GIRFT Programme National Specialty Report: Head and Neck Cancer

Contents

Executive summary

Head and neck cancer (HNC) constitutes a diverse group of tumours, largely comprised of squamous cell carcinoma, affecting the upper aerodigestive tract. There are around 10,500 new HNC cases in England every year.[1] It is the eighth most common cancer in the UK, with incidence projected to rise.[2]

Pathology and radiology are key diagnostic modalities for HNC, while surgery, radiotherapy and systemic therapy are key treatment modalities. Speech and language therapy, dietetics and restorative dentistry are essential components of a multidisciplinary approach to treatment. Specialist nursing underpins the entire pathway, to ensure that the patient has optimal and personalised care,[3] and there are many other co-dependent specialities involved in caring for patients, including psychology and physiotherapy.

Across England, outcomes vary between tumour sites and between networks.[4] Such variation was identified in an HNC audit conducted in 2014[5] and persists today. The Getting It Right First Time (GIRFT) approach aims to highlight, challenge and reduce unwarranted clinical variation, and the methodology has been shown to be effective, so a GIRFT review is timely. The review was commissioned by NHS England's Cancer Programme team.

This national report represents the culmination of many months of work by the GIRFT team, (comprised of nine clinical leads, representing many of the specialties on the HNC multidisciplinary team) assisted by analysts from the NHS England GIRFT team.

During the review, our team conducted an extensive network-mapping exercise and analysed scores of different data sets and hundreds of metrics and pre-visit questionnaires; our leads spent over 100 hours conducting peer reviews across 42 networks, hearing opinions from across the country and across all disciplines. More than 400 hours were spent reviewing both the data and the evidence, drawing inferences from our peer reviews and considering how best to improve the delivery of HNC care in England.

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[1] *2020 data available via: CancerData showing number of tumours including ll ages and persons, where tumour sites were any of: C00 -C14 malignant neoplasm of lip,oral cavity and pharaynx; c08 malignant neoplasm of other and unspecified major salivary glands; c30 neoplasm of nasal cavity and middle ear; D02, Carcinoma in situ of middle ear and respiratory system, D38 Neoplasm of uncertain or unknown behaviour of miffle ear and reaspiratory and intrathoracic organs; c31 malignant neoplasm of accessory sinuses; c32 Malignant neoplasm of larynx.*

[2] *Cancer Research UK, 'Head and Neck Cancers Statistics', accessed 1 April 2024, https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/head-and-neck-cancers.*

[3] *Mayur D. Mody et al., 'Head and Neck Cancer', The Lancet 398, no. 10318 (December 2021): 2289–2299, doi:10.1016/S0140-6736(21)01550-6.*

[4] *Trevelyan Square and Boar Lane, 'National Head and Neck Cancer Audit 2014', 2014, https://files.digital.nhs.uk/publicationimport/pub18xxx/pub18081/clin-audi-supp-prog-head-neck-dahn-13-14.pdf.*

[5] *Square and Lane.*

Following each peer review, each HNC clinical network received feedback from the team about the service they provide, highlighting good practice and providing recommendations for how services might be improved. This national report synthesises our findings from across the country and presents a series of recommendations aimed at improving HNC services across England. Focus areas include network structure, data, patient pathways and treatment protocols and the workforce necessary to deliver patient-centred care.

Our primary finding is the need to consolidate some HNC clinical networks to ensure that all networks can deliver a world-class service for the benefit of patients and staff. This recommendation, detailed in the *Network Structure and Organisation* section, is crucial within the changing landscape of cancer care in England. It reflects the well-documented volume-outcome relationship for complex surgeries and the changing incidence of laryngeal cancers, as well as the need for a sustainable workforce in microvascular surgery. It also reflects observations from peer reviews that HNC care works best where an HNC clinical network corresponds directly with a cancer alliance, and the need to avoid some of the elements that we observed in the less-efficient services with poorer clinical outcomes. While some networks should be reconfigured as a matter of priority, changes can be implemented, in others over a medium-term time period.

Our second cross-cutting theme pertains to data. Data can be a powerful tool to drive changes within services, but there are numerous shortcomings in both the coded data and outcome measures, which lead to trust teams not relating to the data we presented to them nor being able or willing to use data to help drive changes within the service. As with most GIRFT reports, we seek ways in which data collection, collation and utilisation can be improved to harness data effectively to drive improvement.

We discussed each stage of the patient pathway (from referral to diagnosis, diagnosis to treatment, treatment (including surgery and oncology) and post-treatment), presenting the findings from our peer reviews with selected case studies and recommendations that trusts could implement to improve the service they deliver.

Essential pillars of the HNC service are clinical nurse specialists, speech and language therapists, dietitians and specialist restorative dentists. Each of these vital disciplines is considered, with a synthesis of findings from our peer reviews, case studies of exemplar practices and a discussion of the workforce around each discipline. Like the patient pathway section this section also includes recommendations trusts can adopt to improve their service.

During the peer reviews, we noted considerable unwarranted variation in the HNC workforce, including that many networks lack a quorate multidisciplinary team (MDT), and that (as is true across the NHS) consequently many workforces are under considerable strain. In particular, pathology, radiology, speech and language therapy, dietetics and restorative dentistry workforces frequently lack the capacity to meet the needs of increasing volume and complexity of the patient cohort. The final section of our report addresses this, presenting recommendations on the workforce necessary to deliver world-class care for HNC patients.

Summary of recommendations

1.	HNC clinical networks should be consolidated, where indicated, and aligned with cancer alliances, to deliver a world-class service for patients and staff.	NHS England, in collaboration with cancer alliances, commissioners and networks
2.	The quality and content of data should be improved to deliver current and future improvements in this pathway.	NHSE, networks and trusts
3.	Trusts should adopt best practices we identified throughout the pathway	Trusts
4.	Trusts should adopt best practices pertaining to key pillars of patient care	Trusts
5.	Networks should develop a plan to act on the specific staffing gaps we identified in their individual peer reviews, and review these alongside discussions on network structure as well as on broader best practice we have identified nationally.	NHSE, networks and trusts

Foreword from Professor Tim Briggs

Placeholder

Foreword from Professor Peter Johnson

Placeholder

Introduction from GIRFT clinical leads

Placeholder

Statement of support

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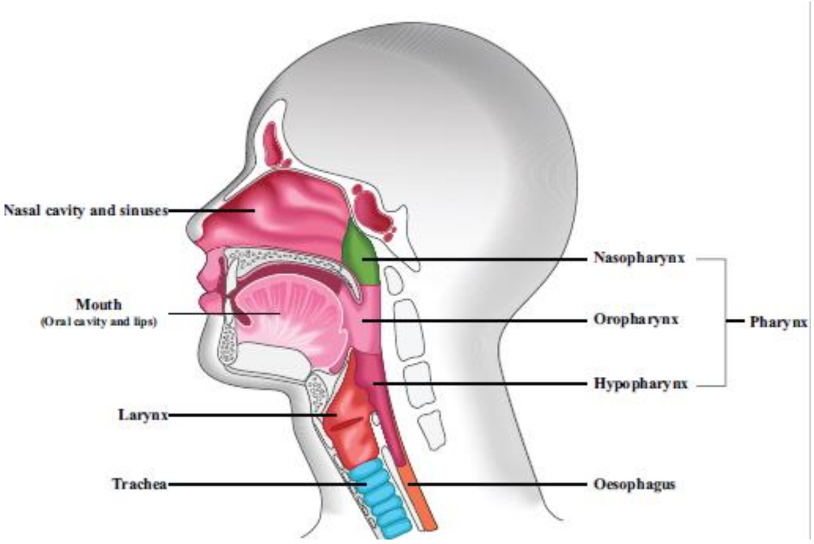
About head and neck cancer

Overview

Head and neck cancers (HNCs) are a heterogeneous group of tumours that arise from the various tissues and structures in the head and neck region (excluding brain cancers, other cranial malignancies and thyroid cancer). HNCs are found predominantly in the oral cavity, pharynx, larynx, nasal cavity and paranasal sinuses, and salivary glands. Over 90% of all malignant HNCs are squamous cell carcinomas.[6]

Given the anatomical and functional complexities of the head and neck region, the disease often has a profound impact on fundamental functions such as speech, eating and swallowing, breathing, and overall appearance. This can significantly affect a patient's quality of life, and managing these implications is a critical aspect of treatment and survivorship care.

Figure 1: Lateral view showing sites of HNC (Homer)



Epidemiology and incidence in the UK

Each year, there are over 10,000 new HNC cases in England (Cancer Data, National Disease Registration Service (NDRS)),[7] accounting for approximately 3% of new cancer cases nationwide.

The commonest sites of HNC are oropharynx, oral cavity and larynx (see **Table 1**). The incidence of HNC has increased by 37% since the early 1990s and is projected to rise a further 5% in the UK between 2023-2025 and 2038-2040.[8] This is due to the increase in HPV-

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[6] *Square and Lane.*

[7] *Cancer Research UK, 'Head and Neck Cancers Statistics'.*

[8] *'Head and Neck Cancers Incidence Statistics', Cancer Research UK, February 2017, https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/head-and-neck-cancers/incidence.*

associated oropharyngeal cancer. The incidence of laryngeal cancer has decreased over the last decade.[9] The overall net survival at 5 years is around 60%.

Table 1: Incidence and mortality of HNC by subsite (NDRS data)

Site	Incidence (DSR per 100 000)	Net survival 12m (%) [1]	Net survival 60m (%) [2]
All sites	18.4	80.3	60.9
Oropharynx including base of tongue, soft palate and tonsils	6.5	84.1	64.7
Oral cavity	5.1	77	58.9
Larynx including anterior surface of epiglottis	3.1	81.9	61.6
Major salivary glands	1.1	88.8	68.7
Nasal cavity and sinus	0.8	75	49.6
Hypopharynx including piriform sinus	1	56	29.2
Nasopharynx	0.4	75.5	56.4

[1] Based on 2018-20 data

[2] Based on 2014-16 data

The major risk factors for HNC are tobacco smoking, alcohol consumption and, for oropharyngeal cancer, Human papillomavirus (HPV).[10] The highest rates of HNC are observed among people living in the most socioeconomically deprived communities. This not only reflects increased exposure to risk factors, with lower socioeconomic status acting as an independent factor for incidence and poorer outcomes. People from lower socioeconomic backgrounds often face health inequalities, such as limited access to healthcare or preventative services, which adversely affects survival rates.[11]

Diagnosis of HNC

Early detection of HNC, like most cancers, significantly improves outcomes. Early detection of cancer is one of the ambitions of the NHS Long Term Plan and the focus of a National Cancer Programme workstream delivered by cancer alliances, so is outside the scope of the GIRFT review. However, we note that across four HNC tumour sites, only 35.7% of cancers in 2021 were diagnosed at early stages (stage I or stage II), compared to an England all-cancer average of 53.9% (Jan–Mar 2022).[12] To meet the NHS Long Term Plan's ambition of diagnosing 75% of all cancers at Stage I or II by 2028, significant progress is needed in HNC diagnosis.

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[9] *'Atlas of Variation - Health Atlases | Fingertips | Department of Health and Social Care', accessed 9 November 2024, https://fingertips.phe.org.uk/profile/atlas-of-variation/supporting-information/health-atlases.*

[10] *S. Elrefaey et al., 'HPV in Oropharyngeal Cancer: The Basics to Know in Clinical Practice', Acta Otorhinolaryngologica Italica 34, no. 5 (October 2014): 299.*

[11] *Baruch Weizman, Nili Golan, and Ohad Ronen, 'Effect of Socioeconomic Status on Survival in Patients with Head and Neck Cancer', Head & Neck 43, no. 10 (October 2021): 3001–3009, doi:10.1002/hed.26788; Kate Ingarfield et al., 'Inequality in Survival of People with Head and Neck Cancer: Head and Neck 5000 Cohort Study', Head & Neck 43, no. 4 (April 2021): 1252–1270, doi:10.1002/hed.26589.*

[12] *Larynx including anterior surface of epiglottis, Oesophagus including cardia and gastroesophageal junction, Oral cavity, hard palate and lip (inner aspect), Oropharynx, base of tongue, tonsil, soft palate and uvula. National Cancer Registration Data, 'Staging Data in England', accessed 30 October 2024, https://nhsd-ndrs.shinyapps.io/staging_data_in_england/.*

> *"There is both variation between anatomic tumour sites, but also variation in mortality between networks/SCNs [strategic clinical networks]."*[13]
> National Head and Neck Cancer Audit 2014

Additionally, the 62-day referral-to-treatment figures for HNC (which also includes thyroid cancers) lag both the national target of 85% and the average across all tumour groups. For the ten months to July 2024 the average 62-day performance across all trusts in England for HNC was 54.2%; for all cancers it was 65.6%.

The role of primary and preventative care

Effective HNC management requires strong preventative and educational programmes. Smoking and alcohol cessation support, along with accessible primary care medical and dental services, are an essential part of risk reduction.

Many oral cavity cancers in particular are detected in dental primary care. The current shortage of primary care dentists and lack of universal access to free dental check-ups present barriers to early detection.

Multidisciplinary, patient-centred HNC care

Head and neck cancers and the effects of its treatment can profoundly impact daily functions like eating, drinking, speaking, swallowing, smell, breathing, appearance, social interaction, sexual function and work capabilities. These challenges often lead to psychological issues such as trauma, anxiety, depression and fatigue.[14] Given these extensive implications, HNC care is multifaceted, based around MDTs that provide patient-centred support through complex treatment pathways and long-term rehabilitation.[15]

The breadth of the MDT team as outlined in various guidelines (see below) and as practised in the 42 networks we visited, reflects the complex skills mix needed to diagnose and prepare the patient for treatment, to provide that treatment for several cancer sites, and to ensure the patient receives holistic care to address the dental, speech and nutritional impact of HNC and its treatment (as well as to support them with social and welfare needs).[16]

The composition, conduct and culture of the MDT in delivering HNC care therefore formed an important part of each of our network-wide peer reviews.

> *"Consecutive reports have noted a pattern of consistent variation between MDTs and networks ... There needs to be a concerted effort to distribute best practice between the best and less well performing organisations to reduce avoidable variation to a minimum."*
> National Head and Neck Cancer Audit 2014[17]

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[13] *Square and Lane, 'National Head and Neck Cancer Audit 2014'.*

[14] *Miren Taberna et al., 'The Multidisciplinary Team (MDT) Approach and Quality of Care', Frontiers in Oncology 10 (March 2020): 85, doi:10.3389/fonc.2020.00085.*

[15] *Taberna et al.; Patrick J. Bradley, 'Multidisciplinary Clinical Approach to the Management of Head and Neck Cancer', European Archives of Oto-Rhino-Laryngology 269, no. 12 (December 2012): 2451–2454, doi:10.1007/s00405-012-2209-y.*

[16] *'2013/14 NHS Standard Contract for Cancer: Head and Neck (Adult)', accessed 1 April 2024, https://www.england.nhs.uk/wp-content/uploads/2013/06/b16-cancr-head-neck.pdf.*

[17] *Square and Lane, 'National Head and Neck Cancer Audit 2014'.*

Frameworks and guidelines for HNC services

Several UK guidance documents provide frameworks for HNC care. The Improving Outcomes Guidance for Head and Neck Cancer (IOG) of 2004 recommended that HNC care should be provided by specialist HNC multidisciplinary services in a network arrangement.[18] The IOG recognised two competing needs: keeping care local for accessibility versus the need to concentrate services (because of the low incidence of cases, their variety and complexity, and the wide range of expertise necessary to support good, safe and comprehensive services). Other more recent guidance documents include the recent BAHNO Standards,[19] UK Multidisciplinary Guidelines, endorsed by all UK speciality organisations involved in HNC, covering service set-up, patient pathways and treatment.[20]

The GIRFT review process

During the review, we carried out a network-mapping exercise, identifying which hospitals referred patients to which specialist MDT. We also reviewed data sources and oversaw the analysis (conducted by NHS England's GIRFT analysts) to produce data packs at both trust and network level.

From August 2023 to September 2024, we conducted clinically led peer reviews across all 42 networks in the country. Trusts were asked to complete a pre-visit questionnaire (PVQ) prior to the peer review of their services. Our team of clinical leads reviewed the PVQs in advance of the meeting, using them to guide discussions and shape recommendations during the peer reviews. While we recognised limitations in the PVQs – such as potential bias from the individual respondent's opinion or knowledge – they still proved valuable for understanding aspects of network services not captured by centrally held data sources. The consultants in restorative dentistry (CRDs) also contacted restorative dentistry (RD) services prior to the peer review visits, as there is currently no nationally collected data on that discipline.

The 2–3-hour peer reviews gave us insights into the services provided and the challenges faced by clinicians and staff nationwide. Following each review, we shared observation notes, offered recommendations for improvement, and highlighted best practice examples.

This national report synthesises our findings from these activities.

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[18] *NICE, 'Improving Outcomes in Head and Neck Cancers. Guidance.', 2004, https://www.nice.org.uk/guidance/csg6.*

[19] *British Association of Head & Neck Oncologists, 'BAHNO Standards 2020', 2020, https://bahno.org.uk/_userfiles/pages/files/final_bahno_standards_2020.pdf.*

[20] *Jarrod J. Homer and Stuart C. Winter, 'Head and Neck Cancer: United Kingdom National Multidisciplinary Guidelines, Sixth Edition', The Journal of Laryngology & Otology 138, no. S1 (April 2024): S1–S224, doi:10.1017/S0022215123001615.*

Findings and recommendations

During our peer reviews, we identified considerable variation between services delivering HNC care.

In some instances, the structure and functionality of the HNC clinical network (the surgical hub and local hospitals) and intra-network patient pathways needs to be improved and reconfigured to consistently and timeously deliver high-quality care. Our primary recommendation addresses this.

We found that many HNC services across the country have established effective pathways and processes. However, many clinicians in high performing networks also told us their services were frequently constrained by resource limitations, particularly around diagnostic services. HNC has struggled nationally particularly to meet the 62-day target, which reflects this.

We also observed that amongst providers delivering poorer-than-average services, the lack of clear, standardised outcome indicators can lead to complacency. Determining what constitutes a high-quality HNC service relies heavily on self-assessment by a trust. As we explain in the *Data* section below, it is crucial to address this by improving data collection and standardising outcome measures to provide more transparency and accountability.

Network structure and organisation

During the review we observed variation in catchment populations, surgical volumes, approaches to network-wide working, team culture and treatment pathways. We identified some low-volume clinical networks and surgical centres and variable geographical and demographic alignment with the cancer alliances. We also noted poorly defined clinical networks and split referral pathways (amongst other issues). These factors, and the resultant poor network cohesion and compromised patient pathways, impact the service provided for HNC patients and result in unwarranted variation in the service offered for HNC patients across the country.

Based on our observations around the necessary catchment populations required and the need to create coherent and defined HNC clinical networks coterminous, where possible, with a cancer alliance, some consolidation is required. This will create high-volume treatment centres (including complex surgery) capable of delivering a world-class service. Team culture, which inevitably differs between networks, should be actively engaged upon, to promote a better staff (and therefore patient) experience.

Recommendation

Recommendation 1: HNC clinical networks should be consolidated, where indicated, and aligned with cancer alliances, to deliver a world-class service for patients and staff

For action by NHS England, in collaboration with cancer alliances, commissioners and HNC clinical networks

a. Each HNC clinical network should establish a working group comprising key personnel from cancer alliances, ICSs, and the major surgical centre (or the MDT host) to drive the necessary changes across providers and systems. This group should include a specialty lead from each cancer alliance, relevant representatives from ICSs, and operational and clinical leaders from the HNC centre as well as from each local hospital. For networks that span multiple cancer alliances or ICSs, each body should ensure its personnel are represented or agree on a lead to act on their behalf.

b. Each HNC clinical network should be assessed against the following standards, and (where indicated) plans should be developed to ensure services align with them.

A single HNC clinical network should:

- provide all treatment modalities for upper aerodigestive tract (UADT) HNC, including complex surgery with composite microvascular reconstruction;
- serve a population of at least one million;
- have a single designated hospital site to perform major HNC surgery*, ensuring all patients can be treated within the clinical network.** The major surgical centre should:
  - perform at least 10 laryngectomy/ pharyngectomy procedures per year (with higher volumes preferred);
  - perform at least 25 microvascular free-flap surgeries per year;
  - employ at least four HNC specialist microvascular surgeons;
- provide oncology services (RT and SACT);
- hold regular clinical network meetings (at least three per year, and within working hours) focussing on strategy, operational issues and governance. These should be carried out in collaboration with the cancer alliance;
- ensure that each trust refers patients to a centre within the network, avoiding split referrals to centres outside the network.

**Major HNC surgery defined as surgery requiring microvascular reconstruction, laryngectomy and craniofacial resections. It is acknowledged that cases requiring neurosurgical input may need to be performed in a neurosurgical facility if different from the major HNC centre.*

*** Larger HNC clinical networks may require additional sites for major surgery (but not laryngectomy) depending on availability of microvascular expertise.*

The changes and consolidation to create the networks outlined in **recommendation 1** above will require collaboration between cancer alliances, ICSs, NHSE and providers with phased implementation. Six HNC clinical networks need urgent restructuring, while 25 need to change in the next 5–10 years. However, all networks should appoint a working group assess themselves against the standards above and develop proposals to implement these standards.

Tables 2 and 3 summarise the number of networks that we recommend require structural change. Further information on the implementation and potential impact of this recommendation (including for patients) are detailed in **Appendix 1**.

Table 2: Estimated number of current HNC clinical networks requiring structural change

Networks requiring urgent change	6
Networks requiring a plan for change within five years	25
Networks requiring no or minor change	11

Table 3: Estimated number of HNC clinical networks needed by cancer alliances in the future

Cancer alliances needing one network	13
Cancer alliances needing two networks	4
Cancer alliances needing three networks	2
Cancer alliances served by a network based in another alliance*****	1

** Note: UCL covers two alliances*

Findings

Currently, cancer care in England is commissioned by Specialised Services via the Cancer National Programme of Care (NPOC). The expectation is that commissioning for HNC will be delegated to Integrated Care Systems from 1 April 2025, although responsibility for the service specification will still lie with the Specialised Services Commissioning team. The current service specification dates from 2013;[21] an updated service specification is currently being written.

The network described here is an HNC clinical network designed to enable HNC centres and local hospitals to work together as a unified system. Currently, patients often move across system boundaries, which can lead to fragmented and poorly coordinated care. Strengthening the clinical network would address these challenges, improving collaboration and ensuring more consistent, joined-up care for patients across the entire pathway.

A HNC clinical network should constitute a single specialist MDT with one major surgical centre and one or two oncology centres with defined local hospitals referring patients to the specialist MDT for care. HNC centres can be defined as the host of the HNC MDT meeting and usually the primary surgical treatment centre. Local hospitals are defined as hospitals who diagnose HNC before referring it to the HNC centre for MDT discussion and treatment, before the patient returns to the local hospital for post-treatment follow-up.

In our network-mapping exercise, 42 providers self-identified as being a HNC clinical network lead site.

Catchment populations, major surgical procedures and case volumes

The catchment populations of the 42 HNC clinical networks vary widely, from 74,000 to 4 million with a median population of 1.2 million (see **Figure 2**).

Figure 2: Variety in HNC clinical network catchment populations

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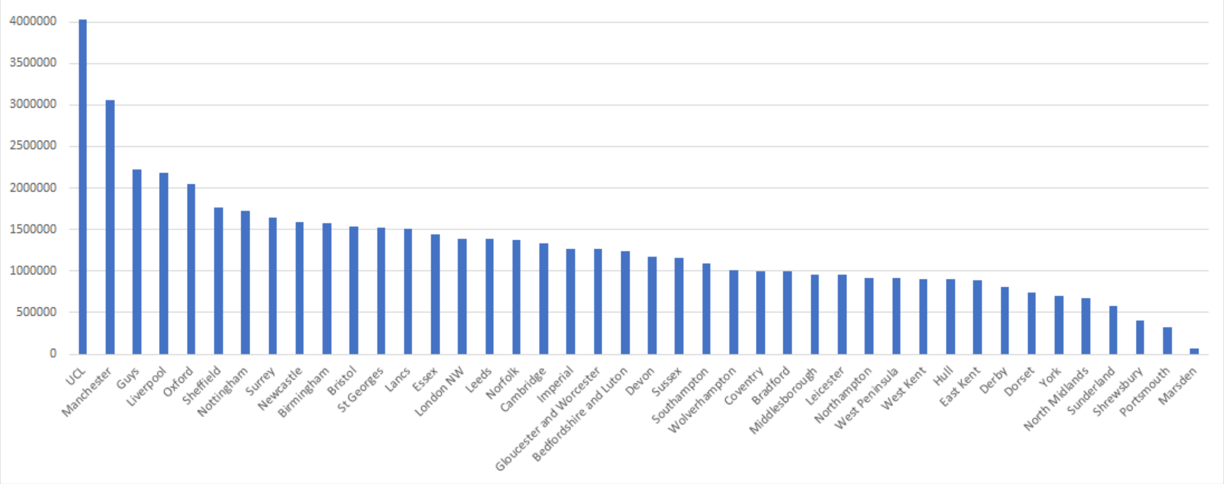
[21] *'2013/14 NHS Standard Contract for Cancer: Head and Neck (Adult)'.*



Three of the self-identified HNC clinical networks do not meet the basic standards we have set out to fulfil this title and we would expect them to urgently reconfigure services to move towards this model. Another three also need to set out their plans to reconfigure within a short time period

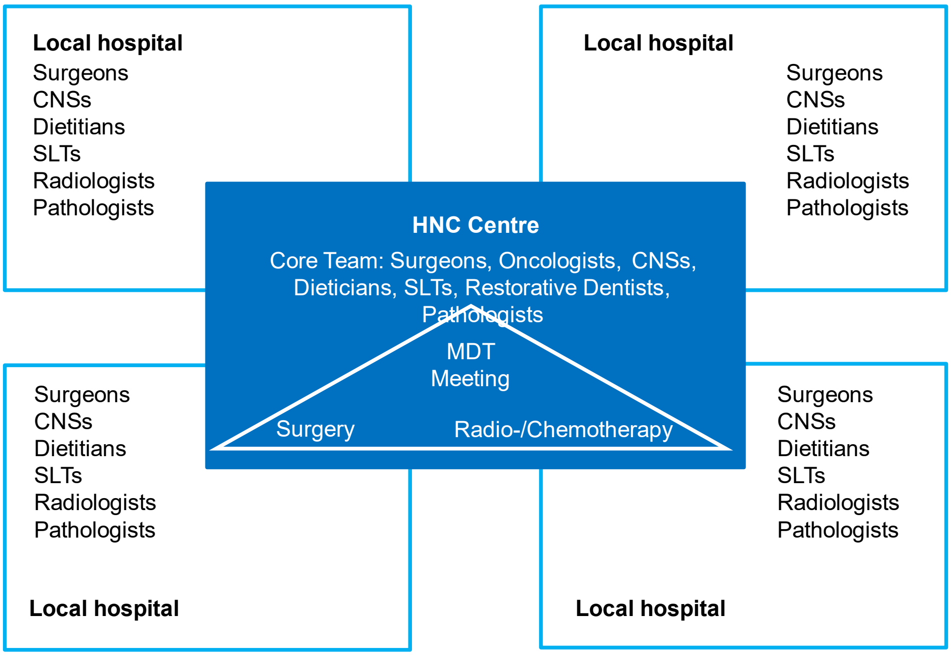
There is considerable variation in surgical volumes across the country, although due to the rising incidence in HPV oropharyngeal cancer, all specialist services treat more than the 100-case minimum, stipulated in the current service specification. Variation in surgical volumes is discussed in more depth in the *Treatment* section, but two salient issues shaped our recommendation for HNC clinical networks:

- There is a well-documented ‘volume-outcome’ relationship in outcomes of cancer treatment, which formed part of the IOG’s rationale for centralising services. However, low and decreasing volumes of laryngectomy/pharyngolaryngectomy nationally means that many surgical teams are performing few of these procedures and are at risk of being unable to maintain skills to carry out this surgery.
- Recruitment of oral and maxillofacial surgeons (OMFS) can be problematic, particularly across smaller surgical centres. OMFS Surgeons currently provide the majority of reconstructive surgery for HNC. Larger centres with four or more surgeons do not seem to have such an issue with recruitment and retention.

Overall, some HNC clinical networks need to be reconfigured to exploit the volume-outcome relationship benefits and to provide a sustainable service for the future.

HNC clinical networks as a single multidisciplinary, multisite team

Figure 3: schematic representation of the HNC clinical network



Note: The HNC centre may operate over more than one site and some treatments may be provided in local hospitals.

The schematic in **Figure 3** shows how HNC clinical networks should function as a single co-ordinated team. Key to this is good communication, established protocols and co-ordination between the constituent hospitals and Trusts. This facilitates as much care as possible provided in patients' localities.

Patients can be diagnosed in local hospitals and then return there for ongoing follow-up post-treatment, if the correct services are available in the correct location. Each discipline within the local hospital should form strong links with the HNC centre team with diagnostic protocols and good communication as standard across the clinical network.

A robust clinical network will facilitate patient pathways which cross system boundaries, although the ideal would be for the clinical network to be coterminous with their ICB and contained within one cancer alliance.

Facilitators to an effective HNC clinical network

1. Core HNC centre surgeons out-reaching to a local hospital. This builds good relationships between the HNC centre and the local hospital and creates a better patient experience with improved continuity of care before treatment as well as after with follow-up that can be provided locally. (Continuity can also be provided by local hospital consultants attending the HNC centre MDT).
2. Locally-based CNS/SLT/dietitians following their patients to the MDT meeting and clinic. We saw excellent examples of weekly meetings between these disciplines

in the HNC centre and local hospitals to ensure good patient handovers. This improves flow in the pathway.

3. HNC clinical network protocols to provide an agreed pathway from diagnostics, through treatment and follow-up/personalised care. When a network is coterminous with a cancer alliance, these protocols can include community and primary care.

Barriers or blockers to effective HNC clinical network function

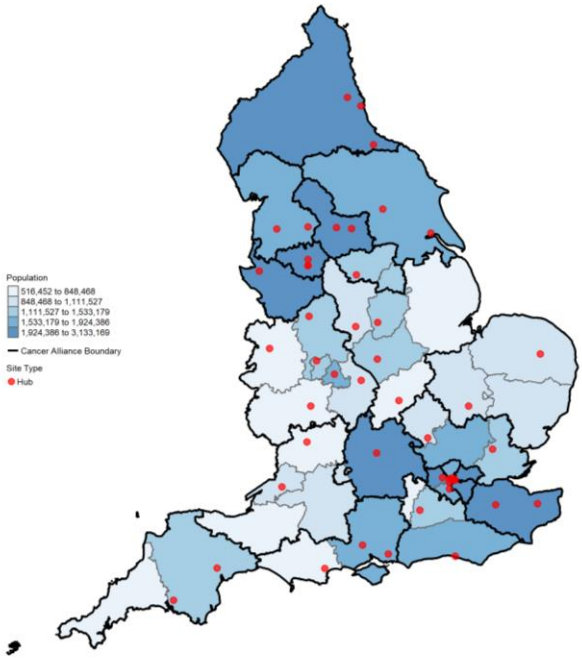
1. Split referral pathways – one third of clinical networks have local hospitals which refer to more than one HNC centre and are therefore part of two clinical networks. This was mostly related to treating specialty and we heard particularly from CNS, SLT and dietitian teams that this leads to convoluted patient pathways and poor co-ordination of patient care. It also leads to inconsistent and sometimes conflicting protocols and unnecessary duplication of resources.
2. Inconsistent system boundaries for cancer alliances, ICBs, pathology networks, imaging networks and HNC clinical networks.
3. Independent surgical teams – some supposed clinical networks share a virtual MDT but are otherwise acting completely independently of one another. They may or may not share an oncology centre.
4. Lack of protocols – some networks do not have clinical network-wide protocols and pathways for MDT referral or imaging etc which leads to inconsistent care, duplication and delays in decision making.
5. Lack of business/governance meetings – many networks lack regular team strategy meetings which are critical for network wide co-ordination and review.
6. Poor communication between the HNC centre and the local hospitals
7. Incomplete service provision – some networks do not offer the full range of surgical treatments and therefore require additional referrals to other networks, prolonging patient pathways.
8. IT issues – some networks identify challenges sharing patient data across the clinical network including records, pathology and imaging.

Cancer alliances

Cancer alliances play a key role in facilitating HNC clinical networks as they are uniquely placed to work across providers in the role as the cancer element of ICBs. We note however that the geographic/demographic relationships between the 20 cancer alliances and 42 HNC clinical networks are variable and complex (see **Figure 4** and **Appendix 1**)

Of 20 cancer alliances, seven have a single HNC clinical network and six cover three or more HNC clinical networks. Of the 42 HNC clinical networks, 33 sit within a single cancer alliance and nine sit across two cancer alliances.

Figure 4: Map showing cancer alliance boundaries, population size and HNC clinical network hub sites (MDTs) (CP team please note this map will be updated).



Note: Each red dot represents the principal hub site (typically the Trust hosting the MDT meeting) for the relevant network and does not represent all Trusts that offer major surgery or radiotherapy

It was apparent to the GIRFT team that when the HNC clinical network and cancer alliance are geographically coterminous, there are high levels of network organisation and effective co-ordination of pathways resulting in quality improvement, research and innovation. Early diagnosis and personalised care including community-based follow-up and support is noticeably better in these situations.

Team culture

HNC cancer care is highly complex involving a huge number of disciplines to provide high quality care. It was clear to the GIRFT team that leadership, team culture and innovation are key to the provision of excellence in a service: We rarely observed professional disagreements in services with strong governance and effective leadership; poor clinical outcomes, such as high flap failure rates, are uncommon where there is effective cross-specialty collaboration. Understanding these inter-relationships is crucial for improving outcomes, operational readiness and the overall function of the service.

Qualities we saw that suggested excellent team culture included teams that valued authenticity and openness, encouraged peer relationships and actively listened to diverse perspectives within the MDT.

We also experienced visits where some MDT members did not speak up, whether by choice or related to the team culture in which they work, which concerned us about the members' ability to be heard within the MDT structure, potentially affecting patient outcomes and experience.

We therefore urge a unified, team-wide approach in managing the MDT and addressing the challenges or issues which arise; the development of a positive team culture should be entrenched as part of business meetings.

Case study: HNC centre

Cheshire and Merseyside's HNC clinical network

The Liverpool Head & Neck Centre (LHNC) (est. 2018) is a formal collaborative venture between the University of Liverpool and three Liverpool NHS trusts: Liverpool University Hospitals NHS Foundation Trust (LUHFT) – the NHS host, the Clatterbridge Cancer Centre NHS Foundation Trust (CCC) and the Walton Centre NHS Foundation Trust (WCFT).

LHNC serves a population of 2.7 million across Cheshire and Merseyside (C&M) integrated care system (ICS) which coincides with the Cheshire and Merseyside CA (CMCA). LUHFT-Aintree is the central site for major head and neck (H&N) and thyroid surgery, WCFT is the central site for skull base surgery and CCC is the central site for non-surgical treatments. There are three separate MDTs: H&N (meets weekly), thyroid (meets alternate weeks) and skull base (meets alternate weeks). In total, about 1,000 new diagnoses are considered per annum.

LHNC is a clinical academic centre of excellence. Research and clinical care are closely aligned, and all patients are screened for inclusion into clinical trials and consented for prospective tissue and blood collection for future research projects.

LUHFT-Aintree and CCC deliver tertiary and quaternary specialist treatment for patients referred from centres across C&M, while simultaneously providing a secondary DGH, diagnostic function for patients local to LUHFT-Aintree.

Working closely with CMCA, four rapid diagnostic centres have been set up across C&M to ensure rapid access of patients from GP referral through secondary care and onto specialist centralised services.

Centralising major surgery means patients benefit from the expertise of 14 dedicated H&N surgeons (evenly split between otolaryngology/H&N surgery and OMFS), four HNC specialist oncologists and the healthcare workforce of the largest centralised MDT in the UK. Operating at this scale requires considerable co-operation to prevent strain on the centre's capacity. Strong interpersonal relationships across the network are essential and practitioners from referring hospitals are encouraged to participate in the MDTs and to perform appropriate cases (e.g. benign thyroids) at their own trusts.

Considerable time has been spent developing 'knowledge networks' of specialists across C&M, allowing professionals in different trusts to work outside of institutional boundaries and to collaborate network-wide. One example is in SLT, where a highly motivated clinical team has established a centralised service providing high-quality postoperative care by suitably trained practitioners, both at the hub and when patients are repatriated to local hospitals.

Data

Ensuring NHS services have the data they need to quality-control patient care has been a central theme in GIRFT's work. This has led to initiatives in clinical coding and data collection, including through the National Clinical Improvement Programme (NCIP) and the Medical Devices Safety Programme.

Our review highlighted that HNC clinical networks need to access better, more insightful data. Specifically, improvements are required in attributing data to HNC clinical networks, enhancing the quality of coded data in Hospital Episode Statistics (HES), and addressing data gaps related to outcomes such as restorative dentistry outcomes, flap failure, functional outcomes and patient-reported outcome measures (PROMs).

Recommendation

Recommendation 2: The quality and content of data should be improved to deliver current and future improvements in this pathway.

For action by NHSE, networks and trusts

NHSE should:

- attribute data to discrete clinical networks;
- improve HES surgical coding in collaboration with NCIP;
- develop a national vehicle for collecting currently available and additional HNC outcomes data for the purposes of audit, quality assurance, peer review and knowledge acquisition. This must include additional data reflecting functional outcomes, including RD (currently absent from national data sets).

HNC clinical networks should:

- audit compliance against agreed national quality and performance indicators that will be based on this GIRFT national report

Trusts performing reconstructive HNC surgery should:

- provide the necessary administrative support and ensure that microvascular surgical teams enter their data on flaps into an appropriate UK-wide flap registry (the UK National Flap Registry is the currently recommended vehicle).

All trusts should:

- conduct local audits (at least annually) to help HNC clinical networks understand and improve their services, augment and inform the case for specialty funding, and enable teams to identify opportunities for improvement;
- facilitate all specialities in routinely conducting service audits.

Findings

Attributing data to HNC clinical networks

A key issue identified in our review is the absence of sufficient data to fully understand patient pathways, treatment patterns and outcomes. This has arisen partly through limited available detail about the complexities of HNC patient pathways. Where HNC clinical networks overlap with others (essentially sharing trust populations), it can be impractical to attribute patient-level data to a treating team or network.

Our detailed mapping of HNC clinical networks has improved our understanding of networks. This, coupled with efforts to better organise clinical networks, will clarify HNC clinical network populations and make it easier to assign patient-level data accurately. We expect future GIRFT projects (such as those using Model Hospital) will incorporate these insights and changes to network structure into their data products. This will enable each clinical network to understand its performance and outcomes, and be able to benchmark against national data.

Coded data in HES

Particular challenges arise in analysing surgery metrics (consistent with findings in the GIRFT Oral and Maxillofacial Surgery[22] report and peer-reviewed literature).[23]

HNC surgery is anatomically complex with varying OPCS coding permutations, making it relatively difficult to code and analyse consistently to produce clinically meaningful categories of surgery (and thus metrics).

We propose to address these difficulties by adjusting the analytical algorithms or 'coding recipes' shared with the National Clinical Improvement Programme (NCIP). It may be necessary to modify OPCS coding for HNC operations in the future. We also recommend collaboration between coders and clinicians to review and improve coded data. This review process should take cognisance of the codes GIRFT and NCIP use to count HNC care, which we will make available in due course.

Clinical outcomes

Patient, tumour, treatment and survival outcome data can be derived through existing data sources that are linked together within the NDRS. However key data reflecting patients' functional outcomes are non-existent on a national level and may require additional data to be submitted from providers.

We found poor compliance with present initiatives to collect outcome data such as *UK Flap Registry* and the *Quality Outcomes in Oral and Maxillofacial Surgery* (OMS) Project. Drawing lessons from this and previous audits such as *Data for Head and Neck Oncology* and the *National Head and Neck Audit*, which also faced challenges with poor compliance, will be crucial.

We recommend collecting a broader range of outcomes, including complications (e.g. flap failure), functional outcomes and PROMs. Trusts should support this by providing administrative resources to ensure accurate data entry into the proposed future HNC repository and the current UK National Flap Registry.

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[22] *'Oral and Maxillofacial Surgery - Getting It Right First Time - GIRFT', accessed 25 July 2024, https://gettingitrightfirsttime.co.uk/surgical_specialties/oral-and-maxillofacial-surgery/.*

[23] *Chen Zhang and Jaideep J. Pandit, 'Getting Operating Theatre Metrics Right to Underpin Quality Improvement: Understanding Limitations of NHS Model Hospital Calculations', British Journal of Anaesthesia 131, no. 1 (July 2023): 130–134, doi:10.1016/j.bja.2023.03.032.*

Patient pathways

Throughout the review, we examined each stage of the patient pathway – from referral to diagnosis, from diagnosis to treatment, and from treatment through to follow-up. We present insights from peer reviews and case studies of exemplary practices.

Recommendation

Recommendation 3: Trusts should adopt best practices we identified throughout the pathway.

For action locally

a. Outpatient endoscopic biopsies: Trusts should deliver laryngeal endoscopic biopsies on an outpatient basis (see *Manchester University* case study for example)

b. Peer review of contours: RT centres should ensure all radical contours are peer-reviewed by at least two appropriately trained staff in line with international consensus guidance. This may require collaboration with other centres (see *UHBW and the RUHB* case study for example)

c. Time-to-treatment targets: Trusts should continue to meet the 31-day target for starting RT and should aim to implement the 17-day target (see *Torbay* case study for example).

Findings

Table 4 overleaf summarises the best practice that we have observed during the course of our review, at each stage of the pathway.

Table 4: Key pathway best practice

Referral to Diagnosis	Diagnosis to treatment - MDT meetings	Multidisciplinary pre-treatment clinics	Surgery	Oncology	Post-treatment
HNC clinical networks and cancer alliances should optimise urgent suspected cancer referrals including from GDPs	MDTs should ensure complete staging according to agreed protocols to maximise meeting efficiency	Clinics should include surgeons, oncologists, CNSs, SLT, dietitians and CRDs	Each major centre should have at least four microvascular HNC surgeons and perform at least 25 microvascular HNC cases/year	All oncology sites should offer peer review of contours	Formally coordinated post-treatment pathways should be established including provision for re-referral
Trusts should use navigators to track the patient through the pathway (Best Practice Timed Pathway)	MDTs should minimise discussion of non-cancer cases	Pre-treatment non-medical clinics are encouraged and offer many elements of prehabilitation	Each centre should routinely collect and audit surgical outcomes data including microvascular free flap outcome data. The use of the UKNFR is recommended	HNC clinical networks with more than one oncology site should offer treatment closer to home. Collaborative working including joint peer review of contours is recommended	Trusts should offer local multidisciplinary follow-up clinics
Trusts should offer patients with neck lumps: • one stop clinics as best practice (alternatives include a straight-to-test pathway following initial triage); • patient review with pathology result available within three to five days	Work towards best practice recommendations for MDT meetings (see **Appendix 2**)		Each centre performing laryngectomy operations should perform at least 10 cases/year	Each HNC clinical network should aim to start RT treatment within 17 days	Patients should have access to well-being and self-management services
Trusts should offer Transnasal oesophagoscopy (TNO) to biopsy suspected laryngeal			HNC surgery should only be performed by core HNC surgeons, although some intermediate or minor procedures can be	Radiotherapy-specific multidisciplinary care should be provided	Each clinical network should offer HNC patients late-effects clinics and

and pharyngeal lesions rapidly in clinic			performed by core surgeons who also work outside of major centre		appropriate re-referral pathways
Each trust within a HNC clinical network should follow the same imaging protocol			Major surgical centres are encouraged to provide enhanced care on the HN ward		
			Any change in HNC surgical provision must factor in the need for additional specialised nursing and allied health care		
			CRDs should be involved in surgical implant planning alongside reconstructive surgeons		

Referral to diagnosis

Referrals and the Faster Diagnostic Standard

The referral-to-diagnosis phase is crucial in HNC care.

The NHS England Faster Diagnosis Standard (FDS)[24] is now reported for HNC, and most trusts (about 78%) currently meet the 75% target. However, the FDS target will rise to 80% in 2026, while increasing HNC incidence and diagnostic referrals intensify pressure on trusts – higher demand with generally no additional resources. A high proportion of referrals are avoidable or unnecessary, as vague HNC symptoms lead to a high number of non-cancer diagnoses: HNC is the fourth most common suspected urgent cancer referral type in England (representing around 9% of cancer referrals) but only the eighth most common cancer.[25] Given the NHS's focus on prevention and early diagnosis, cancer alliances and local networks should try to optimise referral efficiency, which will be facilitated when cancer alliances and HNC clinical networks are coterminous.

HNC referrals come from general dental practitioners (GDPs) as well as GPs. However, GDPs do not use the standard electronic records system, often having their own area-specific electronic systems. Many of them are also private only and, although they make referrals to the NHS, are difficult to reach with improvement initiatives. This underlines the importance of access to NHS dentistry and of establishing close links between HNC MDTs and GDPs in the network.

Best Practice Timed Diagnostic Pathway

We found that many providers largely follow the 2023 Best Practice Timed Pathway (BPTP) for HNC (***see* Appendix 3**). Key aspects of the pathway are in place although pathway navigators, as recommended by the BPTP, are not yet commonly in place. Many providers struggle to meet the pathway's timeframes, especially in the face of growing demand; many face constraints caused by capacity constraints in pathology, radiology and theatre spaces (for biopsies).

Neck lump clinics

NICE Guideline 36 and the BPTP recommend one-stop neck lump clinics. Some sites have insufficient numbers to warrant bespoke clinics, while many centres cannot provide full services as envisaged due to the BPTP's requirement for rapid, on-site pathology services. There are many co-located neck lump clinics (with pathways for patients to have all required tests in one visit); at some centres, patients must attend the outpatient department followed by radiology in ring-fenced slots for testing on the same day; at others, patients with neck lumps are triaged and go straight to test with imaging before clinical assessment.

We encourage centres to develop pathways that include clinical, radiological and biopsy services with pathology results available within three to five days. Colleagues in NHSE's Cancer Programme have now agreed that the BPTP be updated to reflect this more lenient (but still rapid) turnaround time.

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[24] *'NHS England » Faster Diagnosis', accessed 22 October 2024, https://www.england.nhs.uk/cancer/faster-diagnosis/.*

[25] *NHS, 'Faster Diagnostic Pathways. Implementing a Timed Head and Neck Cancer Diagnostic Pathway. Guidance for Local Health and Care Systems', July 2024, https://www.england.nhs.uk/wp-content/uploads/2018/04/B1130-head-and-neck-cancer-implementing-a-timed-diagnostic-pathway.pdf.*

Case study: Neck lump clinics

Milton Keynes University Hospital NHS Foundation Trust

Patients are triaged to six dedicated ENT neck lump clinic slots on a Tuesday morning. History is taken and the patient is examined to confirm a definite neck lump. If confirmed, the patient is immediately sent for ultrasound and/or fine needle aspiration (FNA) cytology and booked in for cytology results on Friday morning. Thyroid patients are discussed at the following week's thyroid MDT meeting. If cytology shows a metastatic squamous cell carcinoma, patients require further work up to identify the primary cancer diagnosis before discussion at MDT level. Though relatively new, the initiative appears effective in streamlining the pathway.

Straight-to-test pathways

The BPTP advocates straight-to-test pathways whereby CNSs triage urgent referrals and book diagnostic tests without a prior specialist appointment, in order to accelerate diagnostic processes. These are not yet commonly established, but one exemplar is highlighted below.

Case study: Straight-to-test pathway

Stockport NHS Foundation Trust

Stockport introduced a straight-to-test pathway in 2021. HNC CNSs perform an enhanced triage of the two-week wait (2WW) referrals, vetting the referrals and booking diagnostic ultrasound and FNAs. Depending on their findings, patients are then allocated appointments in a clinic for urgent suspected cancer or in a clinic for neck lumps, to be examined and to define next steps.

To establish the pathway, the team liaised with NHS Stockport Clinical Commissioning Group's Macmillan GP regarding the need for GP referrals with maximum patient information to allow the team to send straight to test. Greater Manchester CA has also incorporated a neck diagram to assist GPs as they describe the location of neck lumps.

The team aims to enhance this pathway further by expanding the CNS remit to include a protocoled use of MRI neck scans, which would further accelerate the diagnostic pathway and improve their healthy 28-day FDS percentage.

ENT endoscopic outpatient biopsy

Transnasal oesophagoscopy (TNO) is gaining traction as a cost-effective outpatient alternative to panendoscopy, particularly for patients unfit for general anaesthetic.[26] TNO is performed under local anaesthetic, enabling endoscopic examination of the entire UADT. It can also be used for biopsies, dilations and laser treatments.

Case study: TNO as an outpatient day case

Manchester University NHS Foundation Trust

At Manchester University NHS Foundation Trust, TNO was initially introduced as an outpatient procedure on an ad hoc basis in April 2020, to support patients who were unfit for general

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[26] *'Use of Office Based Transnasal Oesophagoscopy in Management of Head & Neck Conditions during the COVID-19 Pandemic at the Royal Albert Edward Infirmary, Wigan, United Kingdom - PubMed', accessed 24 July 2024, https://pubmed.ncbi.nlm.nih.gov/34558551/.*

anaesthesia (GA) but needed diagnostic biopsies. Between August 2022 and 2023, it was formalised into a structured pathway, incorporating both registrar-led procedure clinics and a dedicated TNO clinic run by the H&N clinical director. The service covers both diagnostic and therapeutic procedures. (Note: Some patients, particularly those with a strong gag reflex, require sedation for the procedure. The team also stresses that a skilled histopathology team is vital, as biopsies are only 2mm in size).

TNO has significantly reduced diagnosis times for patients on the 2WW pathway and on the voice pathway, as well as individuals presenting with throat symptoms. This group constitutes about 60% of the 2WW referrals (100 of 177 referrals in November 2023). The team at Manchester estimate the cost of a TNO biopsy at about £470. A previous analysis demonstrated cost savings of approximately £356 per case with this approach.[27]

Imaging protocols

Networks identified problems with inconsistent imaging protocols, e.g. MRI neck, CT thorax and PET, necessitating repeated scans and delaying diagnosis and treatment. To prevent this, clear standardised protocols and access to specialist radiologists and pathologists need to be established. Cancer alliances should ensure pathways and protocols are in place and trusts should audit them periodically.

Diagnosis to treatment

This section summarises insights on the diagnosis-to-treatment stage of the pathway, particularly MDT meetings. NHS England guidance on streamlining MDT meetings was published in 2021,[28] but our peer reviews revealed significant variation in the organisation and conduct of MDT meetings. In **Appendix 2** we present suggested recommendations for HNC MDT meetings.

Pathologies discussed and pre-MDT meeting screening

Some HNC clinical networks use the MDT meeting to discuss patients not yet diagnosed with cancer or with complex (and even routine) benign H&N disease who do not require MDT discussion. The HNC MDT meeting should only be used to discuss HNC patients[39] and complex benign disease such as recurrent pleomorphic salivary adenomas. Trusts can create alternative forums for other groups of patients as required.

To avoid such variation (and potential inefficiencies in MDT meetings), referral criteria should be standardised across HNC clinical networks (in line with NHS England's guidance).[29] Uniform diagnostic and imaging protocols should be implemented so appropriate investigations and staging are complete prior to the MDT meeting. A structured MDT meeting pro-forma can help ensure all necessary information is available, and that only the right cohort of patients is discussed. However, peer reviews revealed significant variation in implementing these processes.

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[27] *M. Goyal et al., 'Use of Office Based Transnasal Oesophagoscopy in Management of Head & Neck Conditions during the COVID-19 Pandemic at the Royal Albert Edward Infirmary, Wigan, United Kingdom', The Medical Journal of Malaysia 76, no. Suppl 4 (August 2021): 14–19.*

[28] *NHS England and NHS Improvement, 'Streamlining Multi-Disciplinary Team Meetings', n.d., https://www.england.nhs.uk/wp-content/uploads/2020/01/multi-disciplinary-team-streamlining-guidance.pdf.*

[29] *NHS England and NHS Improvement.*

National guidance also recommends management protocols (standards of care) for patients being put on treatment pathways without formal MDT meeting discussion. We found no evidence of robust MDT streamlining taking place in HNC services across the country. Several MDTs do a pre-MDT meeting meeting with key individuals, which seems to confer the most benefit, ensuring that patients to be discussed have the appropriate information available and limiting re-discussion of patients due to incomplete data sets. In **Appendix 2**: we provide HNC meeting guidance which details the steps that should be taken in order to be as efficient as possible.

Case study: Pre-MDT meeting meetings

Northampton General Hospital NHS Trust network

At NGH, a pre-MDT meeting meeting is held the day before the formal MDT meeting, to ensure the full set of each patients' histology and imaging reports are submitted to the MDT prior to discussion of a patient. The team meeting is chaired by the NGH MDT lead (an oncologist) and usually lasts 30–40 minutes. It is attended by the NGH MDT co-ordinator and CNSs from the three hospitals (NGH, Milton Keynes and Kettering) served by the MDT. Those who will be present at the meeting can check if each patient has a full data set and follow up if not. A patient is only included on the MDT meeting list if their full data set is in by midday the day before the MDT meeting.

Healthcare professionals attending MDT meetings

The healthcare professionals shown in **Table 5** below should be represented at each MDT meeting, with adequate cross-cover. In addition, the trust hosting the MDT meeting should provide trained MDT meeting co-ordinators to prepare, enter data and ensure outcomes are clearly tracked and communicated. Other professionals (such as clinical psychologists and palliative care/pain specialists) should be available to input as required into a patient's care but do not need to attend every MDT meeting.

Table 5: Healthcare professionals who should attend MDT meetings

Healthcare professional	Comment	Our findings
Core HNC surgeons	ENT, OMFS and plastic surgeons performing major surgery in designated surgical centre. Additional attendance by non-core surgeons based in locality hospitals can assist with continuity of care	Only 1/42 HNC clinical network do not include both ENT and OMFS at their MDT meeting
Clinical oncologists	Some MDTs also have medical oncologists	All HNC clinical networks comply
CNSs	From designated treatment centres (surgical and non-surgical, if separate)	All HNC clinical networks comply
SLTs	From designated treatment centres (surgical and non-surgical, if separate)	Some centres do not have SLT represented at the MDT meeting
Dietitians	From designated treatment centres (surgical and non-surgical, if separate)	Some centres do not have dietitians represented at the MDT meeting

CRDs	There is no substitute for having a CRD	33/42 HNC clinical networks have a CRD. However, 17/42 units only have one CRD and therefore do not have continuous cover
Histopathologists with expertise and special interest in HNC pathology including HNC cytopathology		There is insufficient cover from specialist histopathologists for MDT meetings in some smaller HNC clinical networks
Radiologists with a special interest in HNC		There is insufficient cover from specialist radiologists for MDT meetings in some smaller HNC clinical networks
CNSs from local hospital/s	If local site different from treatment centre	This is the case in most places, except where the local hospital does not have an HNC CNS

MDT clinics after MDT meetings

Most MDTs hold multidisciplinary clinics after the MDT meeting, typically at the surgical centre (but sometimes in local hospitals, to reduce travel for patients). These clinics provide co-ordinated input from surgeons, oncologists and other key professionals and are particularly useful where patients face treatment decisions (should a treatment decision change following discussion with a patient, it should be documented but does not require repeated MDT meeting discussion). Some CRDs attend these clinics. In other cases, CRDs assess patients at a separate RD appointment after the MDT clinic, allowing them time to consider their cancer treatment plan before addressing their oral rehabilitation plan. Close collaboration between OMFS, oncologists and CRDs is essential for this approach to be effective.

Consent to treatment

The consultant surgeon, consultant oncologist, SLT and CNS should provide specific information on the benefits and potential long-term effects of all clinical interventions so that patients are appropriately informed about interventions, as part of consent to treatment. This information is key, as treatment regret is well recognised for people who are diagnosed and treated for HNC.

Pre-treatment clinics and prehabilitation

Non-medical (CNS, SLT, dietetics) pre-treatment sessions for patients prior to surgery are offered in a significant proportion of HNC clinical networks. Generally, these clinics are separate from medical MDT clinics; they represent good practice. However, few providers provide formal prehabilitation programmes encompassing nutrition, physical activity and fitness, smoking cessation and psychological support. (Dental prehabilitation is discussed in the *RD* section below).

Table 6: Availability of prehabilitation services

Prehabilitation services available?	% of trusts
Yes, prehabilitation services available	20%
No, prehabilitation services not available	12%
Some prehabilitation services available	59%
Unanswered	9%

Treatment

In this section we consider each of the key HNC treatment modalities: surgery and oncology.

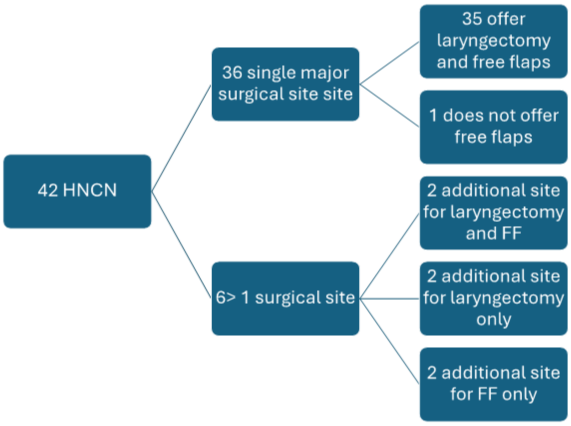
Surgery

HNC surgery is highly complex, requiring multidisciplinary collaboration. Sub-optimal treatment can lead to serious consequences so surgical teams should maintain high case volumes to maintain expertise, develop skills and continually improve pre- and perioperative care pathways.

Provision of HNC surgery

We focused on laryngectomy (including pharolaryngectomy) and microvascular free-flap procedures as major index surgeries for HNC and indicators of overall HNC surgical outcomes. Most HNC clinical networks concentrate major HNC surgery at a single site, as shown below:

Figure 5: HNC clinical networks and surgical sites



'Intermediate' or 'minor' cancer surgeries (such as salivary gland tumour removal, trans-oral laryngeal microsurgeries and neck dissection surgeries) are often performed outside the major surgical centres, sometimes by non-core surgeons. TORS is also performed outside major surgical centres, depending on the robot's location, and as a diagnostic rather than therapeutic procedure.

Laryngectomy and pharyngolaryngectomy

Laryngectomy and pharyngolaryngectomy are complex surgeries which require MDT input and regular practice to maintain staff skill levels. The consensus, obtained during extensive discussion at peer reviews and at the annual BAHNO meeting, is that a surgical centre should perform a minimum of ten procedures on average annually.[30]

While all surgical centres perform these procedures, only 19 trusts currently perform more than ten annually (with two providers performing the surgeries on more than one site), as shown in **Figure 6**.[31] In light of the declining incidence of laryngeal cancer, the number of sites exceeding this threshold may decrease in the future.

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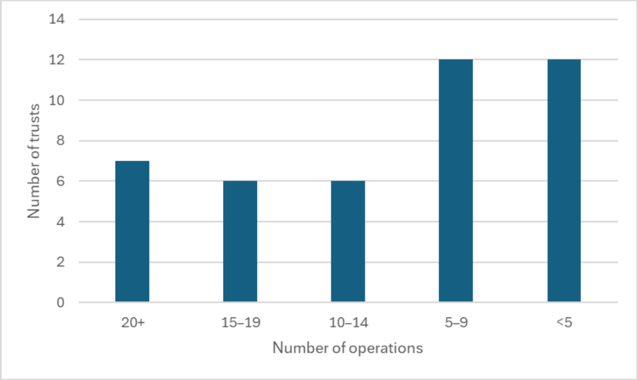
[30] *The minimum requirement is an average of at least ten per year, with most healthcare professionals stating that the number should be higher than this (15–20 per year).*

[31] *Two HNC clinical networks perform the surgery on more than one hospital site.*

Figure 6: Number of pharyngo/laryngectomies being performed by trusts (HES 2022/23)



Microvascular free-flap reconstruction

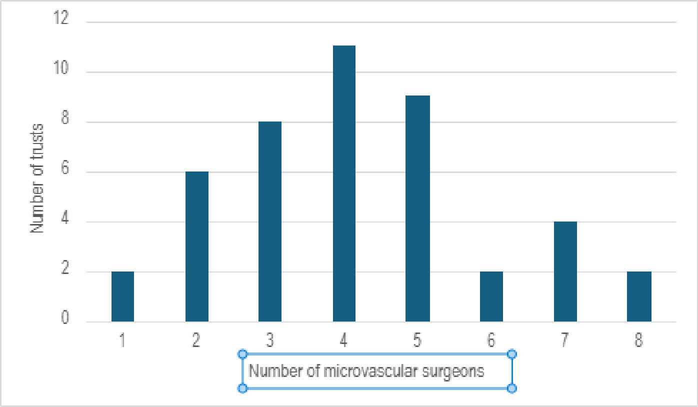
Microvascular tissue transfer (free flaps) is the standard of care when reconstruction is required post-ablative surgery. It is critical for both function and the patient's quality of life. Similarly to laryngectomy, it requires a multidisciplinary approach, with teams of surgeons with specialised training in microsurgery and flap techniques, supported by comprehensive pre- and perioperative care. To ensure optimal care, HNC surgical centres should perform at least the BAHNO-recommended minimum volume of 25 free-flap cases per year[32] and should provide a variety of soft tissue and composite free flaps.

These procedures are regularly performed at 44 surgical sites; four HNC clinical networks offer the surgery at more than one site; one HNC clinical network does not provide the service.

Microvascular workforce

There is significant variation in the number of microvascular surgeons at major surgical centres.

Figure 7: Number of microvascular surgeons in major surgical sites



Both OMFS and plastic surgeons can perform reconstructive surgery. The majority of centres rely primarily on OMFS (59%) or on a combination of OMFS and plastic surgery (34%). In most places the two teams are essentially separate, with OMFS handling their own

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[32] *British Association of Head & Neck Oncologists, 'BAHNO Standards 2020'.*

reconstructions and plastic surgery covering ENT cases. There was some discussion at peer reviews about which speciality should lead reconstructive surgery, but our primary concern is that teams are sufficiently trained, skilled and capacitated to offer the full range of reconstructive options.

Between 5% and 10% of major cases go back to theatre for an unexpected procedure after microvascular surgery. Surgical centres need the capacity to act promptly and have sufficient reconstructive surgeons available during the perioperative period to manage complications and to provide out-of-hours support, if necessary, to salvage a flap. On-call rotas for compromised flaps could include suitably trained OMFS or plastic surgeons, but are rarely shared between the two. OMFS teams sometimes rely on neighbouring centres to cover compromised flap on-call duties.

Such surgery, and the out-of-hours commitment, is a mentally and physically demanding job and surgeon burnout is not uncommon. Many centres (particularly smaller ones) experience difficulties in recruiting replacement or additional microvascular surgeons. Larger centres (where there are at least four microvascular surgeons) benefit from joint operating, better leave coverage and more manageable 24/7 on-call rotas, and seem to have fewer challenges in recruitment. However, only 41% of centres currently have more than four OMFS surgeons.

Reducing the number of surgical centres offering major reconstructive surgery to ensure sufficient surgeon numbers and case volumes (as outlined in the *Networks* section above) could address some of these issues. Genuine collaboration between OMFS and plastic surgery would also enhance cross-cover and broaden the available skill mix.

Flap success rates and registry

Since flap failure is severely detrimental to the patient, centres should have success rates consistently greater than 90%, ideally greater than 95% (BAHNO standards).[33] Inadequate services result in higher failure rates and may necessitate alternative methods (such as pedicled flaps or obturators), which have poorer outcomes.

While most surgical centres hold data on flap surgery locally in informal spreadsheets or logbooks, these are rarely shared beyond the immediate network. The absence of national, comparable and consistent data on flap surgery (including the case volumes, flap types and success or failure rates) constrained our ability to draw meaningful conclusions on surgical reconstruction in HNC. For this reason, as discussed in the *Data* section above, we recommend each surgical centre enters data into a national flap registry to address this aspect of the paucity of outcomes data.

Postoperative care: Intensive care vs enhanced care on ward

Some centres no longer send every postoperative patient to ICU. Sending extubated patients to the ward postoperatively is a potential cost saving for trusts and for the NHS nationally. This requires highly specialised nursing care (skilled in the management of tracheostomies, laryngectomies and free flaps) on the wards.

Further discussion on levels of care and alternatives to ICU, such as enhanced perioperative care, are available in national guidance and previous GIRFT reports.[34]

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[33] *British Association of Head & Neck Oncologists.*

[34] *Several resources are available at the following links: https://gettingitrightfirsttime.co.uk/wp-content/uploads/2021/09/Adult-Critical-Care-Sep21m.pdf*
https://gettingitrightfirsttime.co.uk/wp-content/uploads/2021/09/APOM-Sept21i.pdf#

Standardisation and optimisation of surgical practice

To achieve optimal outcomes for patients, all networks need to embed consistent and standardised overarching surgical practices. These practices have been deliberately outlined in this report, as unwarranted variation in reconstructive surgery was identified in a minority of peer reviews.

Standard data collection would not have identified issues regarding reconstruction preference as current metrics do not interrogate nuanced surgeon-specific technique or compare functional outcomes between patients. Individuals and teams may therefore reassure themselves that surgical outcomes using suboptimal techniques are good, simply due to lack of comparators, the limited ability of patients to challenge or evaluate one reconstructive approach vs another and the paucity of prospective randomised studies which compare interventions and outcomes.

Principles of reconstructive surgery for HNC are tacit to all clinicians, however we reiterate them here to orientate teams to shared core standards, avoiding potential flouting or drift to facilitate or normalise surgeon or site-specific outlying practice.

Optimal outcomes are realised when the resection achieves appropriate clear oncological margins to reduce adjuvant treatment where possible, when the reconstruction appropriately rehabilitates the function and location of the tissue removed, and when cosmetic results and dental rehabilitation are optimised.

Primary reconstruction with appropriate flaps, including bone where bone has been removed, is key.

Presurgical OMFS/RD joint planning is essential so that reconstructions are occlusion-driven and primary implants are considered wherever possible. Where the decision is made not to place primary implants, reconstructions should be planned with potential future implant placement or conventional prosthetic rehabilitation in mind. The use of soft tissue-only free flaps, or obturation in place of bone flaps with specific reference to the maxilla, is insufficient to create viable, long-term structures to achieve optimal mastication and speech quality in the majority of patients.

Maxillary defects which are not appropriately reconstructed can result in lifelong compromise to appearance, speech, dental function, swallow and quality of life. Obturators can become painful and ill-fitted as patients age and or undergo RT and, as soft tissue alone has insufficient structure to maintain facial architecture for implants, cosmesis and sufficient oral competence are inherently compromised. Numerous data sets reassure clinicians that maxillary free flaps do not delay diagnosis of local recurrence. Thus, surgical reconstruction to separate oral and nasal cavities is preferred. Presurgical OMFS/RD planning is required to holistically achieve best facial appearance and dental rehabilitation. This may include soft tissue flaps with zygomatic implants or composite flaps with immediate or secondary conventional implants. Similarly, nasolabial flaps unnecessarily compromise cosmesis at the nasolabial angle and

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https://future.nhs.uk/ElectiveRecovery/view?objectID=166162725
Enhanced Perioperative Care | Centre for Perioperative Care (cpoc.org.uk)

should be reserved for high-risk or flap-failure cases. Soft tissue for tongue and floor of mouth reconstruction is therefore best harvested from less conspicuous donor sites. Research reiterating these concepts can be found in both surgical and quality-of-life literature, with specific reference to recent data concerning treatment regret.

Clinicians must be mindful of limitations within literature in evaluating functional outcomes such as poor prospective randomised data and therefore risk of bias, missing longitudinal data measuring change over time, and inconsistent use of function and outcome measures.[35]

Oncology

Oncological treatment for HNC includes RT, chemotherapy or immunotherapy. During our peer reviews, we focused primarily on RT as the most common treatment for HNC. RT is non-invasive but time-consuming for the patient (usually given in 20–35 fractions over six to seven weeks). It also has significant short- and long-term toxicity.

RCR guidance

The Royal College of Radiologists (RCR) provides clinically relevant guidance and the basis for best practice for HNC RT through the RCR Consensus Statements for Head and Neck Cancer (2022)[36] and the RCR Guidance on Peer Review of Contouring (2022),[37] which do not need to be reiterated here. The RCR is auditing adherence to their consensus statements in 2024. Almost all HNC clinical networks stated their practice is "mostly consistent" with RCR consensus statements or voiced the ambition to bring their practice into line. Trusts should support them in doing so.

RT sites, volumes and peer review of contours

Most HNC clinical networks (26/42) have a single RT centre; 13 have more than one RT centre; three refer patients to neighbouring centres.

Patient volumes vary between the 26 centres, and understanding this variation is important for trusts in service planning, as it can impact treatment timelines. However, the volume of RT treatments at a centre does not directly correlate with outcomes (unlike surgical volumes), therefore we do not recommend consolidation of RT centres.

Instead, noting the vital importance of contour delineation in RT[38] (and that variation in contouring between clinicians and institutions can affect outcomes), we recommend that every RT centre maintain sufficient case volumes (or a suitable alternative approach) to enable peer

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[35] 'Reconstruction of the Maxilla and Midface: Introducing a New Classification - PubMed', accessed 16 May 2024, https://pubmed.ncbi.nlm.nih.gov/20932492/; 'Microvascular Free Flap Reconstruction versus Palatal Obturation for Maxillectomy Defects - PubMed', accessed 16 May 2024, https://pubmed.ncbi.nlm.nih.gov/19902543/; Alice Q. Liu et al., 'Patient-Reported Decisional Regret After Operative Otolaryngology Procedures: A Scoping Review', The Laryngoscope 134, no. 6 (June 2024): 2562–2567, doi:10.1002/lary.31176; 'Health-Related Quality of Life after Maxillectomy: A Comparison between Prosthetic Obturation and Free Flap - PubMed', accessed 16 May 2024, https://pubmed.ncbi.nlm.nih.gov/12618993/; Subramania Iyer and Krishnakumar Thankappan, 'Maxillary Reconstruction: Current Concepts and Controversies', Indian Journal of Plastic Surgery: Official Publication of the Association of Plastic Surgeons of India 47, no. 1 (January 2014): 8–19, doi:10.4103/0970-0358.129618.

[36] 'Head and Neck Cancer - RCR Consensus Statements | The Royal College of Radiologists', accessed 6 April 2024, https://www.rcr.ac.uk/our-services/all-our-publications/clinical-oncology-publications/head-and-neck-cancer-rcr-consensus-statements/.

[37] The Royal College of Radiologists, 'Radiotherapy Target Volume Definition and Peer Review, Second Edition – RCR Guidance', accessed 6 April 2024, https://www.rcr.ac.uk/our-services/all-our-publications/clinical-oncology-publications/radiotherapy-target-volume-definition-and-peer-review-second-edition-rcr-guidance/.

[38] Contour delineation is a critical step in RT treatment planning, outlining the tumour (including areas at risk of microscopic disease and nearby organs) to guide RT, optimise tumour control and minimise toxicity.

reviews of contours.[39] Peer review seeks to reduce variation, supports complex decision-making and helps identify occasional errors in contouring.[40]

Peer review is widely regarded as essential (and 95% of centres stated it is consistently in place), but logistical challenges such as insufficient oncologist numbers, scheduling conflicts or technical issues can hinder its implementation.

In some HNC clinical networks with multiple RT sites, centres collaborate by pooling cases and oncologists to enable peer review of all cases (see *Collaboration to review contours* case study below) and this should continue. When networks merge, existing RT sites can remain, provided they collaborate by sharing protocols, collecting data, conducting joint quality assessment and ensuring representation from all sites at MDT meetings.

Case study: Collaboration to review contours

University Hospitals Bristol and Weston NHS Foundation Trust and the Royal United Hospitals Bath NHS Foundation Trust

UHBW and the RUHB are part of the same MDT network, with a joint MDT meeting. The clinical oncologists from the two centres combine their peer review as a weekly one-hour virtual meeting. The meeting involves clinical oncology consultants, clinical fellows and trainees as well as an H&N radiologist. Preliminary treatment contours are drawn by a team member before the meeting. All radical cases from both centres are discussed at the joint meeting. Both centres use the same planning system and each consultant displays their own cases using screenshare.

Clinical case details are presented, usually by a doctor who has met the patient. Imaging, which has usually been formally reported already and fused with planning CT scans, is reviewed with the help of the H&N radiologist. The extent of the tumour gross tumour volume is agreed and areas at risk are discussed, along with doses and technical approaches (such as use of the 5+5 guideline, bolus, etc.). Discussions are documented using an agreed electronic form, which enters the patient record (using Mosaiq in Bristol).

The meeting is also an opportunity to discuss ideas from recent papers, conferences, etc. There is a shared RT protocol which is updated annually at a separate meeting. The arrangement is robust, continuing even when members of staff are absent.

Time to treatment

Cancer waiting-times guidance states that 96% of patients should start treatment within 31 days of a decision to treat,[41] and NHS England’s Radiotherapy Service Specification states treatment should start within 17 days for Royal College of Radiologists (RCR) Category 1

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[39] *‘A Systematic Review of Contouring Guidelines in Radiation Oncology: Analysis of Frequency, Methodology, and Delivery of Consensus Recommendations - PMC’, accessed 6 April 2024, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8262136/; Lester J. Peters et al., ‘Critical Impact of Radiotherapy Protocol Compliance and Quality in the Treatment of Advanced Head and Neck Cancer: Results from TROG 02.02’, Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology 28, no. 18 (June 2010): 2996–3001, doi:10.1200/JCO.2009.27.4498.*

[40] *The Royal College of Radiologists, ‘Radiotherapy Target Volume Definition and Peer Review, Second Edition – RCR Guidance’.*

[41] *NHS England, ‘Changes to Cancer Waiting Times Standards from 1 October 2023’, accessed 6 April 2024, https://www.england.nhs.uk/long-read/changes-to-cancer-waiting-times-standards-from-1-october-2023/.*

cancers (which include HNC).[42] However, there is wide variation in time to treatment between centres and the 17-day target seems a particular challenge, with only a few trusts coming close to obtaining it.

Trusts that have faster pathways are mostly medium- to high-volume centres. Importantly, they do not appear to have sacrificed dental assessment, nutritional review or intervention, or peer review of RT. Faster pathways require co-ordination and flexibility, but do not necessarily need increased clinician, physicists or treatment-machine capacity. The case study below illustrates how a lower-volume centre has achieved a faster pathway.

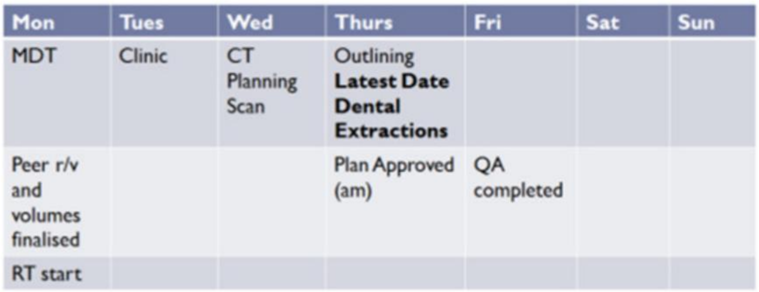
Case study: A high-speed pathway

Torbay and South Deveon NHS Foundation Trust

At Torbay Hospital, a 14-day pathway from decision to treat to start of RT was developed following a quality improvement project which identified common causes of delay. In the pathway, key preparatory steps are scheduled to enable timely RT delivery (shown in the figure below).

An audit conducted on the data of 187 patients treated from January 2017 to December 2022, showed that 62.6% patients underwent radical RT within 14 days of decision to treat, 29.4% patients started within 15 to 21 days and 8.0% patients started after more than 22 days. In patients treated adjuvantly, the aim was to treat within 35 days of surgery: of 75 patients treated, 52% received radiotherapy within 35 days of surgery and 65% patients received RT within the national target of 42 days.

Adherence to the pathway has been maintained over a prolonged period despite workload pressures within the NHS, at no extra financial cost and throughout the COVID-19 pandemic. The team therefore believes that a 14-day pathway for the radical treatment of HNC is achievable for most patients and transferable to other centres.



Mon	Tues	Wed	Thurs	Fri	Sat	Sun
MDT	Clinic	CT Planning Scan	Outlining **Latest Date Dental Extractions**			
Peer r/v and volumes finalised			Plan Approved (am)	QA completed		
RT start						

Care before, during and after radiotherapy

Therapy radiographers, nurses, dietitians, SLTs and CRDs should review HNC patients postoperatively, and this is equally important for a high-quality RT service, especially considering the length of treatment and potential side effects. Where surgery is followed by adjuvant RT, continuity in supportive care improves communication to the benefit of patients.

However, there is significant variation between HNC clinical networks in provision of this care for patients on RT. Some providers offer excellent patient support, including patient support groups before RT (often led by a specialist multidisciplinary group of SLTs, dietitians and

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[42] *NHS England, 'Service Specification No. B01/S/a Adult External Beam Radiotherapy Services Delivered as Part of a Radiotherapy Network', accessed 26 April 2024, https://www.engage.england.nhs.uk/consultation/radiotherapy-service-specification-consultation/user_uploads/radiotherapy-service-specification.pdf.*

CNSs and with access to a dental hygienist). In other cases, time constraints prevent teams from adequately supporting patients, or roles are split between surgery and RT, which may negatively impact patients undergoing RT. Trusts should allocate resources to ensure consistent support for all HNC patients throughout the RT process.

Other aspects of oncology

During the GIRFT review, we focused on radical RT and chemoRT as these are priorities of our care. We recognise, however, that HNC oncology practice is growing in other areas.

Although the UK benefits from a clinical oncology model, where oncologists can deliver chemotherapy as well as RT for the same patient, systemic therapy for advanced and metastatic disease is expanding and larger centres also support medical oncologists. The (welcome) expanding numbers of patients surviving for extended periods with immunotherapy, for example, has created a service need which is hidden from most data sets (which focus on numbers of diagnoses). In future, treatment data such as the SACT database, may help to follow this workload.

Some centres highlighted concerns about access to timely biomarker assays, largely programmed death-ligand 1 (PDL-1) at present.

Post-treatment

Follow-up care

Follow-up should be delivered as locally as possible for patients, with clear communication between treating and local teams. This does happen in many HNC clinical networks, particularly where outreach clinics are provided by surgical centre-based surgeons. In 50% of trusts, longer-term follow-up is delivered through CNS-led clinics and often involve other non-medical healthcare professionals. This can be an effective approach.

Case study: Nurse-led follow-up clinics

Royal Devon University Healthcare NHS Foundation Trust & North Devon satellite clinic

Royal Devon Hospital offers nurse-led HNC clinics. At the HNC centre hospital, senior team members with extensive clinical experience (who have completed advanced clinical practice modules) run nurse-led clinics. Nurses assess patients for cancer recurrence and new symptoms. Patients have full head, neck and nasendoscopic examinations and the nurses request scans, bloods, swabs and any other tests. They work closely with on-site consultants for advice and support and add patients to the MDT for wider team discussion if necessary.

In a North Devon satellite clinic, an experienced (Band 8b) nurse runs a nurse consultant-led follow-up clinic. All patients from North Devon are referred for follow-up, even those who have just completed treatment. The approach is similar to that described above, but the nurse consultant has greater autonomy, regularly instigating treatment to prevent escalations in ill-health and avoidable readmissions. The nurse has rapid access to consultants to answer any queries or concerns and consultants can also review nasendoscopic examinations, when necessary, via the EPR. This approach keeps care local, which is especially beneficial for elderly patients who find it difficult to travel. It also frees up consultant clinic slots at the main centre and keeps cancer waiting time targets on track.

Cancer wellbeing services

According to the PVQs, 81% of trusts provide access to a post-treatment cancer wellbeing course of some sort.[43] Such programmes, external to hospital follow-up, provide peer support and shared experiences. This helps patients at a time when they may feel cast adrift from the cancer service.

Case study: Supporting patients through wellbeing services

University Hospitals Southampton NHS Foundation Trust

Together with their network, UHS offer pretreatment services, such as welfare benefits advice, psychological support, and smoking cessation and alcohol/drug support. Post-treatment, the network offers Macmillan HOPE, lymphoedema and physiotherapy across all three sites. UHS also provide other services, such as support groups, Facing Forward, Swallows HNC Support Group and Heads Together. Hampshire Hospitals also provide six sessions of wellbeing support which include physical activity, psychological support and complementary therapies. The patient experience surveys from all three trusts were positive about their care and bout living with and beyond cancer.

Case study: MARS aftercare service

Royal Surrey NHS Foundation Trust

The Royal Surrey network offers a MARS (Macmillan Aftercare Rehabilitation Service) to fill a gap identified for patients following treatment, when patients report feeling most vulnerable and unprepared for lifestyle changes. The team comprising dietitians and SLTs, nutrition nurses and a CSW attend patients at local hospitals following their treatment at Royal Surrey.

MARS takes a proactive, integrated rehabilitation approach to facilitate smooth patient transfer from acute to community setting, promoting patient self-care and management within a supportive, local environment. MARS also provides patient support in daily activities to help people develop coping strategies, alleviating anxieties and improving their overall aftercare and rehabilitation experience. The initiative has successfully reduced hospital readmissions and improved overall aftercare experiences, while also fulfilling commissioning priorities for a more systematic and proactive management of chronic disease.

Late effects

Late effects of treatment – such as dry mouth, swallowing difficulties, taste changes, tooth decay, osteoradionecrosis and changes in appearance or function – are increasingly common as more patients survive HNC.

Many centres now offer late-effects clinics or plan to do so. We recommend establishing and funding multidisciplinary late-effects clinics, including SLT and dietetic-led services, with appropriate tools, outcome measures and staffing. As demand for these services grows, there is an opportunity to standardise data collection and expand the evidence base for managing these long-term effects.

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[43] *including Moving on from Cancer workshops; Look Good, Feel Better; Macmillan HOPE; Swallows Head and Neck Support group, or other locally organised support group*

Key pillars of patient care

In this section we discuss the vital disciplines (alongside surgeons and oncologists, which are discussed in the *Treatment* section above) who provide the necessary support to patients faced with a difficult diagnosis and through treatment to follow up. For each discipline, we present key findings that emerged from the peer reviews; this includes findings relating to workforce.

A common theme across these key disciplines is that service expansion that takes place as a result of surgical innovation (e.g. trans-oral robotic surgery (TORS)) or the recruitment of new healthcare professionals, is frequently unmatched by the expansion of these services necessary to provide consistent high-quality care. This results in disproportionate growth in the HNC service, increasing pressure on incumbent SLTs, dietitians and CRDs, and leading to inadequate cover for HNC patients. This diminishes recognition of the role of these professionals, results in key duties being inappropriately reassigned to other professionals and impacts ongoing recruitment and retention. Recommendations to address this and other issues relating to workforce are presented in the final, *Workforce* section.

Recommendation

Recommendation 4: Trusts should adopt best practices pertaining to key pillars of patient care

For action locally

a. Lymphoedema therapy: Trusts treating HNC should have access to lymphoedema therapy; ICBs should support commissioning to enable this.

b. Nurse-led clinics: Trusts should develop nurse-led clinics (see *Epsom and St Helier* case study for nurse-led diagnostic clinics and *Royal Devon University Healthcare* case study for nurse-led follow up clinics).

c. SLT clinics: Trusts should ensure that SLTs lead SVR clinics for laryngectomy patients; provide swallow safety management from diagnosis through to palliation and late effects with access to FEES and VF; deliver communication therapy for people with speech and voice compromise and are able to create protected space for rehabilitation.

d. Gastrostomy insertion: Dietitians should consider and lead the transformation of gastrostomy insertion into a day-case procedure, reducing costs and improving patient outcomes (see *North Midlands* case study above).

e. Follow up: Dietitians should provide close follow-up, preferably in collaboration with the MDT, to optimise post-treatment rehabilitation (see *Royal Surrey MARS* case study).

f. CRD integration with MDT: CRDs and OMFS consultants should collaboratively decide whether primary/secondary or no implants are required in each individual case, prior to ablative surgery. The CRD should be involved in virtual surgical planning with OMFS and (where locally appointed) a reconstructive scientist. This will ensure postsurgical prosthetic rehabilitation is considered and optimised. CRDs and oncology consultants/SLTs/dietitians should collaborate to optimise oral health outcomes for non-surgical treatment. Funding for primary and secondary implants should be included in commissioned pathways and appropriate team-based training should be supported by job plans.

g. RD-UK HNC Clinical Excellence Network: CRDs are encouraged to join the RD-UK HNC Clinical Excellence Network, to help CRDs across the UK work collaboratively to share best practice and improve quality of care.

Specialist nursing care

CNSs are essential to HNC care. They are key members of the MDT and contribute significantly to cancer survival[44] and patient experience.[45] CNSs are the "gate-keeper to the patients' cancer pathway, to deliver a seamless journey",[46] delivering support from diagnosis, co-ordinating care, offering psychosocial support and liaising with other care teams.

While CNSs perform most aspects of their role in most trusts, there are variations in aspects of CNS care provision.

Workforce

All providers should make adequate provision so that the CNS can see the patient on diagnosis, attend MDT meetings, and provide psychosocial support and care co-ordination. While this happens at most providers, some do not have sufficient staff to provide this level of cover, particularly during staff absence. Gaps in CNS cover may delay support at critical points, negatively impacting patient wellbeing. Contact with a CNS is particularly important at diagnosis; 93% percent of trusts reported that "almost all" HNC patients see a CNS at this crucial point, but in some places where there is a shortage of CNSs this does not happen. Trusts should ensure there is sufficient CNS capacity for this stage.

Personalised care and support planning

HNCs place a considerable physical, emotional and social burden on the patient and those who care for them.[47] Holistic needs assessments (HNA) are essential for identifying these needs and providing patients with a personalised care and support plan,[48] allowing the patient to flag their concerns, identify additional support requirements and articulate any concerns about carers or loved ones (while also showing opportunities for carers to be involved in supporting the patient).

There are multiple HNA tools available and the choice of adopted tool depends upon the trust. Our findings indicated a high proportion of trusts use Macmillan eHNA and Somerset tools, however, the Liverpool head and neck PCI is a well-recognised HNC-specific tool, and in some cases, trusts have developed their own.
While 94% of trusts offer HNAs at diagnosis, fewer provide them at later stages, such as post-treatment (75%) or after a patient's status changes (67%). Some trusts have established dedicated HNA clinics to achieve this, while others utilise CSWs to assist with the process.

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[44] *Alessy et al., 'Being Assigned a Clinical Nurse Specialist Is Associated with Better Experiences of Cancer Care used linked National Cancer Patient Experience Survey and Cancer Registration Dataset Cancer Patient Experience Survey and identified that patients assigned a CNS and given their name were more likely to report better care experiences with being involved in their treatment decisions, their care being more co-ordinated, being treated with more respect and dignity, and a better overall care experience within the NHS.*

[45] *Saleh A. Alessy et al., 'Clinical Nurse Specialists and Survival in Patients with Cancer: The UK National Cancer Experience Survey', BMJ Supportive & Palliative Care, April 2022, doi:10.1136/bmjspcare-2021-003445.*

[46] *Homer and Winter, 'Head and Neck Cancer'.*

[47] *E. Precious et al., 'Head and Neck Cancer Patients' Perspective of Carer Burden', The British Journal of Oral & Maxillofacial Surgery 50, no. 3 (April 2012): 202–207, doi:10.1016/j.bjoms.2011.04.072.*

[48] *NHS England, 'Personalised Care and Improving Quality of Life Outcomes', n.d, https://www.england.nhs.uk/cancer/living/.*

Consistent implementation of HNAs should be a priority: It is critical that those trusts that do not currently carry out HNAs do so, to ensure that patients' unmet needs are recognised and addressed.

Psychological support

CNSs should be trained in level 2 psychological support, as specified in the Advancing Clinical Capability, Education, and Nursing Development (ACCEND) framework. This level of support includes supporting patients in decision-making and emotional aspects of the disease, supporting self-management, being able to screen for mental health issues (including suicide risk) and providing appropriate interventions or referrals for psychological assessment when needed. Given the psychological burden of the disease,[49] HNC patients should also have access to level 4 support where needed.

Case study: HNC counsellor

University Hospitals Birmingham NHS Foundation Trust

UHB has had a dedicated counselling service for HNC patients for over 20 years. A full-time Band 7 mental health nurse, who is a qualified counsellor, offers 20 sessions weekly alongside additional support for staff and patients. Initially funded by a charity, the service is now fully funded by the trust, providing confidential emotional and psychological support at any stage of the patient journey. The counsellor works closely with the CNS, SLTs and the consultant surgeons to ensure comprehensive, integrated care.

Lymphoedema therapy

Lymphoedema is a common, but distressing, side effect of cancer treatment, often impacting on swallow and breathing. Currently, 86% of trusts offer therapy for this debilitating condition (often off-site at hospices, or charitable centres). All trusts should ensure it is consistently available (after active anti-cancer treatment has finished), and consider how patients may access such therapy.[50] ICBs should support the ongoing commissioning of these services where they are currently available, as well as commissioning new services where there is current no availability for patients to access local therapy.

Supportive services

Key supportive services (detailed in the table below) should be available throughout the HNC patient's pathway, close to home, but provision is inconsistent. Moreover, only 23% of HNC patients return to work post-treatment suggesting gaps exist in vocational support.[51]

Table 7: Availability of supportive services

Service	% of HNC centres providing access to service	% of local hospital trusts providing access to service

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[49] J. A. Twigg et al., 'Best Practice in Reducing the Suicide Risk in Head and Neck Cancer Patients: A Structured Review', The British Journal of Oral & Maxillofacial Surgery 58, no. 9 (November 2020): e6–e15, doi:10.1016/j.bjoms.2020.06.035; 'Incidence of Suicide in Persons with Cancer - PubMed', accessed 31 October 2024, https://pubmed.ncbi.nlm.nih.gov/18695257/.

[50] Brad G. Smith and Jan S. Lewin, 'The Role of Lymphedema Management in Head and Neck Cancer', Current Opinion in Otolaryngology & Head and Neck Surgery 18, no. 3 (June 2010): 153–158, doi:10.1097/MOO.0b013e32833aac21.

[51] The Swallows & Mouth Cancer Foundation, 2023. Back-to-Work Guide for Head and Neck Cancer Patients. Supported by Working With Cancer, Salivary Gland Cancer UK, and members of the Head and Neck Cancer patient community. Funded by Bristol Myers Squibb.

Physiotherapy	71%	62%
Psychological therapy	83%	66%
Welfare benefits adviser	85%	78%
Smoking cessation	90%	78%
Alcohol support	83%	73%

Case study: HOPE Somerset

Somerset NHS Foundation Trust

The HOPE (Helping Overcome Problems Effectively) Somerset service provides psychological support, restorative clinical supervision and training. Cancer patients can receive up to ten counselling sessions. Restorative clinical supervision is also provided monthly to all HNC MDT members. In March 2023, the service appointed a clinical nurse onc-psychotherapist to deliver crisis support, care planning and short- and long-term psychotherapy for complex cases, as well as to liaise with mental health teams and GPs. The psychotherapist also advises colleagues on managing complex treatment pathways.

Nurse-led clinics

Nurse-led clinics help services to meet cancer wait-time targets, free up consultant capacity and foster good relationships with patients. We identified exemplar nurse-led clinics at different stages in the pathway (see also *Nurse-led follow-up* below).

Case study: Nurse-led triage clinics

Epsom & St Helier University Hospitals NHS Trust

In 2022, Epsom & St Helier hospitals launched a nurse-led triage clinic for suspected HNC referrals following extensive stakeholder consultation, led by a consultant and a dedicated and highly experienced CNS (Band 8a). The clinic uses the Symptom Based Risk Calculator (SBRC) v2 to triage laryngeal/pharyngeal cases, including neck lumps and ear/nose/sinus, oral/lip, salivary and thyroid symptoms. Although the SBRC tool has only been validated for use with patients presenting with symptoms affecting the larynx and pharynx, it was felt that the triage nurse's expertise ensures appropriate clinical evaluation and triage for all H&N referrals.

The nurse conducts a telephone assessment of symptoms and a full medical and social history, and then triages patients into high-risk ENT review, low-risk ENT review or OMFS review. Patients are then seen within seven days, with risk stratification guiding resource allocation (so high-risk patients are seen by HNC consultants). An audit revealed the SBRC tool's limitations in identifying younger patients with lateral neck lumps, prompting the introduction of a local override protocol that ensures all neck lump cases are seen in high-risk clinics and receive immediate ultrasound imaging.

In addition to providing effective triage, the approach has helped the nurse to support patients throughout the pathway, increasing patients' understanding and providing psychological support earlier in the patient journey.[52]

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[52] *'Triage-Led Clinic for Suspected Head and Neck Cancer - Head and Neck Cancer UK', December 2023, https://hncuk.org/triage-led-clinic-for-suspected-head-and-neck-cancer/.*

Dietetics

Malnutrition is a significant issue for HNC patients, with an estimated 30%–57% malnourished at diagnosis.[53] Both disease and treatment can worsen nutritional status for HNC patients at any stage, leading to poorer treatment tolerance, delayed wound healing, higher morbidity and mortality, reduced quality of life and lower survival rates.[54] Optimising nutrition is therefore essential in managing HNC,[55] and the HNC dietitian should lead on patients' nutritional assessment, providing individualised nutritional advice and support throughout the patient's journey.[56] Nutritional support can be oral (fortification and high energy/protein supplements), enteral (tube feeding) or parenteral (IV).

Workforce

We identified considerable variation regarding the availability of HNC dietitians and noted that a significant minority of local hospitals cannot offer specialist dietetic support, which may affect treatment outcomes.

HNC centres should have a named (specialist) dietitian with at least 50% of time dedicated to HNC[29] and all providers should ensure that a dietitian with HNC knowledge and nutrition-support expertise is available to patients. However, while 98% of HNC centres have dietitians available, this falls to 64% across all providers. A significant minority of local hospitals cannot offer specialist dietetic support, which may affect treatment outcomes.

Nationwide, the average banding of dietitians is Band 6. Some centres have HNC dietitians with an extended scope of practice, including skills such as gastrostomy tube care, nasogastric tube (NGT) insertion and removal, and supplementary prescribing. This expanded role streamlines the care process and enhances the patient experience. However, this is not yet consistent across centres. Where HNC dietitians do not have an extended scope, collaboration with the nutrition nurse, feeding company nurse and other MDT members is often necessary to fulfil these tasks effectively. The availability of those staff may occasionally pose an issue.

All HNC dietitians should engage in clinical audits and service evaluation and improvement projects to enhance patient nutritional outcomes across the treatment journey, including palliative care. This can be done locally or collaboratively within networks. However, staffing issues often force dietitians to prioritise clinical duties over service reflection and improvement. In some networks, limited research capacity restricts their ability to measure dietetic outcomes, reflect on practices or enhance service quality.

Provision of dietetic care

Dietitians should play a role “throughout the patient’s continuum of care”,[57] but provision along the pathway varies. This reflects both a provider’s approach to dietetic care and the availability, or lack thereof, of dietitians (see the *Workforce* section above).

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[53] *British Dietetic Association, ‘Key Fact Sheet for Head and Neck Cancer’, n.d, https://www.bda.uk.com/static/4b2f4720-ec51-4db4-8eefd437e9fe4821/headandneckkeyfactssheet.pdf.*

[54] *Florence Cook, Jose M. Rodriguez, and Lorna K. McCaul, ‘Malnutrition, Nutrition Support and Dietary Intervention: The Role of the Dietitian Supporting Patients with Head and Neck Cancer’, British Dental Journal 233, no. 9 (November 2022): 757–764, doi:10.1038/s41415-022-5107-8.*

[55] *Homer and Winter, ‘Head and Neck Cancer’.*

[56] *Cook, Rodriguez, and McCaul, ‘Malnutrition, Nutrition Support and Dietary Intervention’.*

[57] *Homer and Winter, ‘Head and Neck Cancer’.*

Table 8: Provision of dietetic care at key stages in the pathway

Stage in pathway	% of all networks providing dietetic support at stage
At diagnosis	78%
During prehabilitation	78%
During perioperative assessment and/or during the surgical admission	88%
During RT including chemotherapy	90%
During chemotherapy	68%
Post-treatment/rehab	88%
During palliative care	83%

Case study: Dietitians team trained in HNC

The Royal Marsden Hospital NHS Foundation Trust

While the dietetics team does not provide a specific H&N service at the RMH, five dietitians are trained in HNC which ensures consistent coverage, particularly during staff absences. All patients are seen by a dietitian, with a blanket referral approach (though initial assessments may take place at another site, such as St George's). Dietitians collaborate closely with SLTs and CNSs, holding joint clinics. This ensures effective post-treatment care, rehabilitation and the safe, timely removal of feeding tubes following treatment.

Screening tools and assessment

Every HNC patient should undergo nutritional screening at diagnosis, repeated at intervals during treatment for optimal patient management. However, only 44% of trusts use validated tools like the Malnutrition Universal Screening tool or the Patient Generated Global Assessment tool. Around one in five trusts (21%) rely solely on clinical judgement, which can lead to inconsistent referral patterns and patients not being identified for necessary support.

Enteral feeding

Enteral nutrition support may be necessary for HNC patients on a short- and/or long-term basis. Specialist dietitians should take the lead in managing enteral feeding pathways, providing expertise to support appropriate decision-making regarding the type, timing, placement and removal of feeding tubes. However, the lack of a consensus on these practices often results in variability in practice.[58] All trusts should have clear protocols for determining use of prophylactic and reactive feeding tubes, and regarding tube removal. These are not yet in place consistently:

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[58] *Homer and Winter.*

Table 9: Proportion of trusts with feeding tube pathways or protocols

Protocol/pathway	% of trusts with protocol /pathway
Written protocol/pathway for determining need for prophylactic feeding tubes (versus reactive feeding tubes)	38%
Written protocol/pathway for HNC patients requiring an NGT during their treatment	33%
Written protocol/pathway for the removal of tubes after treatment	42%

Case study: Dietitian-led NGT insertion Service

Queen Elizabeth Hospital Birmingham

After feedback revealed patients could spend four to five hours waiting for an NGT replacement while undergoing RT, the H&N dietetic service at the QEH identified an opportunity to improve patient care, streamline the service and prevent hospital admissions. Through an extended scope of practice, H&N dietitians at QEH now perform NGT insertions for patients during RT, managing late treatment effects and providing palliation for outpatients.

The service strives to identify patients early in their pathways, ensuring that NGT placements are well planned and as proactive as possible. A standard operating procedure is in place to support clinical practice and decision-making.

Gastronomy tube insertion

Prophylactic gastrostomy placement before or during treatment may benefit patients with HNC and should be considered on a case-by-case basis.[59] Prophylactic gastrostomy tube placement is offered by 64% of trusts. Of those offering prophylactic balloon gastrostomy (BG) insertion, 21% offer it as a day case.

Case study: Day case BG pathway

North Middlesex University Hospital NHS Trust

At North Middlesex, there is a well-structured and successful day-case pathway for HNC patients requiring a BG. Patients undergoing radical RT are assessed for prophylactic BG (pBG) placement. The need for a BG is initially discussed during the consent process for RT and revisited during the pre-treatment dietetic assessment. If patients consent, the procedure is scheduled for week three of RT. For those who decline, the need is reassessed weekly.

An evaluation conducted in 2021 showed that 32 of 38 patients during a 12-month period were successfully discharged on the day of the procedure. This freed up 32 bed nights and resulted in an estimated cost saving of £7,904 directly associated with the gastrostomy insertion overnight stay.

A further service evaluation conducted in 2024 indicated that shared decision-making regarding pBG insertion may further reduce costs by avoiding unnecessary pBG insertions in some patients. The evaluation also suggested that it might be possible to insert pBG in week four of RT without compromising nutritional status.

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[59] *Homer and Winter.*

Speech and language therapy

HNC can severely impact speech, swallowing and communication – all of which are essential for patients' quality of life. In treating these aspects of the disease, SLTs are crucial throughout the patient's journey[60] and their role extends to the broader social and emotional impacts of HNC. SLTs aid physical recovery, social reintegration and psychological wellbeing, offering patients tools to manage their condition and cope with changes in their self-perception.[61] The input of an SLT can improve the patient's quality of life through psychological input which meets the patient's needs addressing their altered self and function.

Workforce

Insufficient numbers of SLTs across the country leaves SLT services significantly compromised. Currently, there are only 1.8 WTE specialist HNC SLTs per trust and around one in four trusts have one WTE SLT or less. In addition, 25% of trusts lack access to FEES and 15% lack access to VF, limiting their ability to perform evidence-based assessments.

There is a high vacancy rate for SLTs across the UK, however workforce shortages in HNC specifically are compounded by the limited and inconsistent funding of SLT services. The scarcity of advanced practice roles (there are fewer than 15 Band 8 SLTs working in HNC), which limits career progression opportunities for SLTs, can also impact the quality of service provided.

Career progression paths are often poorly defined for advanced clinical work. Instead, progression frequently involves management roles (with limited or no clinical work), so the NHS loses a highly skilled clinical workforce. This is also likely to deter SLTs who have interests in advanced practice or clinical academic roles and/or those who seek consultant-level roles from pursuing a career path in HNC specialisms.

Provision of SLT care

In order to fulfil the role envisaged in the MDT Guidelines,[62] SLTs should have sufficient job-planned time to attend collaborative clinics and MDT meetings; to lead SVR clinics for laryngectomy patients; to deliver timely interventions to optimise swallow safety and support nutrition (including assessing swallow competence before, during and after treatment); to provide targeted communication therapy and to address physical and psychosocial needs related to eating, drinking and speaking; and to create protected space for rehabilitation.

Our review identified many SLT-led clinics that deliver high-quality interventions and drive cost savings by reducing acute admissions, improving flow, reducing undue length of stay, enhancing patient function, easing treatment burdens, supporting return to work and freeing up consultant time. These benefits were demonstrated in the autonomous role of the SLT: undertaking assessment, diagnosis and management of swallow using FEES, as well as

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[60] Heather M. Starmer and Jocelen Hamilton, 'Speech, Voice, and Swallowing Rehabilitation for Patients with Head and Neck Cancers', in Multidisciplinary Management of Head and Neck Cancer: Contemporary Applications and Techniques, ed. Ravi A. Chandra and Ryan J. Li (Cham: Springer International Publishing, 2022), 215–238, doi:10.1007/978-3-031-05973-5_14.

[61] Camilla Dawson, Jo Adams, and Deborah Fenlon, 'The Experiences of People Who Receive Swallow Therapy after Surgical Treatment of Head and Neck Cancer', Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology 128, no. 5 (November 2019): 456–463, doi:10.1016/j.oooo.2019.03.012.

[62] Homer and Winter, 'Head and Neck Cancer'.

providing timely SVR, dysphagia and voice rehabilitation clinics, laryngectomy support groups, radiotherapy-related dysphagia clinics and some palliative-care outreach services. Our reviews emphasised the value and efficiency of SLTs' expertise in these areas.

However, staff and instrumentation shortages render some trusts unable to provide the requisite SLT services (including SVR clinics and swallow safety management).

Funding and team culture

Staffing levels and service provision are frequently a function of limited funding. Funding mechanisms for HNC SLTs vary. SLTs (and dietitians) rarely have ring-fenced directorate-specific funding for HNC services, unlike other professional groups. Funding may come from a trust’s therapies’ budget, from service level agreements with another trust or from community budgets. Further complications arise when services cross ICB or trust boundaries without oversight and centralised funding to either follow a patient journey or adequately fund personnel, services and consumables. As a result, funding inconsistencies create disparities in service provision across different trusts.

In the services offering an exceptional level of SLT care, we observed the MDT acting as a cohesive team with a culture which elevates SLTs as peers in the HNC workforce rather than as ‘wrap-around services’ or as one component of an allied health professional workforce. In exemplar centres, this attitude is reflected in funding models, team culture and trust recruitment strategies.

Case study: Funding models supporting a team culture of excellence

University of Birmingham NHS Foundation Trust

Funding is provided by the acute Trust H&N directorate, meaning it is ring-fenced proportionate to the surgical, oncological and nursing workforce, and SLTs can effectively carry out the work that they are job-planned to do, supporting patients and providing rehabilitation from the point of diagnosis through to cure or palliation. The H&N directorate also contribute funding towards the consultant SLT team, which has facilitated protected research time and extended role development. This improves staff recruitment and functional outcomes for patients and expedites expert dysphagia assessment.

The SLT team reports results on specific key performance indicators to the directorate to demonstrate outcomes and patent benefit following investment. The SLT team is fully integrated into the H&N MDT and gives input into all facets of the patient journey. This is only possible due to the protected time provided through adequate and responsible funding.

SVR clinics

Three providers were unable to offer SVR clinics due to staffing and skill-set limitations, leaving patients without voice and at risk of aspiration for extended periods. While CNS and ENT teams may help with basic valve changes, an SVR service relies on the specialist expertise of SLTs, whose role is essential for assessing, diagnosing and managing dysphagia and communication issues after larynx removal. This includes managing the compromised parti wall and handling complications like local leakage, strictures and recurrent disease. Having an SVR clinic optimises function and gives the patient the opportunity to return home without risk of readmission as a result of aspiration and malnutrition/dehydration. The SLT role (with access to FEES and VF) is crucial for improving patient outcomes.

Case study: Network-wide and community collaboration

Guy's and St Thomas's NHS Foundation Trust

The SLT team at GSTT operates in two main areas: the acute team and the community head and neck team (CHANT), team, managing patients with HNC throughout the care pathway. The SLT team provides training to local hospitals, district nurses and junior doctors while the CHANT team provides rehabilitation support closer to patients' homes. The Guy's team's comprehensive SVR service includes a community SVR policy and also supports laryngectomy insufflation tests, online training and clinical trials. The team holds regular FEES and VF clinics. It serves marginalised groups including prisoners and palliative care patients. Staff rotation between CHANT and Guy's disseminates knowledge and good practice, while a South East London CA innovation-funded post fosters a research-oriented environment (focusing on dysphagia outcomes).

Swallow safety

Five providers lack adequate staffing or instrumentation to deliver timely, evidence-based swallow-safety care during or after oncological or surgical treatment. This unwarranted variation can lead to preventable complications, such as aspiration pneumonia, which increase morbidity, mortality and hospital admissions, and reduce quality of life. Properly resourced swallow-safety services are essential to fully rehabilitate patients, ensuring cancer treatments not only cure the disease but also restore function and independence.

Service evaluation and research

Few providers allocate protected time to SLTs for service evaluation and team development. This can hinder service progression, recruitment and retention, and ultimately affect patient outcomes. Conversely, where there is adequate funding and infrastructure for feasibility and research projects, innovative approaches have emerged. SLT-led 2WW clinics in Newcastle, which demonstrate both efficiency and safety, highlight the benefit of service evaluation, auditing and research for the wider service.

Restorative dentistry

RD is vital in the care of HNC patients, addressing short- and long-term oral, facial and dental complications that can significantly affect the patient's quality of life. CRDs are responsible for both the prehabilitation and rehabilitation of a patient's oral and dental health, working closely with the treatment team and accounting for planned surgery or RT. Their involvement throughout the care pathway is essential for improving oral and dental health.

Provision of RD care

The IOG stipulated that a CRD should be a core member of the MDT and recent UK guidelines emphasise the importance of RD in HNC care.[63] **Figure 8** illustrates the CRD's integral role.

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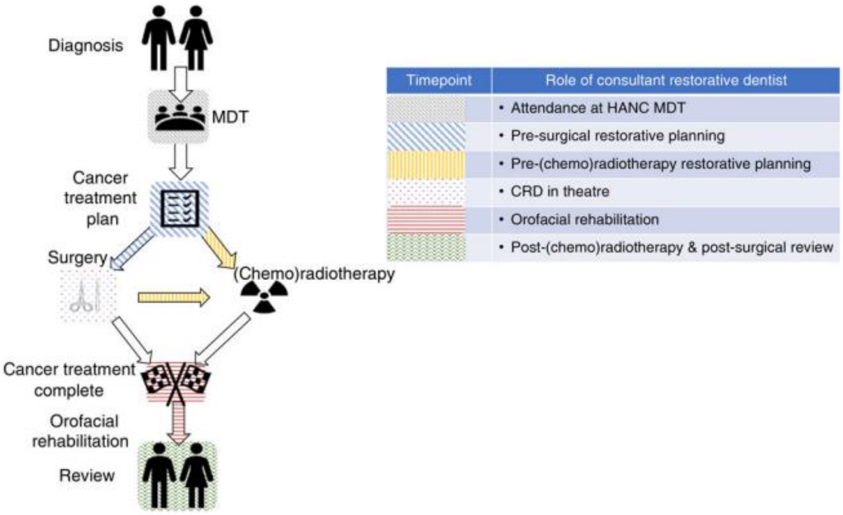
[63] *Homer and Winter; Lorna K. McCaul et al., 'Oral Prehabilitation for Patients with Head and Neck Cancer: Getting It Right - the Restorative Dentistry-UK Consensus on a Multidisciplinary Approach to Oral and Dental Assessment and Planning Prior to Cancer Treatment', British Dental Journal 233, no. 9 (November 2022): 794–800, doi:10.1038/s41415-022-5197-3; British Association of Head & Neck Oncologists, 'BAHNO Standards 2020'; 'Head and Neck Cancer, British Dental Journal, Volume 233 Issue 9, 11 November 2022', Nature, March 2024, https://www.nature.com/bdj/volumes/233/issues/9.*

Figure 8: CRD role in the patient pathway (UK National MDT Guidelines 2024)[64]



Workforce

HNC centres should have continuous cover by a CRD as a core member of the MDT (with cross-cover for when the CRD is absent)[65] but 22% of MDTs do not have any CRD input, or have insufficient CRDs to provide continuous care. This causes inconsistent and variations in specialist oral health care and rehabilitation, impacting quality of life and recovery.

In many places we observed there is an insufficient number of CRDs. We found considerable variation in RD provision across HNC clinical networks, so patients do not have equal access to specialist RD services. RD services are delivered in both dental hospital (40% of services) and non-dental hospital (60% of services) environments.[66] In general, CRDs based in dental hospitals have the benefit of being co-located with other specialist dentistry services and working alongside and sharing HNC service responsibilities with other CRDs and other members of the dental team, such as dental hygienists. CRDs based in non-teaching hospitals have the advantages of being co-located and often working directly alongside their HNC MDT colleagues.

Some centres deliver exemplary RD services where the CRDs are proactive and fully integrated in the MDT, and RD is valued as essential throughout the pathway.

Case study: Embedding RD within the HNC MDT

Sheffield Teaching Hospital NHS Foundation Trust / Charles Clifford Dental Hospital

Sheffield (the Charles Clifford Dental Hospital) exemplifies how RD can be embedded within the HNC MDT in a dental hospital environment. Two CRDs and a total of 12 PAs are dedicated to HNC, ensuring 100% MDT attendance. The CRD carries out assessment and planning for all pre-RT and presurgery patients, collaborating with OMFS where necessary. Other CRDs support HNC patient rehabilitation. The team includes two dental hygienists, (less than ten PAs) and one dental therapist (less than five PAs) and has access to an on-site maxillofacial laboratory and off-site reconstructive scientists. The RD service is underpinned by effective

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[64] *Homer and Winter, 'Head and Neck Cancer'.*

[65] *British Association of Head & Neck Oncologists, 'BAHNO Standards 2020'.*

[66] *In England, the Restorative Dentistry services cover populations of around 23 million / 40% in Dental Hospitals and around 34 million / 60% in non-Dental Hospitals.*

communication within the MDT, a dedicated HNC patient database, staff motivation to improve the service (including via clinical audit) and monthly meetings with oncology for service development.

Case study: Developing an integrated RD service

Imperial College Healthcare NHS Trust/Charing Cross Hospital

RD is fully integrated at Charing Cross, serving the Imperial College and Chealsea & Westminster network, within a non-dental hospital environment. Since it began in 2015/16, the service has grown rapidly, with one CRD (five PAs dedicated to HNC care) and up to three RD specialty registrars (StR). There is a close working relationship with the trust's operational management team and local service commissioners, with emphases on both developing and delivering high-quality care. Now almost all patients have CRD input throughout their pathway. The CRD attends most MDTs, with StR presence ensuring 100% MDT cover. Pre-RT and presurgery planning are delivered by CRD and RD colleagues. The service includes on-site dental hygienists/therapists and a maxillo-facial lab, and has received excellent patient feedback.

By contrast, we noted that in some networks, MDTs without a dedicated CRD resort to various ‘workarounds’, such as involving dentists from different specialties, GDPs or even OMFS to fulfil aspects of the role. Alternatively, they forgo the necessary planning and pretreatment assessment altogether. These arrangements may appear convenient or become inappropriately normalised by some centres, but they introduce unwarranted variation, leave the MDT non-quorate and fall short of best practice standards and national guidelines.

Dental prehabilitation

Dental prehabilitation should be conducted by a CRD, yet according to our PVQs, this only occurs in 52% of centres before RT and in 48% of centres before surgery. Where CRDs are not involved, assessments may be skipped altogether, or undertaken by other dental specialties or OMFS. This represents unwarranted variation. Additionally, the location for dental extractions varies: while 79% are conducted within surgical centres, others are performed by GDPs. This also represents unwarranted variation.

Dental implant treatment

Dental implant treatment is often necessary for the HNC patient for rehabilitating dentofacial appearance and oral function, and it may improve the patient’s quality of life.[67] However, we identified unwarranted variation in patient access to primary and secondary dental implants, with less than half of HNC clinical networks stating they deliver implants.[68] Variation was also evident in:

- job-planning to accommodate joint planning and implant placement with surgeons
- CRD involvement in implant planning and placement;
- waiting times for secondary dental implants;
- funding arrangements for primary and secondary dental implant treatment;
- dental implant systems;

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[67] *Naser Sargolzaie, Amir Moeintaghavi, and Hamid Shojaie, ‘Comparing the Quality of Life of Patients Requesting Dental Implants before and after Implant’, The Open Dentistry Journal 11 (August 2017): 485–491, doi:10.2174/1874210601711010485.*

[68] *46% of the networks that filled in the relevant section of the questionnaire stated they deliver implants.*

- digital implant planning software used;
- use of advanced techniques such as zygomatic implants.

In some centres, CRDs and OMFS collaborate effectively on implant placement (including routine joint attendance in theatre), while at others the CRD is under-utilised in implant-based oral rehabilitation. This may lead to sub-optimal outcomes for the patient.

Case study: Restoratively driven collaborative implant planning and placement

Bradford Teaching Hospitals NHS Foundation Trust

Close involvement of the CRD in the Bradford MDT ensures early identification and joint RD/surgical identification and planning in cases requiring primary dental implants. The CRD attends every major HNC surgery where primary dental implant placement is required. A local audit showed that patient rehabilitation outcomes were improved when the CRD was present.

Funding for implant-based rehabilitation

While most services can access funding for dental implants, we identified inconsistencies between HNC centres in the approach to funding for prehabilitation and rehabilitation. Implant-based rehabilitation pathways should be commissioned as part of Specialised Services Commissioning pathways, but some centres rely on alternative funding streams or have no funding. ICBs must ensure consistent funding for implant-based rehabilitation, providing all patients with necessary access.

Table 10: Funding arrangements for implant-based rehabilitation

Funding arrangement	Primary implants - % of networks	Secondary implants - % of networks
Specialised services commissioning	29%	2%
Block contract funding	17%	43%
Local funding arrangements	17%	19%
Not funded	2%	7%
Not applicable/ not known/ unanswered	36%	29%

Post-treatment review

Post-treatment review practices vary significantly, with some CRDs not reviewing patients at all after treatment. In some networks, patients are only reviewed after six months, by which time preventable problems may have developed.

Follow up, discharge and re-referral from primary care

Access to primary dental care is an almost universal challenge, with significant issues with access reported by 73% of networks and moderate issues by 25%. This causes bottlenecks in specialist services due to a lack of suitable discharge options. Some networks have addressed this with effective discharge pathways.

Case study: Safe discharge pathway

Leeds' Teaching Hospitals NHS Trust

LTHT's safe discharge pathway, a model of collaboration with primary care dentists, was established after a local audit showed over 30% of HNC patients lacked access to dental care. The pathway involves collaboration with a small network of GDPs (who had volunteered and received training in HNC issues) and allows unregistered patients to have access to an NHS

GDP. Note, however, since GDPs who provide the service are not remunerated for this, it is vulnerable and requires funding to expand.

Best practice pathway

GIRFT are working with RD-UK to produce a best practice pathway. Please contact Lorna MacNab for a copy: Lorna.MacNab@ggc.scot.nhs.uk

Workforce

As show throughout this report, delivering HNC care is inherently complex, requiring multidisciplinary input throughout the patient pathway and involving over eight clinical disciplines. Consolidating networks (see **Recommendation 1**) could ease some workforce challenges. Where networks cohere and communicate better, they may be able to better address staffing gaps or issues, such as collaborating to peer review RT contours and providing cross-cover in staff absence.

Evaluating the extent of the HNC workforce proved problematic: data submitted in PVQs was inconsistent and, since many staff also treat patients with other conditions, providers could/ or did not provide precise staffing data (often making rough estimates when discussing the issue at peer reviews). Furthermore, due to the lack of standardised core outcomes across services, linking staffing levels to patient outcomes is difficult. Despite these limitations, our analysis (based on PVQ responses and peer-review evidence) highlighted significant variation in staffing across MDTs. Many services have inadequate staffing and so cannot consistently deliver the requisite multidisciplinary care across all sites and disciplines, and gaps in staffing at some services appear to adversely affect patient outcomes.

Nationally, shortages are most pronounced in SLT, dietetics, RD, pathology, radiology and microvascular surgery (pathology and radiology issues are the subject of previous GIRFT reports and therefore outside the scope of the current report).[69] In some networks there is a lack of whole-time equivalence (WTE) across key MDT components – such as nursing, dietetics, SLT and RD – resulting in a lack of business continuity if personnel are on annual leave or are off sick.

Recommendation

Recommendation 4: Networks should develop a plan to act on the specific staffing gaps we identified in their individual peer reviews, and review these alongside discussions on network structure as well as on broader best practice we have identified nationally

For action by HNC clinical networks, in collaboration with cancer alliances, commissioners and trusts

- Nationally, NHSE (and/or appropriate professional bodies) should:

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[69] *'Pathology - Getting It Right First Time - GIRFT', accessed 30 October 2024, https://gettingitrightfirsttime.co.uk/medical_specialties/pathology/; GIRFT, 'Radiology GIRFT Programme National Specialty Report', 2020.*

  - urgently review the surgical workforce, including OMFS, ENT (ear, nose and throat) and plastic surgeons, to consider the capacity to deliver current surgical demand and the requirements for training the future surgical workforce;
  - review workforce to account for the changing incidence of HNC, the increasing complexity of the disease and its management, trainee numbers and the number of clinicians likely to retire over the medium to long term. This analysis will likely illustrate the urgent need for a national plan for recruitment and retention in HNC.
- HNC clinical networks should:
  - future proof networks and staffing levels together;
  - consider network-wide plans to cover leave and sickness.
- Trusts should:
  - define their own workforce requirements, taking the network structure and form into account;
  - consider the capacity and demands of surgical and oncological practice developments (e.g. the introduction of TORS and/or new radiotherapy centres);
  - review funding for SLTs, dietetics and RD in line with the development of the surgical and oncological workforce;
  - ensure sufficient staff across multiple pay bands to deliver business continuity and provide multiple levels of expertise while managing day-to-day service delivery;
  - use evidence-based algorithms where available, which will account for pre-treatment and follow-up care, along with demand factors such as number of new diagnoses per year. (Note the GIRFT team are currently considering the algorithms that are available and whether we should develop calculators for networks to use);
  - take into account certain patients' lifetime requirement for follow-up, e.g. those with surgical voice restoration (SVR) post laryngectomy;
  - Review the speciality guidance below alongside existing workforce guidance from BAHNO[37] and other bodies

Specialty requirements

SLT:

- Trusts should appropriately fund and protect specialist SLT services to ensure full coverage for the HNC patient caseload, including:
  - sufficient SLT staff at the surgical and diagnostic centres with advanced clinical skills in HNC to manage and lead SVR services and to provide assessment, diagnosis and management of swallow, voice and communication from the point of diagnosis to throughout and after treatment (to manage late effects and provide palliation);
  - sufficient staff with advanced skill sets to carry out instrumental assessments of swallow using fiberoptic endoscopic evaluation of swallow (FEES) and video fluoroscopy (VF) as standard;
  - sufficient staff at the surgical centre so that both SLTs and dietitians can attend the MDT meeting, with cross-cover for absence.
- Trusts should have a training and development budget, peer support, close collaboration with surgical and oncological teams, offers of flexible working where appropriate and the opportunity to realise career progression (which includes advanced practice). Providing opportunities for these professionals to undertake research, clinical audits and evaluation will help attract and retain the high-calibre staff needed to deliver SLT and dietetic services.

Dietetics:

- All trusts should ensure that a dietitian with HNC knowledge and nutrition support expertise is available to patients. Where this is not currently the case, dietitians should be encouraged to shadow specialist HNC dietitians to develop knowledge and experience.
- Trusts should ensure adequate dietetic staffing to:
  - conduct baseline nutritional assessments for all HNC patients at diagnosis, with follow-up reviews as clinically indicated, including perisurgery, pre-oncological treatment, weekly

    during and immediately after radiotherapy, and as needed during rehabilitation and other treatments;
  - lead the HNC enteral feeding pathway, including guideline development, enteral nutrition assessments and tube management, with extended scope for gastrostomy care, NG tube management and supplementary prescribing where feasible;
  - ensure HNC dietitians consistently attend MDT meetings at the specialist centre, with HNC and nutrition support expertise available at all trusts;
  - conduct audits, service evaluations and improvement projects.

CRDs:

- Each network should have at least two substantive CRDs to provide continuous cover (at least one WTE) for the whole pathway (from MDT meeting, and for oral and dental prehabilitation and rehabilitation).
- The CRDs should ideally be located at the surgical hub to optimise integration into the pathway.
- As an interim solution (and, strictly, *only* as an interim solution), pending appointment of sufficient substantive CRDs in places where there are currently no or insufficient CRDs, trusts should collaborate with another local or regional CRD service to ensure coverage. (Note: Delegation of RD care to other professional groups is inappropriate.)
- HNC centres should provide access to dental hygienists/therapists working under the guidance of the CRD. They should also provide access to dental and maxillofacial laboratory support, from appropriately trained dental and maxillofacial technicians.

CNSs:

- Trusts should ensure that there is sufficient CNS capacity for a CNS with HNC experience to see every patient at the point of diagnosis and to give patients personalised care and support throughout their pathway. CNSs should:
  - have a post-graduate education in HNC, to ensure they have the advanced knowledge and skills for this cohort of patients;
  - be trained to provide level 2 psychological support.
- Trusts should review whether their service (and the CNSs therein) would benefit from cancer support workers (CSWs) within the HNC workforce. CSWs can provide administrative support, direct patients to relevant services and serve as the first point of contact (instead of an answering service), enabling CNSs to focus on providing clinical care.

Surgery:

- Surgical centres should have a minimum of four reconstructive surgeons to staff flap rotas and provide cross-cover sustainably.

Oncology:

- RT centres should have sufficient and co-ordinated consultant oncology and radiology time to facilitate peer review.
- SLTs, dietitians and CNSs caring for patients undergoing oncological interventions should have adequate job-planned time and training to do so.

Appendix 1: Implementation and impact

1.1 Current cancer alliance and HNC clinical network populations

2 Cancer Alliance	Population	Number of HNCN	Population per HNCN
Cheshire and Merseyside	2 308 000	1	2308 000
East Midlands	4 129 000	4	1 032 250
East of England North	1 327 000	1	1 327 000
East of England South	4 766 000	3	1 588 667
Greater Manchester	2 925 000	1	2 925 000
Humber and North Yorkshire	1 597 000	2	798 500
Kent and Medway	1 752 000	2	876 000
Lancashire and South Cumbria	1 512 000	1	1512000
North Central London	3 770 000	1	3 770 000
Northern	3 129 000	3	1 043 000
Peninsula	1 611 000	2	805 500
Somerset, Wiltshire, Avon & Gloucestershire	3 200 000	2	1 600 000
South East London	2 228 000	1	2 228 000
South Yorkshire and Bassetlaw	1 768 000	1	1 768 000
Surrey and Sussex	3 205 001	2	1 602 501
Thames Valley	1 695 000	1	1 695 000
Wessex	2 531 000	3	843 667
West London	3 705 000	4	926 250
West Midlands	5 192 000	5	1 038 400
West Yorkshire and Harrogate	2 382 000	2	1 191 000

1.2 Implementing the vision

Transforming the HNC service to meet the standards outlined in the report is a significant undertaking. The service needs reconfiguration in regions that currently fall furthest short of these standards.

Aligning HNC services with the benchmarks mentioned above will reduce the number of HNC clinical networks. The aim is to align each network with a single cancer alliance where feasible, ensure each surgical centre performs at least 10 laryngectomy/pharyngolaryngectomy operations annually, and sustain a team of microvascular surgeons.

Following implementation of these recommendations, there will be approximately 26 HNC clinical networks in England, with most cancer alliances having one principal HNC clinical network. While some cancer alliances with large populations may require more than one HNC clinical network, it is anticipated that all cancer alliances with populations below 3 million will have a single HNC clinical network.

These proposals are based on peer review findings and the GIRFT team's judgment regarding the extent to which reconfiguration is necessary. This judgment considers the extent to which networks currently meet the outlined benchmarks and their performance based on peer review evidence.

Certain alliances and HNC clinical networks require urgent reconfiguration. For most HNC clinical networks, however, changes will occur over 5-10 years. During this period, all networks should assess themselves against the standards above and develop proposals to implement them, including reconfiguration where necessary. This will involve close collaboration between cancer alliances, ICSs, and NHSE. The extended timeframe should allow for significant planning and implementation, accommodating the impact of any changes on hospital capacity and services, ensuring that commissioners and stakeholders can effectively plan for the recommended reconfiguration.

The GIRFT team will contact cancer alliances to outline the recommended service changes in their area.

1.3 Impact on patients

The proposed changes aim to improve and maintain consistently high standards of care across England with minimal impact on patient travel time for appointments and treatments. By establishing well-defined networks of hospitals working as a single team, high-quality care can be delivered closer to patients' homes.

The reduction in centres for major surgery will affect travel times for a small proportion of HNC patients undergoing major surgery and complex rehabilitation. These patients will travel further within their cancer alliance to a better-staffed centre that more regularly performs a complete range of complex and reconstruction. Typically, these inpatient episodes last between 1-3 weeks. Their travel will mostly be limited to the hospital stay; the proposed changes should not affect other aspects of the patient pathway: Patients will still receive most of their care, including pre-surgical and post-surgical care, closer to home.

For most patients not undergoing major surgery (the majority), there will be no impact.

We do not recommend reducing the number of radiotherapy centres. RT is a significant part of most patients' treatment and is often delivered over a six-week period on an outpatient basis. Thus, it is crucial not to add any additional travel burden on patients. We observed excellent communication between RT within and between networks, allowing for effective service delivery across multiple sites with common protocols and peer review.

These proposals are designed to ensure consistently high standards of care, with most of the care continuing to be delivered locally. Most patients do not need major surgery and will continue to receive much of their care locally.

Appendix 2: HNC MDT meeting guidance

A Multidisciplinary Team is a group of professionals from one or more clinical disciplines who together make decisions regarding recommended treatment of individual patients.

This document serves as guidance on what makes a good MDTM and how to make the most of the meeting.

The overall aim is to have a well-functioning, safe and effective MDTM for patients and the key to this is to ensure all clinical groups are represented, be clear about who is responsible for each patient and the associated actions, ensure that the outcomes are clearly tracked and communicated and that the amount of time allocated to each MDT is appropriate for the number and complexity of patients being discussed.

The MDT Meeting (MDTM) is a central part of the HNC pathway. There are continuing changes to the cancer landscape: cases are increasingly complex, treatment options more diverse than ever and demand higher than before. For MDTMs to derive their full benefit they need to be able to operate effectively and provide full multi-disciplinary input where it is needed. As such, it is incumbent on all those involved in the MDTM, to ensure MDTMs continue to enable appropriate contribution from all clinicians involved in care of these patients.

Variation exists in the number of patients being discussed at different MDTMs with an overall trend for increasing numbers of new cancer diagnoses and Trusts should keep under review the volume of patients being discussed, to ensure adequate time is available to ensure efficiency as well as equity for all patients. Job plans for those attending should be proportionate for the amount of time required to prepare, administer and attend the MDTM (and validate any data required for mandatory national audits).

It has previously been considered whether patients should be involved in MDTM meetings. Current opinion suggests this is not physically possible due to the large number of patients discussed over a short period of time. Patients would also want and expect different things from an MDTM. It is appropriate that an MDTM produces patient information, to explain the function of the MDTM.

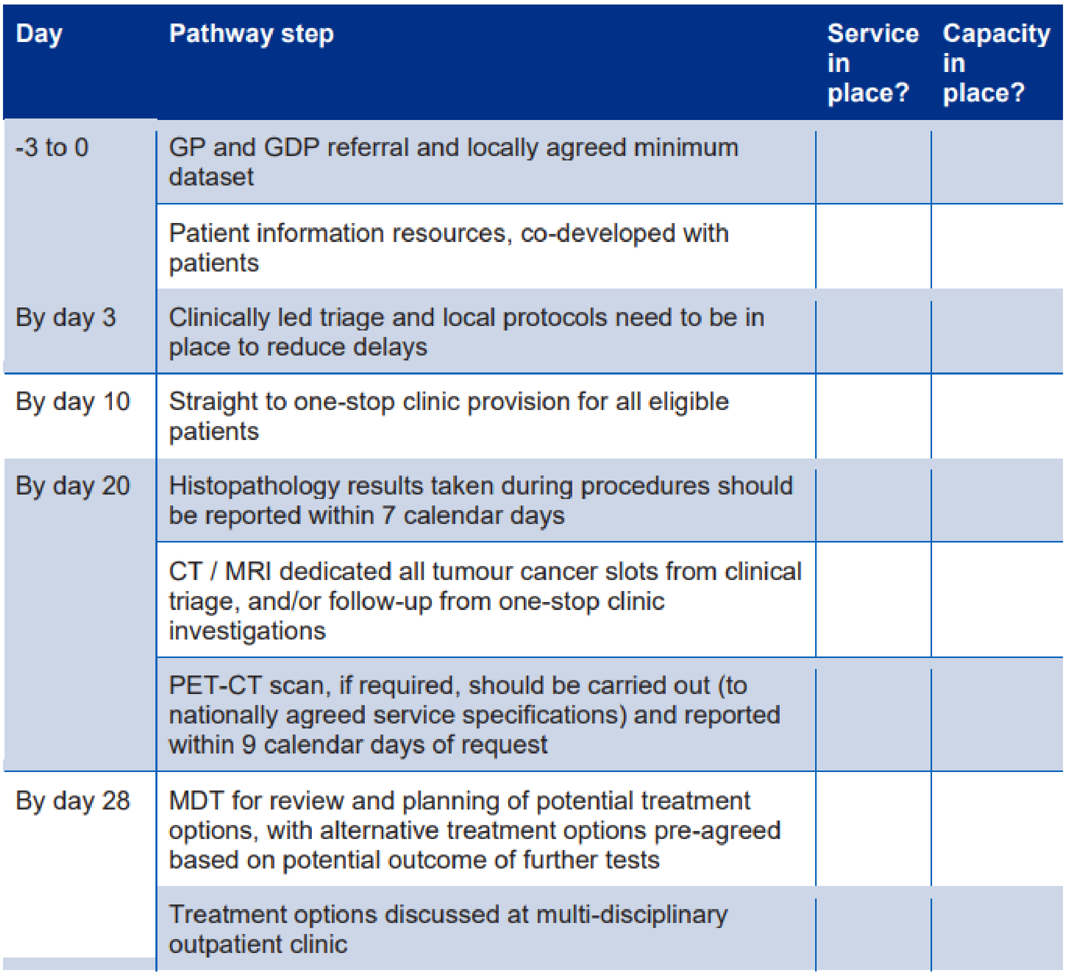
It is also acknowledged that as well as there needing to be many essential and critical discussions taking place, many decisions are routine, follow protocols and need minimal discussion. Responsibility for agreeing these local protocols lies with each MDTM.

1. There should be a Clinical Lead as well as an MDT co-ordinator for each MDTM, with competent colleagues available to deputise during periods of leave.

2. Those clinicians present and contributing to the MDTM should represent all those involved in the care of this patient group.
3. The frequency and duration of the MDTM should be agreed well in advance and periodically monitored to ensure effective use of resources.
4. MDTM paperwork should be produced within the Trust's information system.
5. There should be agreed mandatory data requirements for each MDTM including expertise in collecting and maintaining this data.
6. There should be an agreed process and point of referral for patients to be added to the MDTM.
7. Consideration should be given by individual MDTMs as to whether management protocols can be created to put some patients on a treatment pathway without the need for formal discussion by the full MDTM.
8. There should be a pre-MDTM meet of agreed personnel to ensure that appropriate cases can be triaged for as per protocol and complex cases identified that may need additional time for discussion as well as ensuring the required information and investigations are available to ensure the meeting will be fruitful for individual patients.
9. There should be a review every 6 months of who is attending the MDTM and why (specifically aimed at extended members, trainees and students to ensure information governance is maintained), the MDT Clinical Lead and MDT Coordinator will be responsible for ensuring equity of involvement and contribution from all clinicians.
10. There should be training for the MDT Clinical Lead and the MDT co-ordinator to ensure the preparation, meeting and outcome processes run smoothly.
11. Outcomes should be recorded live during the MDTM meeting with the lead clinician agreeing the outcome with the rest of the attendees. It is essential that this includes details of the responsible clinician and who is responsible for any agreed actions.
12. Communication of outcomes with a plan should be readily available within 24 hours of the MDTM, with clear documentation about how and by whom this will be communicated to the patient and the GP#.
13. Communication of outcomes back to the patient and the GP should happen in a timely manner as soon after the MDT as practical.
14. There should be continuing education and development for members of the MDTM
15. After seeing the patient, treatment decisions can change. These do not necessarily need to be re-discussed, but should be documented. It is at the discretion of the responsible clinician to determine if further MDTM discussion is warranted.
16. One does not necessarily need to wait for MDTM discussion to start non-complex, protocol driven treatment.
17. Clinicians and trackers can decide on the first MDTM date as patient comes through the door to ensure diagnostic teams are working to this target.
18. MDTMs as a group should consider how to deal with private patients referred to the MDTM. There are no clear national guidelines to advise us on this. It is good practice to discuss private patients given it is considered the best standard of care. Trusts are responsible for financial renumeration for this work.

19. A pathway should be available to allow patients seen through ED with suspected or confirmed cancer to be routed into the correct pathway at an appropriate point without requiring a further visit to their GPs for onward referral.
20. Referrals for opinions remain under the care of the referring clinician until a transfer of care is agreed and the patient is accepted under the named care of a Consultant from the MDTM

Appendix 3: Best practice timed pathway



Day	Pathway step	Service in place?	Capacity in place?
-3 to 0	GP and GDP referral and locally agreed minimum dataset		
	Patient information resources, co-developed with patients		
By day 3	Clinically led triage and local protocols need to be in place to reduce delays		
By day 10	Straight to one-stop clinic provision for all eligible patients		
By day 20	Histopathology results taken during procedures should be reported within 7 calendar days		
	CT / MRI dedicated all tumour cancer slots from clinical triage, and/or follow-up from one-stop clinic investigations		
	PET-CT scan, if required, should be carried out (to nationally agreed service specifications) and reported within 9 calendar days of request		
By day 28	MDT for review and planning of potential treatment options, with alternative treatment options pre-agreed based on potential outcome of further tests		
	Treatment options discussed at multi-disciplinary outpatient clinic		

Figure 9: audit tool listing key components of the Best Practice Timed Pathway

Abbreviations

2WW	Two-week wait
ACCEND	Advancing clinical capability, education, and nursing development
BAHNO	British Association of Head and Neck Oncologists
BG	Balloon gastrostomy
BPTP	Best practice timed pathway
C&M	Community head and neck team
CA	Cancer alliance
CHANT	Community head and neck team
CMCA	Cheshire and Merseyside CA
CNS	Clinical nurse specialist
CRD	Consultant in restorative dentistry
CSW	Cancer support worker
CT	Computed tomography
DGH	District general hospital
ENT	Ear, nose and throat
EPR	Electronic patient records
FDS	Faster diagnosis standard
FEES	Fibreoptic endoscopic evaluation of swallowing
FNA	Fine-needle aspiration
GA	General anaesthesia
GDPs	General dental practitioner
GIRFT	Getting It Right First Time
H&N	Head and neck
HES	Hospital episode statistics
HNA	Holistic Needs Assessment
HNC	Head and neck cancer
HOPE	Helping overcome problems effectively
HPV	Human papillomavirus
ICB	Integrated care boards
ICS	Integrated care system
ICU	Intensive care unit
IOG	Improving Outcomes Guidance for Head and Neck Cancer
MARS	Macmillan Aftercare Rehabilitation Service
MDT	Multidisciplinary team
MRI	Magnetic resonance imaging
NCIP	National Clinical Improvement Programme
NGT	Nasogastric tube
OMFS	Oral and maxillofacial surgery
PBG	Prophylactic balloon gastrostomy
PDL-1	Programmed death-ligand 1
PET	Positron emission tomography
PROMs	Patient-reported outcome measures
PVQ	Pre-visit questionnaire
RCR	Royal College of Radiologists

RD	Restorative dentistry
RT	Radiotherapy
SACT	Systemic anti-cancer therapy
SCN	Strategic clinical network
SLT	Speech and language therapy
SLTs	Speech and language therapists
SRBC	Symptom Based Risk Calculator
StR	Specialty registrar
SVR	Surgical voice restoration
TNO	Transnasal oesophagoscopy
UADT	Upper aerodigestive tract
VF	Video fluoroscopy
WTE	Whole time equivalent

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