency with creatinine 177-265umol/l.
Endocrine System			
Diabetes Mellitus	Hospitalization ≤ 6 months for DKA Diabetes causing end-organ failure retinopathy neuropathy nephropathy* coronary disease* peripheral arterial disease*	IDDM without complications Poorly controlled AODM	AODM controlled by oral agents only

Cogent comorbid ailment	Grade 3 Severe Decompensation	Grade 2 Moderate Decompensation	Grade 1 Mild Decompensation
Neurological System			
Stroke	Acute stroke with significant neurologic deficit	Old stroke with neurologic residual	Stroke with no residual Past or recent TIA
Dementia	Severe dementia requiring full support for activities of daily living	Moderate dementia (not completely self-sufficient, needs supervising)	Mild dementia (can take care of self)
Paralysis	Paraplegia or hemiplegia requiring full support for activities of daily living	Paraplegia or hemiplegia requiring wheelchair, able to do some self care	Paraplegia or hemiplegia, ambulatory and providing most of self care
Neuromuscular	MS, Parkinson's, Myasthenia Gravis, or other chronic neuromuscular disorder and requiring full support for activities of daily living	MS, Parkinson's, Myasthenia Gravis, or other chronic neuromuscular disorder, but able to do some self care	MS, Parkinson's, Myasthenia Gravis, or other chronic neuromuscular disorder, but ambulatory and providing most of self care
Psychiatric			
	Recent suicidal attempt Active schizophrenia	Major depression or bipolar disorder uncontrolled Schizophrenia controlled w/ meds	Major depression or bipolar disorder controlled w/ medication
Rheumatologic (Incl. Rheumatoid Arthritis, Systemic Lupus, Mixed Connective Tissue Disorder, Polymyositis, Rheumatic Polymyositis)			
	Connective Tissue Disorder with secondary end-organ failure (renal, cardiac, CNS)	Connective Tissue Disorder on steroids or immunosuppressant medications	Connective Tissue Disorder on NSAIDS or no treatment
Immunological System (AIDS should not be considered a co-morbidity for Kaposi's Sarcoma or Non-Hodgkin's Lymphoma)			
AIDS	Fulminant AIDS w/KS, MAI, PCP (AIDS defining illness)	HIV+ with h/o defining illness. CD4+ < 200/µL	Asymptomatic HIV+ patient. HIV+ w/o h/o AIDS defining illness. CD4+ > 200µL
Malignancy (Excluding Cutaneous Basal Cell Ca., Cutaneous SCCA, Carcinoma in-situ, and Intraepithelial Neoplasm)			
Solid Tumor including melanoma	Uncontrolled cancer Newly diagnosed but not yet treated Metastatic solid tumor	Any controlled solid tumor without documented metastases, but initially diagnosed and treated within the last 5 years	Any controlled solid tumor without documented metastases, but initially diagnosed and treated > 5 years ago
Leukemia and Myeloma	Relapse Disease out of control	1st remission or new dx <1yr Chronic suppressive therapy	H/o leukemia or myeloma with last Rx > 1 yr prior
Lymphoma	Relapse	1st remission or new dx <1yr Chronic suppressive therapy	H/o lymphoma w/ last Rx >1 yr prior
Substance Abuse (Must be accompanied by social, behavioral, or medical complications)			
Alcohol	Delirium tremens	Active alcohol abuse with social, behavioral, or medical complications	H/o alcohol abuse but not presently drinking
Illicit Drugs	Acute Withdrawal Syndrome	Active substance abuse with social, behavioral, or medical complications	H/o substance abuse but not presently using
Substance Abuse (Must be accompanied by social, behavioral, or medical complications)			
Obesity		Morbid (ie., BMI>38)	

Overall co-morbidity score (circle one)

0	1	2	3	9
None	Mild	Moderate	Severe	Unknown

Aetiology	part of medical science dealing with the causes of disease
Alveolus	the portion of the jaw containing the teeth
Aspiration	withdrawal of fluids or gases from a cavity
BAHNO	British Association of Head and Neck Oncologists
Biopsy	removal and examination of tissue for diagnostic purposes
Buccal mucosa	mucous membrane of the mouth or inside of cheek
Cancer site	area where cancer is located
Careplan	represents the point in the patient pathway where a plan of treatment is proposed and thus an appropriate point to assess and record a patient's fitness
Casemix	a means of classifying hospital patients to provide a common basis for comparing cost effectiveness and quality of care across hospitals.
CCAD	Central Cardiac Audit Database
CEU	Clinical Effectiveness Unit
CHART	continuous hyper fractionated accelerated radiotherapy
Chemotherapy	drugs used in the treatment of cancer
Child document	sub-document of a parent (top level) document
Co-morbidity	co existent illness(es) to the disease under consideration
Cordectomy	removal of the vocal chords
CSV	Comma Separated value
CT scan	computerised tomography scan - a radiological investigation
Curative	intending to cure
CXR	chest X-ray
Cytologist	medically qualified specialist in the study of cells and disease
Cytology	study of cells and disease
DAHNO	Data for Head and Neck Oncology
DAHNO application	software used to collate national, comparative head and neck cancer data
Dataset	collection of data items
Decompensation	the functional deterioration of a previously working structure or system. Decompensation may occur due to fatigue, stress, illness, or old age. When a system is "compensated", it is able to function despite stressors or defects. Decompensation describes an inability to compensate for these deficiencies
Demographic	a statistic characterizing human populations (or segments of human populations) broken down by age or sex or income etc.
Deprivation	absence of expected level of social provision
DH	Department of Health
Diagnosis	confirming the presence of a disease
Dietician	Allied Health Professional specialising in aspects of nutrition
Dorsal	top surface
DSCN	Data Set Change Notification
Early adopter	team or individual taking up a new idea ahead of majority
Endolaryngeal	describing treatment of the larynx via a hollow endoscope
Endoscopy	visualisation of hollow organs
ENT	Ear, Nose and Throat
Epidemiologist	specialist in the study of prevalence of disease
Excision	removal of an area of tissue
Extensive resection	extension of surgical procedure to remove greater volume of tissue than normally required for named procedure
Flap repair	reconstructive surgery utilising a flap of tissue
GDP	General Dental Practitioner
Gingiva	mucosal tissue between and around teeth

Glossectomy	removal of the tongue
Glottis	the vocal apparatus of the larynx; the true vocal folds and the space between them where the voice tone is generated
GMP	General Medical Practitioner
GP	General Practitioner
Healthcare Commission	an independent body, to promote and drive improvement in the quality of healthcare and public health in England and Wales.
Hemimandibulectomy	removal of half the mandible
Histology	microscopic study of cells and tissues
Histopathologist	medically qualified specialist in histology and pathology
HNCRG	Head and Neck Clinical Reference Group
Homogeneous	of similar consistency
Hypopharynx	the lowest section of the pharynx
IBM Lotus Domino®	the server architecture upon which the central DAHNO application database replica resides
IBM Lotus Notes®	the client software that renders the functionality of the DAHNO database to its users
IC	The Information Centre for health and social care (NHS body)
ICD-10	International Classification of Diseases version 10 (a coding nomenclature prepared by the World Health Organisation).
IMD	Index of Multiple Deprivation
IOG	Improving Outcomes Guidance - issued by NICE
ISB	Information Standards Board
Laryngeal	of the larynx
Laryngectomy	removal of larynx (voice box)
Larynx	voice box - anatomic cartilage and soft tissue structure
LDP	local delivery plans
Lesion	abnormal area of tissue
Linear accelerator	radiotherapy machine to deliver high energy beam to treat cancer
Locoregional	area surrounding tumour and its expected lymph node drainage
Lymph node	a bean shaped focus of lymphoid tissue present in many areas of the body forming part of the immune system
Malignant	cancerous
Mandibulectomy	removal of mandible
Mandibulotomy	division of mandible - usually for surgical access
Maxillectomy	removal of maxilla
Maxillofacial	of the face and jaws
MDT	Multi Disciplinary Team – a team of clinical specialists assembled to discuss and agree the appropriate care for a patient
Meta analysis	statistical technique to summate separate statistical analyses
Metastasis	distant spread of tumour
MRI scan	Magnetic Resonance Imaging – a scanning technique using magnetic and radio-waves
Mucosa	mucous membrane
Multimodality	combination of treatments
NCASP	National Clinical Audit Support Programme
NCDS	National Cancer Dataset – the standardised set of data items used in the collection of cancer data
NCIN	National Cancer Intelligence Network

Neo-adjuvant	a substance given ahead of another treatment to boost its effect
Neoplasm	new growth of tissue in part of body
NHSIA	NHS Information Authority – the name of the NHS body now known as 'The Information Centre'
NICE	National Institute for Clinical Excellence - an independent organisation responsible for providing national guidance on promoting good health and preventing and treating ill health
NOS	Not Otherwise Specified
NSF	National Service Framework – Dept. of Health long term strategies for improving specific areas of care. They set measurable goals within set time frames.
Oncologists	medically qualified non surgical specialists in cancer management
ONS	Office for National Statistics
Oral cavity	the mouth: anatomic area bounded by the lips palate and pharynx
Oropharyngeal	anatomical subsite the oropharynx e.g. a tumour arising in the oropharynx
Osteoradionecrosis	breakdown of bone as a consequence of previous radiotherapy
Palate	'roof of the mouth' comprising bony anterior portion and soft tissue portion posteriorly
Palliative care	care to alleviate a disease without intent of cure
Parent document	top level document that has subdocuments beneath it
PAS	Patient Administration System
Pathology	study of organs of the body in disease
Pathway	describes stages in the journey of care for a disease
PCT	Primary Care Trust
PET scan	Positron Emission Tomography - a nuclear medicine technique which produces a three-dimensional image or map of functional processes in the body.
Pharynx	anatomical area from back of nose to start of oesophagus (gullet)
PIAG	Patient Information Advisory Group - PIAG was established to provide advice on issues of national significance involving the use of patient information and to oversee arrangements created under Section 60 of the Health and Social Care Act 2001. Its membership is drawn from patient groups, healthcare professionals and regulatory bodies.
Prognosis	predicted outcome of a disease
Radiologist	medically qualified imaging specialist
Radiotherapy (RT)	cancer treatment using high energy beams
RCT	Randomised Control Trial - the essential characteristics of a RCT are that there will be a comparison between a treatment and placebo group. Great care is taken to avoid bias when collecting the data and assigning subjects (randomly) to their respective groups.
Resective pathology	pathology of a surgically removed specimen
Retromolar area	the area directly behind the molar teeth
SALT	Speech and Language Therapists
Squamous cell carcinoma (SCC)	the commonest cancer of mucous membranes in the head and neck
Stage certainty	validation of diagnostic method used to derive stage of cancer
Subglottis	area of voice box below vocal cords
Supraglottis	upper portion of voice box above vocal cords
SUS	Secondary Uses Services
Surgeon	medically qualified specialist who performs diagnostic assessments and operative procedures

SWAHN	South West Audit of Head and Neck Cancer
Teletherapy	high energy external beam used in the treatment of cancer
Thorax	chest cavity
TNM	Tumour, Node, Metastasis. Clinical Classification of anatomical extent of cancer
Tomography	multiple slice x-ray
Triage	preliminary assessment to determine future pathway of care
Tuberculosis	infectious granulomatous disease
Tumour	swelling or abnormal growth
Voice Restoration	means of achieving voice in a patient who has had a laryngectomy
UICC	International Union Against Cancer (French Acronym - Union Internationale Contre le Cancer)
Ulceration	erosion of a mucosal lining
Ultrasonography	technique of high frequency sound scans to visualise body structures
Upper aero- digestive tract	anatomic area from nose and mouth to start of gullet, includes both respiratory passages (nose and voice box) as well as mouth and pharynx

There are many organisations that have contributed and continue to contribute to the audit. They are listed below.

British Association of Head and Neck Oncologists

British Association of Head and Neck Oncology Nurses

British Association of Oto-larynologists - Head and Neck Surgeons (ENT UK)

British Association of Oral and Maxillofacial Surgeons

British Association of Plastic Surgeons

British Dental Association

British Dietetic Association

British Society for Oral and Maxillofacial Pathology

National Association of Laryngectomee Clubs

Royal College of Surgeons

Royal College of General Practitioners

Royal College of Radiologists

Royal College of Pathologists

Royal College of Speech and Language Therapists

Palliative Care Association

Let's Face It

UK Association of Cancer Registries

Representatives from clinical oncology

Representatives from clinical psychology

Trent Cancer Registry

Welsh Cancer Intelligence and Surveillance Unit

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[5] National Standards for Head and Neck Cancer Services 2005 http://www.wales.nhs.uk/sites3/docmetadata.cfm?orgid=362&id=43257

[6] Informing Healthcare: Cancer Information Framework (CaNISC) http://www.wales.nhs.uk/ihc/page.cfm?orgid=770&pid=33639

[7] DAHNO second annual report: Key findings from the National Head and Neck Cancer Audit. 2007 http://www.ic.nhs.uk/services/national-clinical-audit-support-programme-ncasp/audit-reports/head-and-neck-cancer

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