

## FACTORS INFLUENCING INDIAN PROFESSIONAL DELAYS IN ORAL CANCER DIAGNOSIS AND TREATMENT

<sup>\*1</sup>Dr. Sheshkaran Singh, <sup>2</sup>Dr. Kumari Pramila and <sup>3</sup>Dr. Shivane

<sup>1</sup>CEO and Consultant Dental Surgeon –Drishti Hospital Barmer, Rajasthan.

<sup>2</sup>MPH Scholar AIIMS Jodhpur, Rajasthan.

<sup>3</sup>MPH Scholar AIIMS Jodhpur, Rajasthan.

Article Received date: 21 May 2025

Article Revised date: 11 June 2025

Article Accepted date: 01 July 2025



\*Corresponding Author: Dr. Sheshkaran Singh

CEO and Consultant Dental Surgeon –Drishti Hospital Barmer, Rajasthan.

### ABSTRACT

Delays in diagnosis and treatment continue to be a major problem, even with improvements in diagnostic equipment and treatment options. Oral cancer is one of the top causes of morbidity and mortality in India. In the context of Indian healthcare, this publication seeks to investigate the different elements that lead to delays in the diagnosis and treatment of oral cancer. These elements include socioeconomic impacts, cultural hurdles, lack of knowledge, poor training, a lack of resources, and the difficulties presented by the healthcare system. Developing methods to reduce delays and enhance patient outcomes requires an understanding of these obstacles. Diagnostic delay in oral cancer, the time between symptom onset and final diagnosis, significantly impacts outcomes. The advanced presentation of head, oral and neck malignancies, which raises morbidity and mortality, is caused by delayed diagnosis. It often involves both patient and professional delays. Patient delay, where individuals wait to seek medical attention after noticing symptoms, is a major contributor. Professional delay, where healthcare providers fail to accurately diagnose or refer patients, also plays a role.

**KEYWORDS:** India, oral health, oral cancer, Delay Diagnosis, Cancer care, Health.

### INTRODUCTION

In India, where the prevalence is startlingly high, oral cancer—especially oral squamous cell carcinoma, or OSCC—represents a significant health concern. The World Health Organization estimates that about 30% of oral cancer occurrences worldwide occur in India, primarily as a result of the country's high rates of alcohol and tobacco use as well as poor oral hygiene. There is a considerable lag between the onset of symptoms and the start of suitable treatment, even with the availability of sophisticated diagnostic instruments and efficient therapies. This delay, which is frequently called "professional delay," has a significant impact on patient survival and prognosis.

### Defining Diagnostic Delay

Diagnostic delay in oral cancer is the duration between the initial appearance of symptoms and the confirmation of the cancer diagnosis via a biopsy and histological assessment.

### Components of Delay

**Patient Delay:** This refers to the time a patient waits before seeking professional medical advice after noticing suspicious signs or symptoms.

Factors contributing to patient delay can include lack of knowledge about oral cancer, misattributing symptoms to other conditions like infections or dental problems, and fear of diagnosis.

**Professional Delay:-** This encompasses delays in the initial or subsequent healthcare provider's ability to accurately diagnose or refer patients,. This can be due to misinterpreting symptoms or failing to adequately assess a patient's oral health.

### Impact of Delay

Diagnostic delay can lead to.

**Advanced Stage at Diagnosis:** Patients with delayed diagnosis are more likely to have advanced stage oral cancer at the time of diagnosis, which impacts prognosis and treatment options.

**Reduced Survival Rates:** Studies have shown that delayed diagnosis is associated with lower survival rates in oral cancer patients.

**More Extensive Treatment:** Advanced stage oral cancer often requires more aggressive and invasive treatments.

### Factors Contributing to Delay

**Patient Factors:** Lack of knowledge about oral cancer, misattributing symptoms, and fear of diagnosis or treatment are significant patient-related factors, according to a study in Science Direct.

**Professional Factors:** Misinterpretation of symptoms, difficulty in recognizing early signs, and inadequate screening practices can contribute to professional delay.

**Systemic Factors:** Access to healthcare, socioeconomic factors, and cultural beliefs can also play a role in delaying diagnosis.

### Addressing Diagnostic Delay

**Education and Awareness:** Raising public awareness about oral cancer risk factors, early symptoms, and the importance of timely diagnosis is crucial.

**Improved Screening Practices:** Encouraging regular oral exams and screening, especially among high-risk individuals, can help detect oral cancer early.

**Enhanced Professional Training:** Providing healthcare professionals with adequate training in oral cancer diagnosis and screening can improve their ability to detect the disease early.

**Addressing Systemic Barriers:** Improving access to healthcare, addressing socioeconomic disparities, and promoting culturally sensitive care can help reduce delays.

### Factors Contributing to Professional Delays in Oral Cancer Diagnosis

#### 1. Lack of Awareness Among Healthcare Providers

One of the primary reasons for professional delays in diagnosing oral cancer is the lack of awareness and knowledge about the disease among healthcare professionals. Many general practitioners (GPs) and even some dentists may fail to recognize the early symptoms of oral cancer, such as persistent ulcers, leukoplakia, or erythroplakia. This lack of recognition can result in a delay in referral to specialized oncologists or oral surgeons.

In rural and semi-urban areas, where access to specialized healthcare is limited, healthcare providers may not have the training or resources to diagnose oral cancer at an early stage. Even in urban centers, there may be a lack of emphasis on continuous professional development and training in recognizing oral cancer symptoms.

#### 2. Inadequate Diagnostic Infrastructure

In many parts of India, particularly in rural areas, the diagnostic infrastructure is underdeveloped. There is a shortage of diagnostic tools such as biopsy facilities,

imaging technologies, and pathology labs equipped to identify early-stage oral cancers. Moreover, there may be long waiting times for diagnostic tests and reports, causing further delays in diagnosis.

Inadequate access to modern diagnostic facilities is also compounded by a shortage of trained pathologists and radiologists who can effectively interpret the results. The combination of these factors can significantly contribute to delays in diagnosis.

### 3. Socioeconomic Factors and Access to Healthcare

Socioeconomic barriers play a crucial role in delaying oral cancer diagnosis and treatment. Many patients, especially in low-income groups, may delay seeking medical care due to financial constraints, lack of insurance coverage, or the inability to afford diagnostic tests. In some cases, patients may opt for traditional or alternative treatments, which can further delay the initiation of appropriate cancer care.

Additionally, the rural-urban divide in healthcare access is a significant concern. Patients from rural areas often need to travel long distances to reach urban centers with better diagnostic and treatment facilities. This logistical challenge can delay the initiation of both diagnosis and treatment.

### 4. Cultural Barriers and Stigma

Cultural perceptions and stigma surrounding cancer can further delay diagnosis and treatment. In many communities, cancer is still perceived as a terminal illness, and patients may be reluctant to seek medical care due to fear of diagnosis. The stigma surrounding oral cancer, particularly in the context of its association with tobacco use and alcohol consumption, may cause patients to avoid professional healthcare consultations.

Additionally, in some rural areas, traditional healers or herbal remedies are preferred over modern medical treatments, leading to a delay in seeking medical intervention. This cultural reluctance to approach modern healthcare professionals can result in advanced stages of the disease when diagnosis occurs.

### 5. Limited Training in Oncology for Healthcare Professionals

While there are specialized oncology programs in India, a significant number of healthcare providers, particularly in rural areas, do not receive sufficient training in oral oncology. This knowledge gap leads to delays in recognizing the signs and symptoms of oral cancer and delays in referrals to oncologists.

The absence of standardized protocols for oral cancer diagnosis and management in primary care settings exacerbates this issue. For instance, a general practitioner may overlook or misinterpret early signs of oral cancer, leading to a delay in appropriate intervention.

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## Factors Influencing Treatment Delays

### 1. Delayed Referral to Specialists

A common reason for treatment delays is the failure to refer patients to oral surgeons or oncologists in a timely manner. In many cases, general practitioners or even dentists may not refer patients for specialized evaluation until the disease has progressed significantly. This delay in referral can result in a missed opportunity for early intervention, which is critical for improving patient survival rates.

### 2. Lack of Multidisciplinary Approach

Oral cancer treatment requires a multidisciplinary approach involving surgeons, oncologists, radiologists, and pathologists. However, in many Indian healthcare settings, this collaborative approach is not well-integrated. Patients may be treated in isolation by different specialists without adequate coordination, leading to delays in initiating treatment.

### 3. Delayed Access to Treatment Facilities

Even once a diagnosis has been made, delays in accessing treatment can occur due to limited treatment options, long waiting lists for surgery or radiation therapy, and the absence of post-treatment care in some regions. Patients often have to wait for extended periods to receive appropriate treatment, which may worsen the prognosis.

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## DISCUSSION

In India, a number of interrelated variables contribute to professional delays in the diagnosis and treatment of oral cancer. The larger problems of healthcare access, cultural considerations, and financial constraints cannot be disregarded, even while healthcare workers' awareness, proper training, and prompt referral mechanisms are crucial for reducing delays.

Increased education and training for healthcare professionals, especially in rural areas, to better recognize early indications of oral cancer should be part of the effort to resolve these delays. Delays in diagnosis can also be decreased by the construction of more easily accessible diagnostic facilities, particularly in underprivileged areas. Additionally, patients may seek care sooner if public health initiatives are launched to lessen stigma and raise awareness of the value of early diagnosis.

Timeliness in diagnosis and treatment could be further enhanced by the creation of integrated care pathways, in which specialists work together from the initial point of contact. To guarantee that all patients, regardless of their socioeconomic background, have access to prompt care, government initiatives like the growth of healthcare insurance programs and better infrastructure are also crucial.

The patients themselves (primary delay) or the time it took the primary care physician to diagnose the problem (secondary delay) were the main causes of this therapeutic delay. Early detection of oral malignancies may be aided by oral self-examination.

Diagnostic delays in individuals with oral cancer are greatly influenced by socioeconomic and demographic characteristics.

Improving early detection and improving patient outcomes require targeted efforts to address these discrepancies.

## CONCLUSION

Professional delays in oral cancer diagnosis and treatment in India are multifaceted and influenced by a variety of healthcare, socioeconomic, and cultural factors. Addressing these delays requires a comprehensive, multi-pronged approach involving policy changes, educational initiatives, and infrastructural improvements. Reducing these delays will not only improve patient outcomes but also contribute to a significant reduction in the overall burden of oral cancer in India.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

### Key Message

Training and capacity building of Healthcare Worker and Public Awareness will play an essential role in reducing diagnostic delay in oral cancers.

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