nhsa Northern Health Science Alliance

NHNA Northern Head and Neck Alliance

HEALTH EQUITY NORTH

Hard to Swallow: The Truth about Head and Neck Cancer Inequalities

EMBARGOED: 00:01hrs on Wednesday 11 March 2026

Foreword

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Head and neck cancer remains one of the most under recognised yet deeply inequitable cancer challenges affecting our communities today. Too many people – particularly those living in the most socioeconomically disadvantaged areas – continue to face higher risks, later diagnoses, more complex treatment journeys, and poorer outcomes.

These inequalities are neither inevitable nor acceptable. They reflect long standing structural disadvantages that shape people's lives, their health, and their access to timely, high quality care.
This report provides a powerful and sobering account of the scale and nature of these inequalities across the North of England and Scotland. It brings together compelling evidence, the lived reality of patients and families, and clear opportunities for action across prevention, diagnosis, treatment, and survivorship. Crucially, it shows that improving outcomes for head and neck cancer is not simply a clinical priority – it is a matter of fairness, dignity, and social justice.

We have a responsibility to ensure that where someone lives, how much they earn, or the barriers they face in daily life do not determine their chances of surviving cancer. Addressing the root causes of inequality, strengthening services across the pathway, and investing in prevention and early detection will save lives and improve the quality of life for thousands of people.

I welcome the recommendations contained within this report. By acting on these insights, we can not only transform outcomes for head and neck cancer but also make significant strides in tackling wider health inequalities across our population.

EMBARGOED: 00:01hrs on Wednesday 11 March 2026

Contents

Executive Summary 4

Introduction 6

Unequal Disease Burden 7

Unequal Risk 9

Unequal Diagnosis 9

Unequal Treatment 10

Unequal Prevention 10

Recommendations 10

Concluding remarks 11

EMBARGOED: 00:01hrs on Wednesday 11 March, 2026

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About the Northern Head and Neck Alliance (NHNA)
The NHNA is an extensive network of academic and clinical experts in head and neck cancer. It is convened by the Northern Health Science Alliance (NHSA), from universities and NHS trusts across the North of England and Scotland. The NHNA meets monthly to share clinical knowledge and collaborate on activities aimed at addressing common challenges in cancer treatment across the North. The group has a "Bench to Bedside" approach and includes expertise in pre-clinical research, screening and diagnosis, translational development, clinical evaluation and adoption in the NHS.
The ultimate goal of the NHNA is to work together to significantly improve head and neck cancer treatment and patient outcomes in the region, as well as nationally and internationally.

Executive Summary

60-Second Summary

Head and neck cancer is a major public health inequality issue which disproportionately impacts on people in the North of England and Scotland. More investment in research and innovation to develop equitable services is needed to meet this challenge.

Head and neck cancer is an exemplar of an under-prioritised cancer with rising incidence, persistently poor survival and wide inequalities. Action to address the challenge of inequalities in head and neck cancer would pave the way to tackle cancer and health inequalities more broadly.

This report by the Northern Head and Neck Alliance (NHNA) and Health Equity North (HEN) sets out the latest evidence on socioeconomic inequalities in head and neck cancer and provides recommendations for policy, NHS, and research support.

The NHNA welcomes the recent release of the government's National Cancer Plan and many of the actions within it align closely with the findings and recommendations made in this report.

EMBARGOED: 00:01hrs on Wednesday 11 March 2026

Key findings

Head and neck cancer incidence in the UK is rising

5,000 UK deaths every year from head and neck cancer

Northern regions of England and in Scotland have some of the highest head and neck cancer incidence and mortality rates

People living in the most socioeconomically deprived areas in England and Scotland have higher incidence rates for head and neck cancer than those in the least socioeconomically deprived areas

Mortality rates for head and neck cancers are nearly 2.5 times higher in the most deprived areas compared to areas of low deprivation

Approximately 10% of people with head and neck cancers present as emergencies which are strongly linked to **poor survival outcomes**

Emergency head and neck cancer cases occur almost twice as often among individuals from the most socioeconomically deprived backgrounds

57% **of patients from areas of high socioeconomic deprivation are diagnosed at advanced stages of head and neck cancer**

Patients from the most socioeconomically deprived areas generally experience longer waiting times for treatment and are 33% more likely to wait over 104 days

Almost 50% of patients with head and neck cancer in England **do not start treatment within the 62-day target NHS waiting time**

Dental referral plays an important role in early detection of head and neck cancer but individuals from the most socioeconomically deprived areas are less likely to be referred by a dentist than those from more affluent areas

HPV vaccination can help prevent some head and neck cancers, but uptake of the vaccine is

21%

lower in the most deprived compared to the least deprived areas

Key recommendations

Public health

- Provide enhanced smoking cessation and alcohol support services in socioeconomically deprived areas.
- Further policy implementation to help control risk factors such as alcohol and tobacco price policies and updating the graphic health warning library for cigarette packaging.
- HPV vaccination promotion campaign particularly focused in the most socioeconomically deprived schools.
- Further support for policies to reduce the social and economic inequalities that drive poor health.

NHS services

- Improve access to primary care and dental services for those in the most socioeconomically deprived areas.
- Improve communication and referrals between primary and secondary care.
- Increase equity monitoring and targets of waiting times through the system.
- Prioritise support through care pathway for those from the most disadvantaged backgrounds.
- Co-create service innovations and developments with community engagement principles at the heart.

Research

- Increase research funding to better understand the problem of inequalities in head and neck cancer and identify potential solutions.
- Explore the potential of prevention and early detection innovations.
- Develop a national head and neck cancer cohort to examine in-depth the inequalities across the cancer pathway.
- Increase clinical trials in head and neck cancer and ensure a focus on reducing inequalities in participation.

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Introduction

Head and neck cancer is the collective term for cancers of the mouth, tongue, saliva glands, nose, throat, and voice box (Box 1).

Head and neck cancer affects nearly 13,000 new people per year in the UK and there are nearly 5,000 deaths from the disease each year – with only around half of people diagnosed with the disease still alive after 10 years[1].

These numbers are on the rise and projected to continue to increase in the future with annual numbers expected to reach over 16,000 in the 2030s.

Head and neck cancer is more common in men than women and among 65- to 69-year-olds, but the disease is increasingly affecting patients over 75 years old.

Head and neck cancer is a devastating disease with wide ranging impacts on individuals, their families, and in communities. Head and neck cancer and its treatment can lead to life changing effects on swallowing, speech, relationship intimacy, appearance, taste appreciation, and enjoyment of food. Wider social and economic consequences may also be experienced that can limit full participation in society. The often-unheard voices of people from socioeconomic disadvantaged backgrounds who have head and neck cancer, illustrate the fatalistic views and reluctance to access care or respond to symptoms amongst these patients (Box 2)

It is not all bleak – early diagnosis and timely expert multidisciplinary cancer treatment and care in regional cancer centres can achieve good outcomes. However, there are stark socioeconomic inequalities in head and neck cancer across the UK – with those from the poorest backgrounds disproportionately affected.

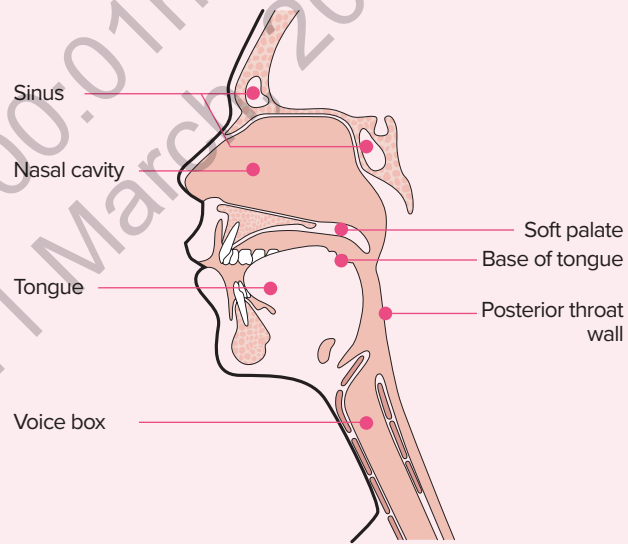
These inequalities are apparent across the entire head and neck cancer pathway – from disease risk to stage of diagnosis, to access and adherence to treatment, and on to quality of life and survival outcomes. This report sets out the latest evidence on socioeconomic inequalities in head and neck cancer and highlights how people in the North of England and Scotland are particularly impacted.

Box 1 Head and Neck Cancer Symptoms[2] – "if in doubt get checked out" if you have any of the following:

Neck Lump: A new or changing, unexplained lump in the neck (persisting 3-6 weeks).

Mouth: Ulcer or lump/swelling in the mouth lasting >3 weeks
A swelling or mass in the mouth/lip lasting >3 weeks.
Red or red-and-white patches in the mouth.

Throat/Voice box: Persistent unexplained hoarseness (>3 weeks).
Persistent sore throat, especially with swallowing difficulty, hoarseness, or ear pain.



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Box 2 Patient Voices - quotes from people with head and neck cancer

"You hear that word (cancer) and think, 'That's it."[3]

"At the back of my mind I kept thinking, I wonder if this is cancer. I kept ignoring it."[3]

".. eventually I was diagnosed... the tumour was so large, it had pushed my eye out of its socket... I am grateful for the treatment I have had... but the long term consequences of head and neck cancer and its treatment are often ignored, and more information and support is needed."
(Patient Public Involvement Representative, CRUK RadNet Glasgow Centre.)

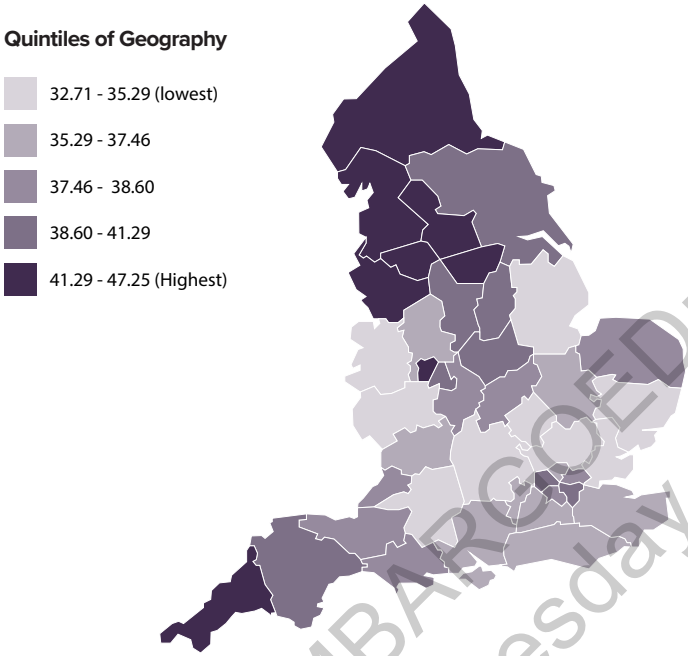
"...my age is 70 and I was born [in] the times [when] if you have a cancer, that's it. You have no cure. I was born and brought up in that time. That was still deeply in my mind."[3]

Unequal Disease Burden

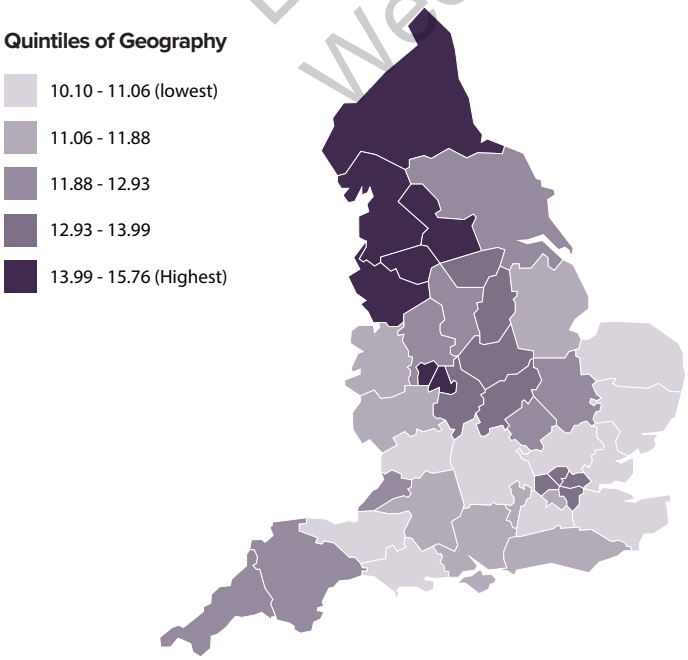
The burden of head and neck cancer disproportionately affects people in the North of England and Scotland – especially those from socioeconomically deprived areas.

The recently published Atlas of Health Variation in Head and Neck Cancer in England (2024)[4] shows stark North-South inequalities. The regions with the highest incidence and mortality rates are predominantly found in the North of England which is covered by seven NHS Integrated Care Boards (ICBs) (Map 1 & Map 2). All seven northern ICBs have an incidence rate higher than the England average (Map 1, Figure 1a). Six of the northern ICBs have higher than average mortality rates (Map 2, Figure 1b) with the North East and North Cumbria showing the highest mortality rate in England. Scotland reports even higher rates (Figures 3 & 5).

Map 1: Variation in incidence rate of head and neck cancer in England by Integrated Care Board (ICB) region (All ages, 2013 to 2020 pooled)[4]



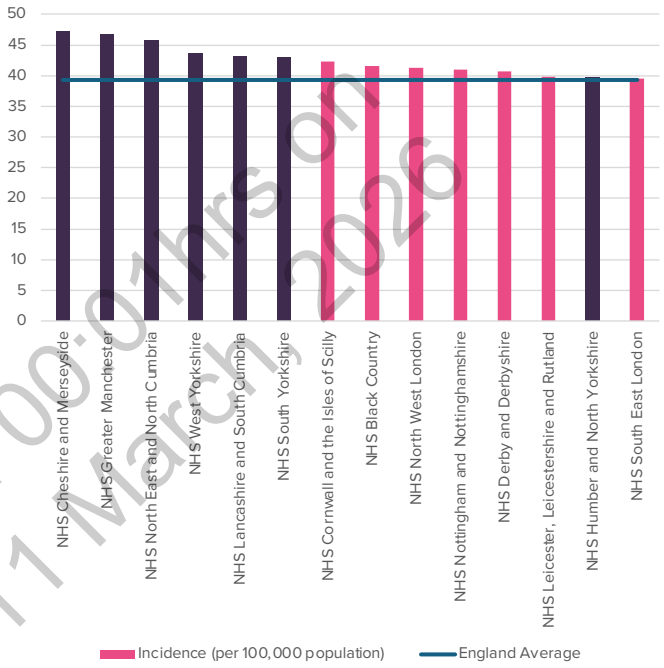
Map 2: Variation in mortality rate of head and neck cancer in England by Integrated Care Board (ICB) region (All ages, 2013 to 2020 pooled)[4]



Greater head and neck cancer risk in people living in socioeconomically deprived areas.

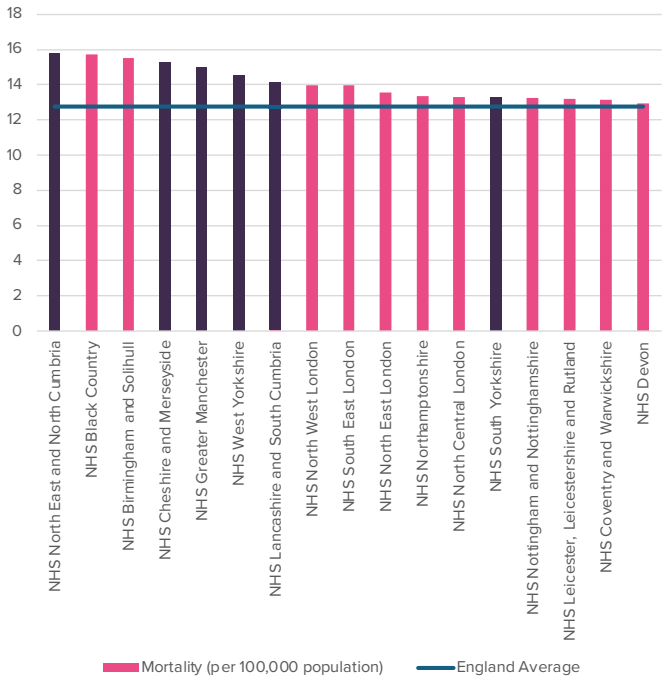
Recent incidence data from the Get Data Out programme (National Disease Registration Service, NHS England)[5] show a sustained increase in head and neck cancer incidence between 2014 and 2022. This rise is not uniform across the population. When analysed by Index of Multiple Deprivation (IMD) quintiles, people living in the most socioeconomically

Figure 1:(a) : Integrated Care Board (ICB) areas in England with head and neck cancer incidence rates above the English average [4]



Columns corresponding to North of England ICB areas are coloured dark purple

Figure 1:(b) Integrated Care Board (ICB) areas in England with head and neck cancer mortality rates above the English average[4]



Columns corresponding to North of England ICB areas are coloured dark purple

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deprived areas consistently exhibit higher incidence rates than those in the least socioeconomically deprived areas of England (Figure 2). Similar data are observed in Scotland (Figure 3)[6].

Figure 2: Incidence of head and neck cancers in England by Index of Multiple Deptivation (IMD) quintile (2014–2022) (1 = most socioeconomically deprived, 5 = least socioeconomically deprived)[5]

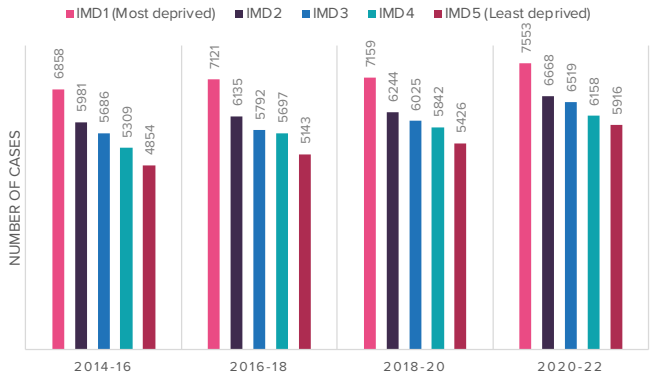
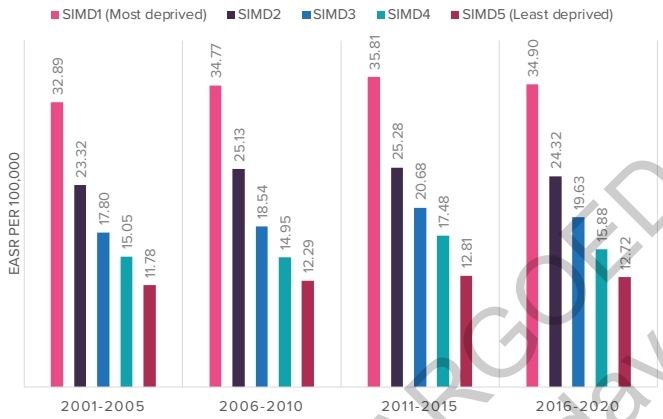


Figure 3: European Age-Standardised Incidence Rates (EASR per 100,000) of head and neck cancers in Scotland by Scottish Index of Multiple Deprivation (SIMD) quintile (2001-2020) (1 = most socioeconomically deprived, 5 = least socioeconomically deprived) [6]



Poorer outcomes in people living in the most socioeconomically deprived areas

Inequalities are even more pronounced when examining mortality. Age-standardised mortality rates for head and neck cancers are nearly 2.5 times higher in those living in the most socioeconomically deprived areas (IMD1) compared to the least socioeconomically deprived areas (IMD5) (Figure 4). This inequality is stronger among men, and higher in Scotland (Figure 5).

Figure 4: Variation in mortality rate of head and neck cancer by IMD quintile in England (2013 to 2020 pooled)[4]

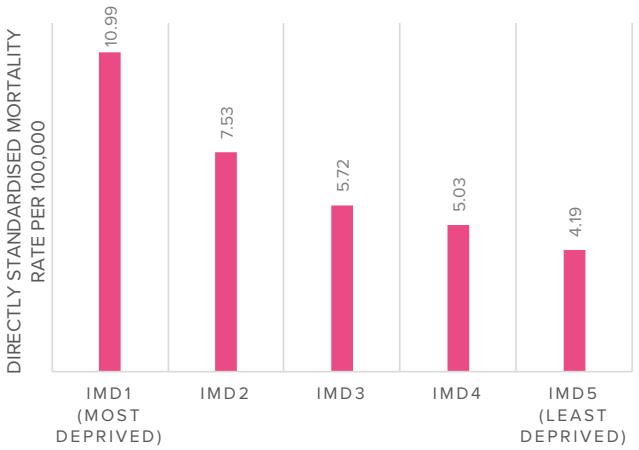
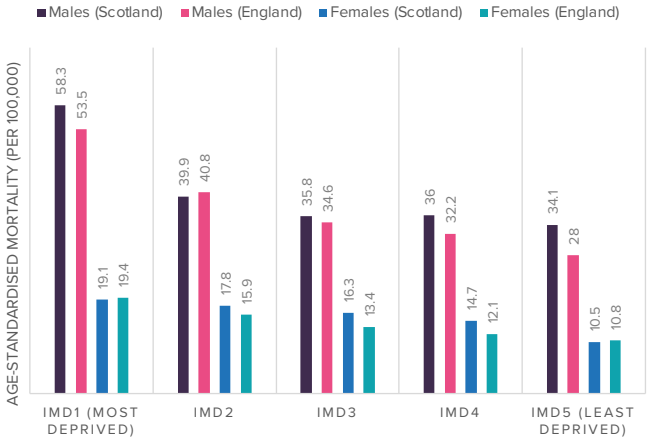
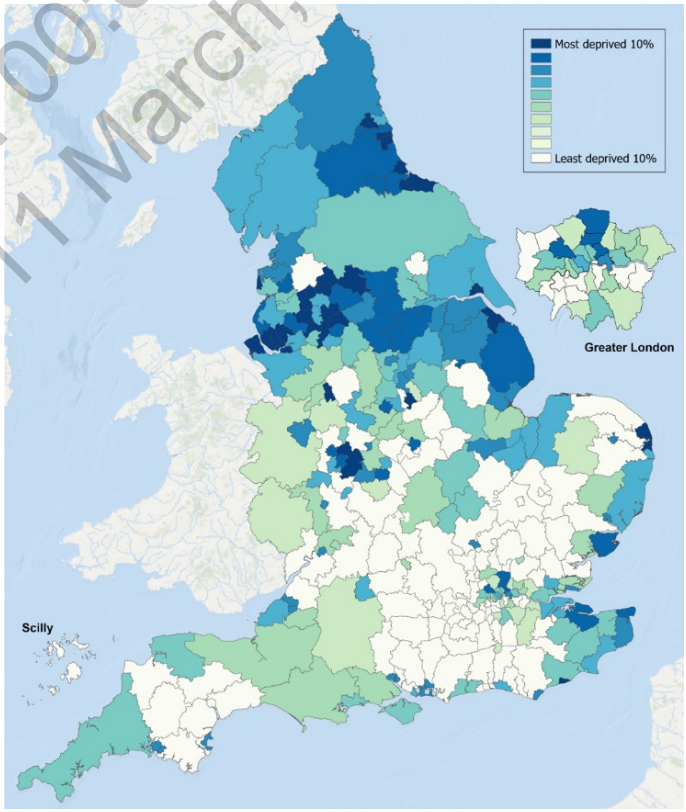


Figure 5: Age-standardised mortality for head and neck cancer by sex and England IMD and Scottish IMD.[7]



The distribution of IMDs by Local Authority District in England shows that the North of England is most affected by areas of high deprivation (Map3) and highlights how head and neck cancer incidence and mortality rates mirror the distribution of socioeconomic deprivation across England[8].

Map 3: Distribution of the Index of Multiple Deprivation 2025 (IMD25) in England by Local Authority District based on the proportion of their neighbourhoods in the most socioeconomically deprived decile nationally[8]



Inequalities in survival, which seem to be widening over both calendar time and time from diagnosis, have been observed in data from Scotland[9]. Beyond clinical outcomes, socioeconomic inequalities in head and neck cancer extend to health-related quality of life. Individuals from more socioeconomically deprived groups also experience lower overall and social-emotional quality of life[10].

EMBARGOED: 00:01hrs on Wednesday 11 March 2026

Unequal Risk

The major risk factors for being diagnosed with head and neck cancer are tobacco smoking and chewing and drinking alcohol, with nearly three quarters of head and neck cancer cases attributable to these factors[11]. Smoking and alcohol consumption are socioeconomically unequal – shaped by the social determinants of health and therefore more prevalent among the most disadvantaged communities. For example, smoking is as high as 20% (1 in 5) in people living in the most socioeconomically deprived areas of England compared to 9% (less than 1 in 10) in people living in the least socioeconomically deprived areas[12]. Socioeconomic factors including low relative to high income, low relative to high educational attainment, and low relative to high occupational socioeconomic status are all associated with increased risk for head and neck cancers. These relationships are not entirely explained through known risk behaviours such as tobacco and alcohol[13, 14]. Thus, how low socioeconomic circumstances increases head and neck cancer risk is not yet fully understood.

Along with tobacco use and alcohol drinking, the Human Papillomavirus (HPV) is also a major risk factor for cancer of the throat (including the tonsils and back of the tongue) – and this is driving the rapid rise of this particular type of throat cancer over the last 20 years[15]. Recent data show that a large number of smokers are switching to e-cigarettes, the impact of this on head and neck cancer is yet unknown.

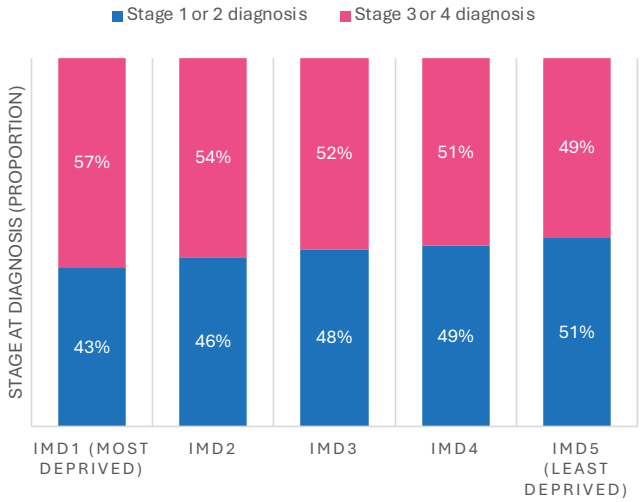
Unequal Diagnosis

Most patients with suspected head and neck cancer are referred from their GP or dentist to secondary care for further assessment. Approximately 10% of people with head and neck cancers present as emergencies, often due to severe airway obstruction or dysphagia (difficulty swallowing). Such emergency presentations are strongly associated with advanced disease stage and poor survival outcomes. Notably, they occur almost twice as often among individuals from the most socioeconomically deprived backgrounds compared with those from the least socioeconomically deprived groups[16].

Dental referral plays a potentially important role in early detection. Diagnosis through dental pathways is typically associated with earlier-stage disease; however, individuals from the most socioeconomically deprived areas are less likely to be referred by a dentist than those from more affluent areas[16]. Regular dental attendance is similarly associated with earlier-stage diagnosis and improved outcomes[17]. Widening inequalities in access to primary care dental services in England is a related and increasing public health problem[18]. Welcome efforts are underway to improve access to NHS dentistry, but costs (or perceived costs) remain a barrier for many people to access regular dental care[19].

Socioeconomic disadvantage is also consistently linked to advanced-stage diagnosis – 57% of patients in the most socioeconomically deprived areas were diagnosed at advanced-stages III or IV, compared with 49% in the least socioeconomically deprived areas[4] (Figure 6). Which means patients from the poorest areas are 16% more likely to be diagnosed with advanced disease than patients from the most affluent areas. Advanced-stage presentation is correlated with markedly poorer survival rates and greater treatment burden. Consequently, this is another way in which people from poorer parts of the country are disadvantaged.

Figure 6: Head and neck cancer stage at diagnosis in England by IMD quintile (1 = most socioeconomically deprived, 5 = least socioeconomically deprived)[4]



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Unequal Treatment

Inequalities related to timely treatment and fidelity to completing planned treatment are beginning to be recognised. For example, patients with head and neck cancer from the most socioeconomically deprived areas in Merseyside were more likely to have missed radiotherapy treatment appointments. This is linked to increased unplanned hospital admissions which is more challenging for the patients and for the NHS[20].

Patients with head and neck cancer in England have some of the poorest waiting times for treatment initiation with just over 50% starting within the 62-day target[21]. These longer waiting times are associated with poorer treatment outcomes and survival. Patients from the most socioeconomically deprived areas generally experience longer waiting times for treatment – they are 33% more likely to wait over 104 days when compared to those from the least socioeconomically deprived areas[22].

Increasing socioeconomic deprivation is also associated with poor health outcomes in patients undergoing head and neck cancer surgery. This includes more frequently requiring emergency surgery, longer hospital stays, and worse overall survival[23, 24].

Unequal Prevention

The HPV vaccination is expected in the long term to reverse the rising rates of HPV-driven throat cancers. However, current monitoring data on HPV vaccination levels since the COVID-19 pandemic shows, not only a declining overall uptake of HPV vaccination, but also a widening of inequalities (with those from the most socioeconomically deprived areas declining more rapidly). Recent data shows 21% lower vaccine coverage in the most deprived compared to the least deprived areas (Figure 7)[25, 26]. Similar patterns of HPV vaccination uptake are observed in Scotland[27].

Smoking cessation services in England endeavour to prioritise reaching people in areas of socioeconomic deprivation and some progress on this has been made since they were first established in 1999-2000.

However, there remains concern about whether services are reaching the most disadvantaged groups. Additional pilot projects are exploring this further[28], including providing smoking cessation advice through dental practices[29].

Alcohol dependence services focus on reducing the burden of hospital admissions related to alcohol in England and include:

- Specialist consultation liaison teams or alcohol care teams (ACTs).
- Specialist staff provided by community addiction services.
- Community-based outreach teams[30].

These services have been expanded since 2019, but their reach and impact in relation to socioeconomic inequalities has so far not been evaluated.

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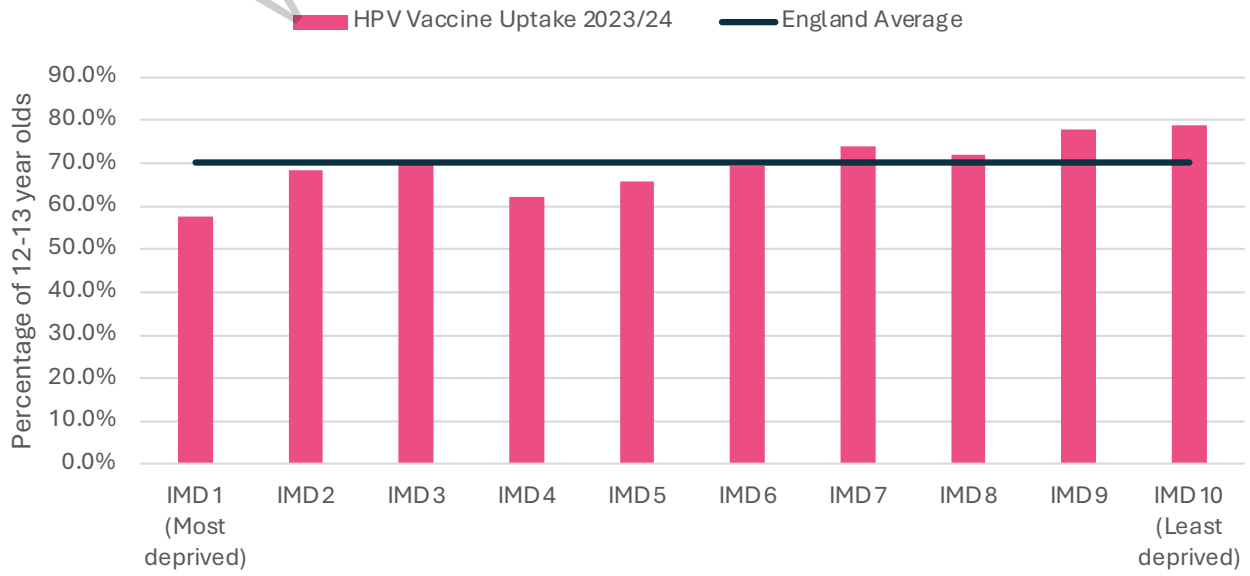
Figure 7: Uptake of HPV Vaccination in England (in 12-13 year olds) by deprivation decile (1 = most socio-economically deprived, 10 = least socio-economically deprived)[24]



Recommendations

Public health policy recommendations

- Provide additional smoking cessation and alcohol support services in socioeconomically deprived areas.
- Further support for policy implementation in relation to controlling smoking such as tobacco price policies and updating the graphic health warning library for cigarette packaging. Current guidelines from the Department of Health and Social Care[31], unlike those in the EU (used in Northern Ireland) show only one image for throat cancer (an ambiguous headshot of an older adult male) with no images of other head and neck cancers or consequences of current treatment.
- Further alcohol licensing and advertising regulation (taxation, minimum unit pricing for alcohol).
- Consider HPV vaccination promotion campaign focused in the most socioeconomically deprived schools – including potential co-designing and testing of different approaches to improve uptake and reduce inequalities.
- Further support for policies to reduce the social and economic inequalities that drive poor health.

Head and neck cancer services policy recommendations

A holistic head and neck cancer care equity strategy should be developed covering approaches to:

- Improve access to primary care services including dentistry for those in the most socioeconomically deprived areas.
- Improve connections / communications / referral systems between primary and secondary care to optimise the pre-diagnostic pathway.
- Increase equity monitoring and targets of waiting times through the system by IMD, and prioritising support through care pathway for those from the most disadvantaged backgrounds.
- Encourage head and neck cancer health system innovation and developments (with appropriate monitoring and evaluation) across the care pathway such as more supportive care.
- Ensure multi-morbidities are managed and prevention interventions are delivered throughout the pathway.
- Embed patient navigation / facilitation support to improve adherence to treatment, and enhance survivorship support (including for social and economic matters).
- Co-create service innovations / developments with community engagement principles at the heart.

Research recommendations

- Increased research funding to both better understand the nature of the problem of inequalities in head and neck cancer across the pathway, but also to identify potential solutions – including more health system research and innovation.
- Explore the potential of prevention / early detection innovations including, for example, head and neck cancer within the lung cancer screening programme, workplace health improvement initiatives.
- Develop a national head and neck cancer cohort via linking routine administrative data and biobanking to examine in-depth inequalities across the cancer pathway.
- Increase clinical trials in head and neck cancer and ensure a focus on reducing inequalities in participation.

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Concluding remarks

Head and neck cancer is an exemplar of an under-prioritised cancer with rising incidence, persistently poor survival and wide inequalities. Action to address the challenge of inequalities in head and neck cancer would pave the way to tackle cancer and health inequalities more broadly.

There is considerable head and neck cancer expertise and ongoing research in the North of England and Scotland, with valued support from regional and national cancer charities. However, further national recognition and focus on solutions is urgently needed.

The Northern Head and Neck Alliance (NHNA) welcomes the recent release of the government's National Cancer Plan[32]. The plan highlights the significance of rare cancers (such as head and neck cancer), and the importance of research, development and innovation. The NHNA agrees strongly with the recognition that preventable risk factors for cancer cluster in poorer parts of the country and that working class and more socioeconomically deprived communities are being failed most of all.

Strategies outlined in the National Cancer Plan to regulate tobacco use, alcohol consumption and encourage HPV vaccination are particularly relevant to head and neck cancer. As is the commitment to prioritise prevention, early diagnosis, increase awareness, improve access to treatment, and reduce waiting times and lengthy treatment regimes. Many of the actions within the national cancer plan align closely with the recommendations made in this report and the NHNA looks forward to being able to help transform cancer outcomes for future generations.

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EMBARGOED: 00:01 hrs on Wednesday 11 March 2026

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