

Delays in adjuvant therapy in head and neck cancers: Identifying clinical and population disparities

Leena Abu-Zahra BS, Jazzmyne Adams MPH, Jennifer Bruening MD, David Friedland MD, PhD
Department of Otolaryngology and Communication Sciences, Medical College of Wisconsin

Background

Head and neck squamous cell carcinoma (HNSCC) is one of the most common cancer types worldwide, with treatment traditionally including surgical resection followed by adjuvant radiation therapy (RT) or chemoradiation therapy (CRT).¹⁻² Currently, the National Cancer Center Network recommends initiating postoperative radiation therapy (PORT) within 6 weeks after surgery, however, recent trends suggest a decreasing national compliance to this guideline. Timely PORT is largely affected by various social determinants of health, care coordination, and individual case complexities.³ Given the increasing delays to adjuvant therapy for HNSCC, this study seeks to identify what specific factors prevent timely PORT initiation for HNSCC patients at Froedtert Hospital, as well as potential systemic interventions to combat this harmful trend.

Hypothesis

Untimely dental care in preparation for radiation therapy represents the principal barrier to achieving timely PORT.

Methods

Retrospective Chart
Review

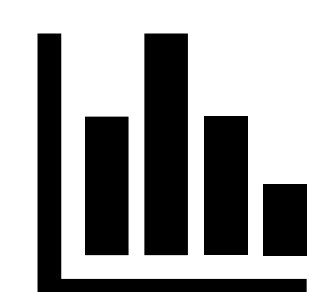
Inclusion Criteria

☒ HNSCC diagnosis

☒ Surgical Intervention by MCW
ENT

☒ Adjuvant RT/CRT

Data Analysis



218 patients met
inclusion criteria

Results

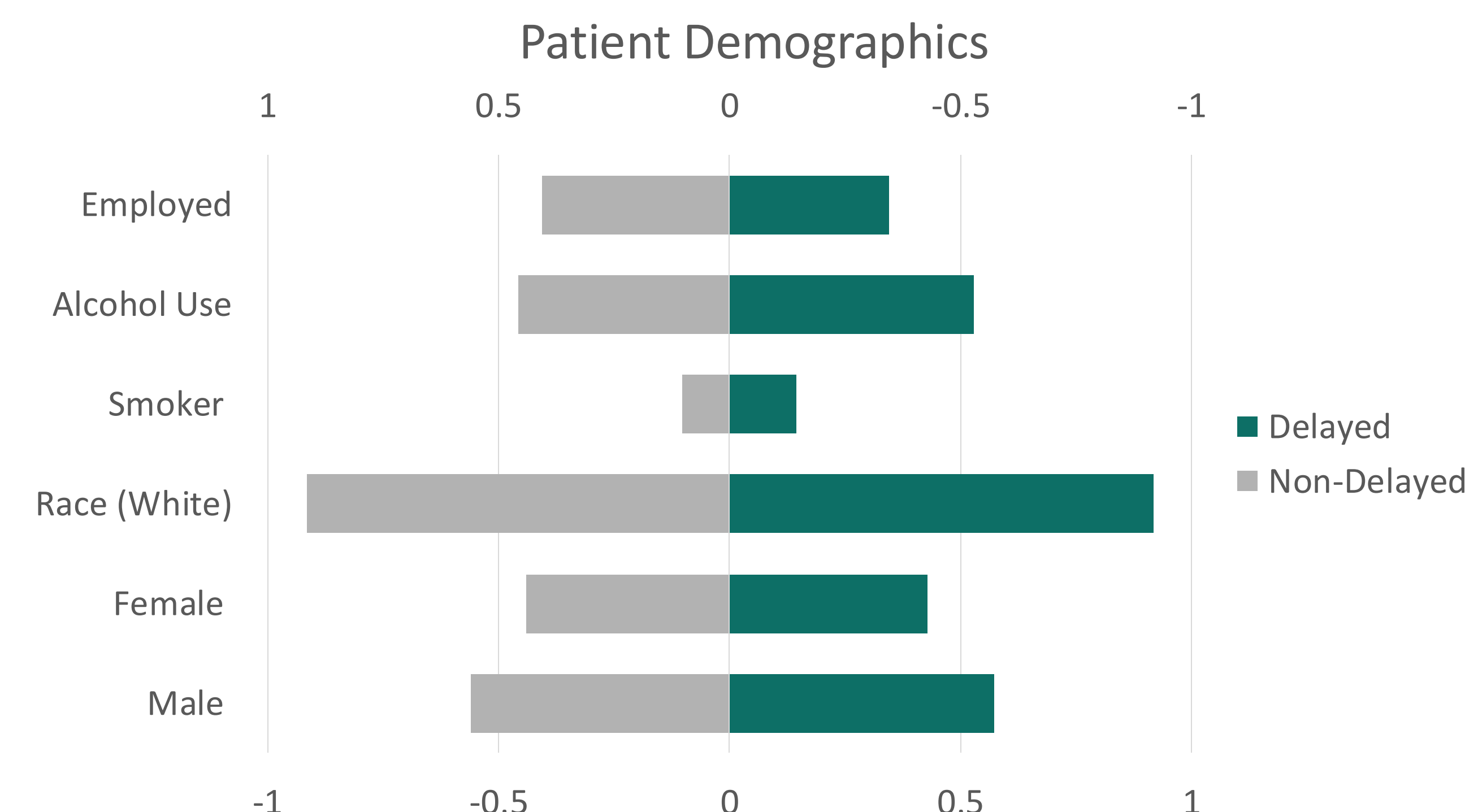


Figure 1. This chart illustrates the distribution of patient demographics as a proportion of the total study population. The delayed and non-delayed groups had comparable proportions of male, female, and white patients. Additionally, there were no statistically significant differences between the groups in terms of smoking status at the time of surgery ($p=0.4$), alcohol use ($p=0.06$), or employment status (full-time, part-time, self-employed) ($p=0.4$).



Figure 2. Flowchart illustrating the average time intervals between surgery, post-operative radiation consultation, and PORT initiation for delayed and non-delayed patients. Overall, 72.9% of the patients experienced delays to PORT. Delayed patients experienced more time between **surgery and the first radiation consult** ($p=0.0002$) and between their **first radiation consult and PORT initiation** ($p=0.0003$), compared to non-delayed patients. Additionally, delayed patients had a longer time to their **first ENT follow-up** ($p=0.0001$) and to receiving their **pathology report** ($p=0.0079$).

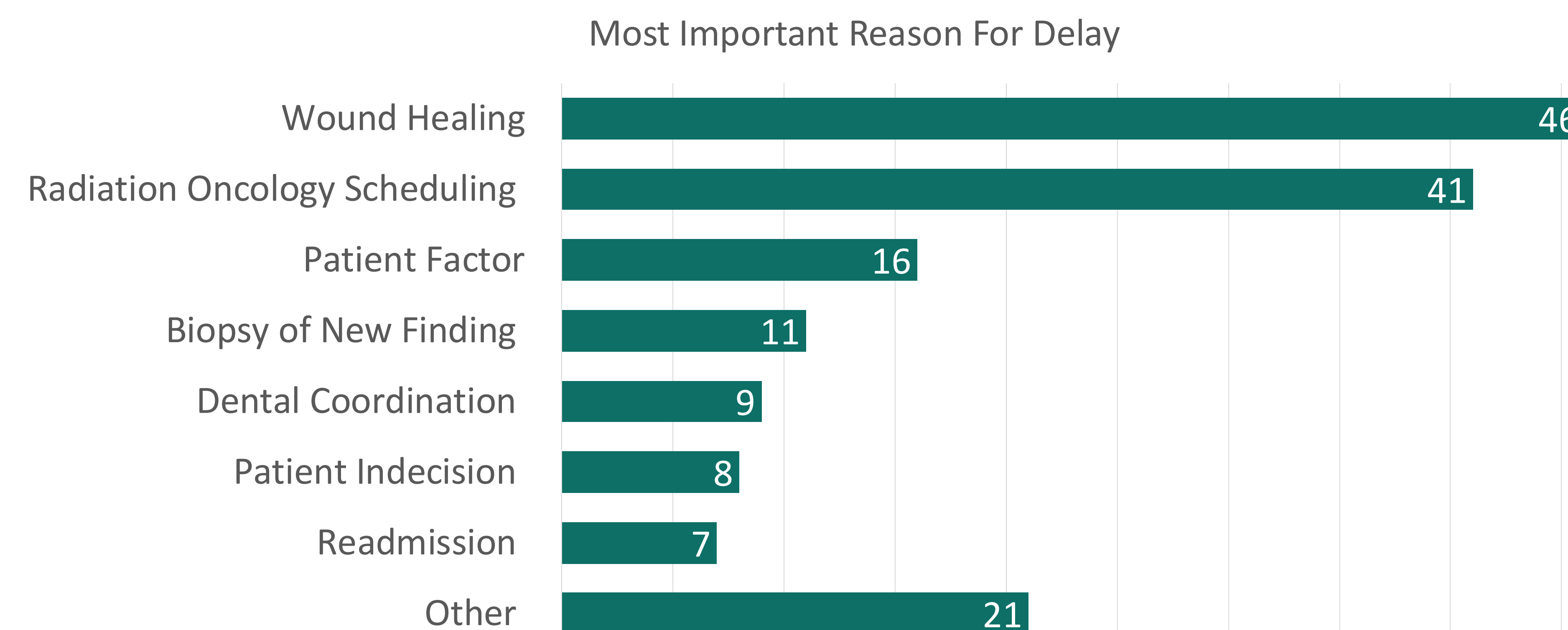


Figure 3. For patients with delayed PORT initiation ($n=159$), wound healing (28.9%) and untimely radiation oncology consult scheduling (25.8%) contributed the most to delays. A lesser proportion of delays were associated with patient factors (preference), biopsy of new findings, dental coordination, patient indecision, and other reasons (prolonged LOS, other health issue, delayed pathology report).

Discussion

Contrary to our hypothesis, dental care did not impact timely PORT achievement. Instead, post-operative **wound healing caused the greatest proportion of delays (28.9%)** compared to barriers to dental care (5.6%). More specifically, there was an average of 34 ± 30.4 days between surgery and the first radiation consult for delayed patients, compared to 27 ± 15.2 days for non-delayed patients. As such, delayed patients experienced a **significantly larger time between surgery and the first radiation consult** compared to non-delayed patients. Demographically, no difference was found in relation to age, smoking history, employment status, alcohol use, and location of PORT.

Future Work

Future directions of study include assessment of PORT delays in relation to:

- alternate cancer subsites (e.g., larynx, nasopharynx, oropharynx, hypopharynx)
- medical comorbidities
- overall patient outcomes

Recognizing predictive factors for delayed PORT could allow for the:

- identification of patients at risk for delayed PORT
- support for system improvement initiatives to optimize referral and scheduling processes
- standardization of HNSCC treatment plans that minimize time to PORT

Acknowledgements

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