CIDC
Consortium for Infectious Disease Control
www.CIDCgroup.org

Consortium for Infectious Disease Control

A neutral, third party platform supporting infectious disease projects, providing continuing medical education, coordinating initiatives, and undertaking research

Winnipeg, Manitoba, Canada
June 16, 2022

The Tsunami of Head and Neck Cancers in Canada: Addressing the issues

Panellist: Dr. Danielle MacNeil MD, MSc (Epidemiology), FRCS(C)

Otolaryngology-Head and Neck Surgery, Head and Neck Oncologic and Reconstructive Surgeon
London Health Sciences Centre, Western University

Panellist: Dr. Cheryl Cable BSc, DDS, MBA, FRCD(C)

Associate Professor, Faculty of Medicine and Dentistry, U.Alberta
Specialist in Prosthodontics and Maxillofacial Prosthodontics
Lead Alberta Head and Neck Cancer Dental Leadership Team
President, Canadian Association of Women Dentists

Panellist: Dr. Vivien Brown MD, CM, CCFP, FCFP, NCMP

Assistant Professor, University of Toronto
Family Physician
VP North America, Medical Women's International Association

Moderator: Dr. Marc Steben MD, CCFM, FCFM

Chair of the Canadian Network on HPV Prevention
Family Physician, Family Medicine Group, Montreal, QC
Board Member, International Papillomavirus Society

Organizer: George Wurtak BSc, MED

Executive Director, Consortium for Infectious Disease Control
Director, Canadian Network on HPV Prevention
Founding Chair, International Indigenous HPV Alliance

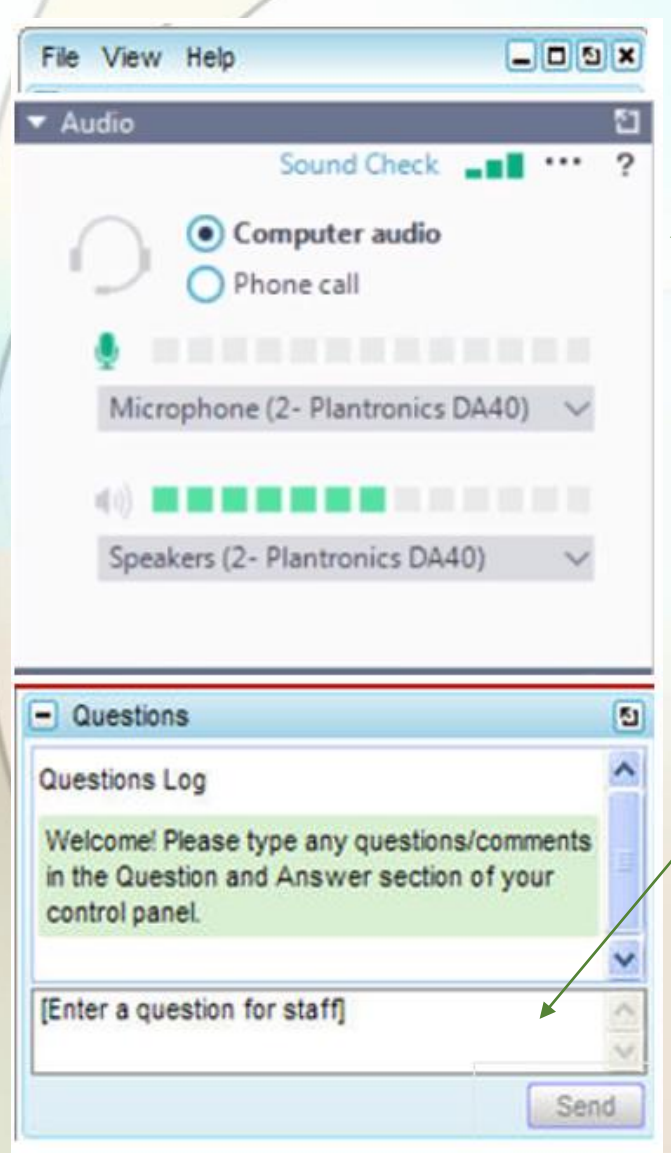
This educational program is made possible through the support of **Merck Canada Inc.**

Webinar Objectives

CIDC
Consortium for Infectious Disease Control

1. Discuss the epidemiology, increasing burden and current landscape of HPV-related head and neck cancers
2. Describe the head and neck cancer diagnostic and therapeutic journey of the patient
3. Provide counselling suggestions adapted to various head and neck patients and their families
4. Outline ways to improve prevention of head and neck cancers and discuss the roles of different specialties in increasing awareness and prevention

Administrative Notes



How to participate:

- You will hear the audio for today's webinar via your computer

- Submit your text question at any time by typing in the Questions pane & click the 'Send' button
- NOTE: For mobile device users:
  To open the questions pane, tap on "*?*" or "*Questions*"

- Questions will be answered following the presentations

Note: Slides and a recording of the presentation will be made available at www.CIDCgroup.org

Evaluation

Complete the Evaluation Survey at:
https://questionpro.com/t/ASLvBZsrb7

Completion of survey is requested to receive a certificate of participation

– all registered participants will receive an email with this link

Slides and Video Recording

The webinar **Slides and Recording** will be archived at:
https://www.CIDCgroup.org

Moderator

Dr. Marc Steben, MD

- Chair, Canadian HPV Prevention Network
- Co-President, HPV Global Action
- Family Physician, Family Medicine Group, Montreal
- Board member and Chair of the Education Committee, International Papillomavirus Society
- Board member, American Sexually Transmitted Diseases Association

Panellist:

Dr. Danielle MacNeil MD, MSc (Epidemiology), FRCS(C)

Otolaryngology-Head and Neck Surgery, Head and Neck Oncologic and Reconstructive Surgeon

London Health Sciences Centre, Western University

Objective 1: Discuss the epidemiology, increasing burden and current landscape of HPV-related Head and Neck cancers

Western

UNIVERSITY · CANADA

Epidemiology of HPV-associated Head and Neck Cancer

June 16, 2022

Dr. Danielle MacNeil, MD, MSc, FRCSC

Western

Department of Otolaryngology-Head and Neck Surgery

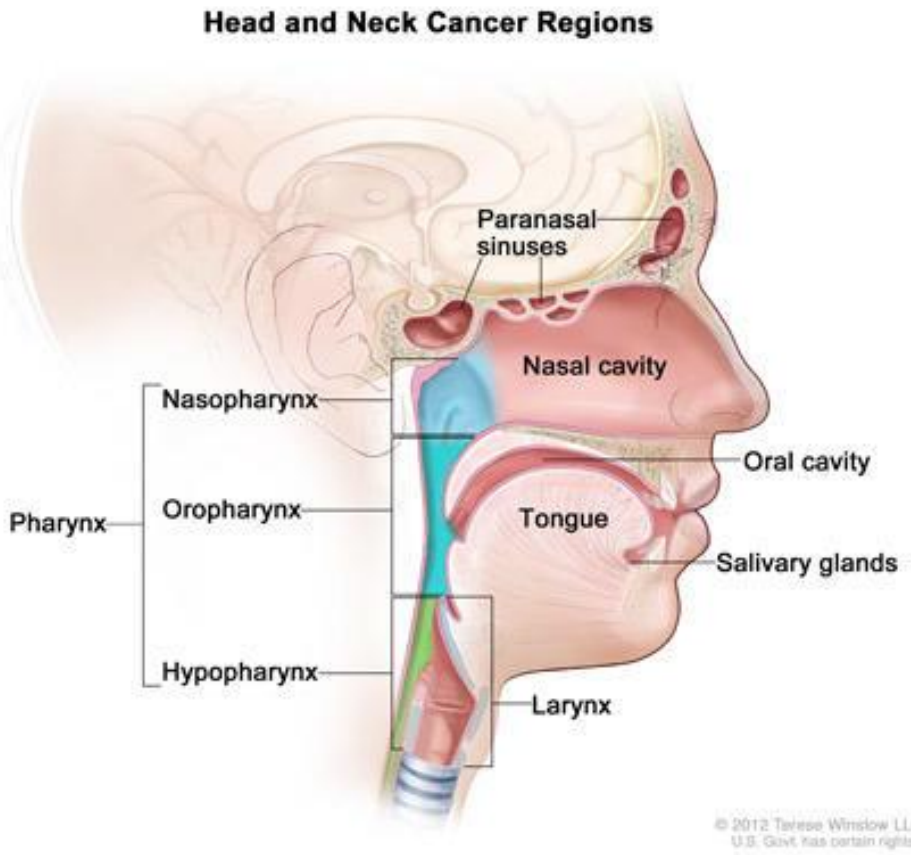
Disclosures

- none

Objectives

- To review the current landscape of head and neck cancers (HNC)
- Discuss the epidemiology of HPV related HNC
- Review the clinical presentation and treatment of HNC
- Introduce HNC Survivorship

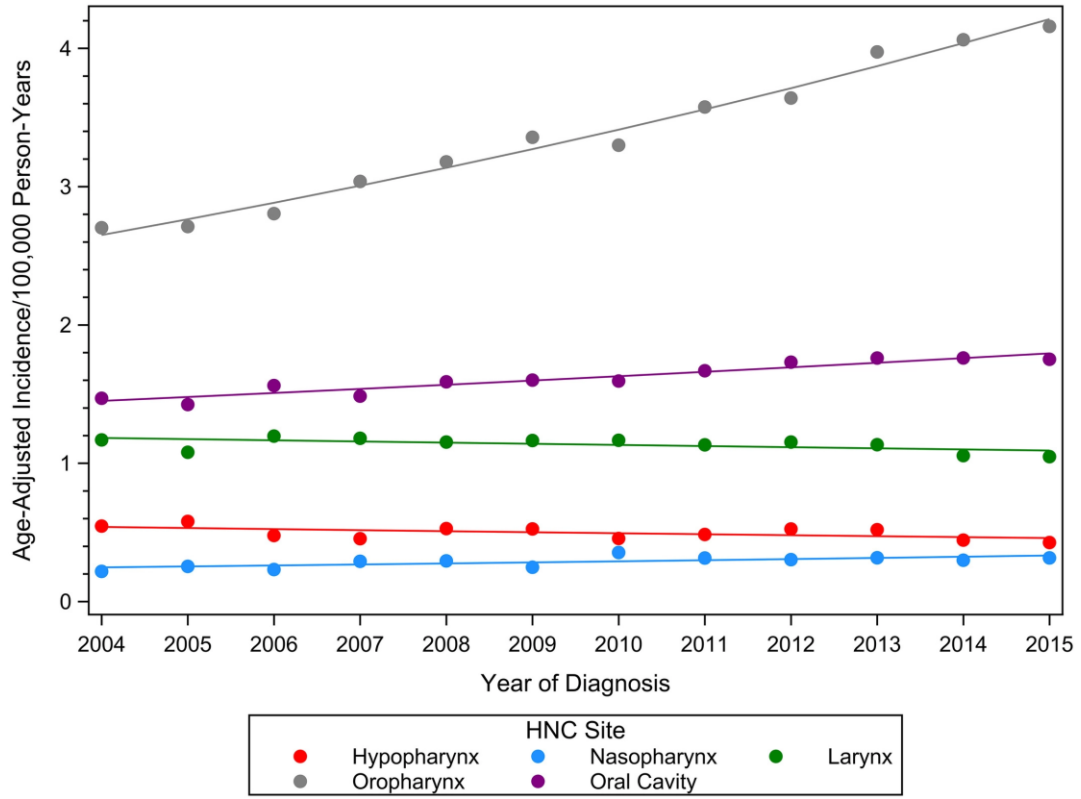
Head and Neck Cancer



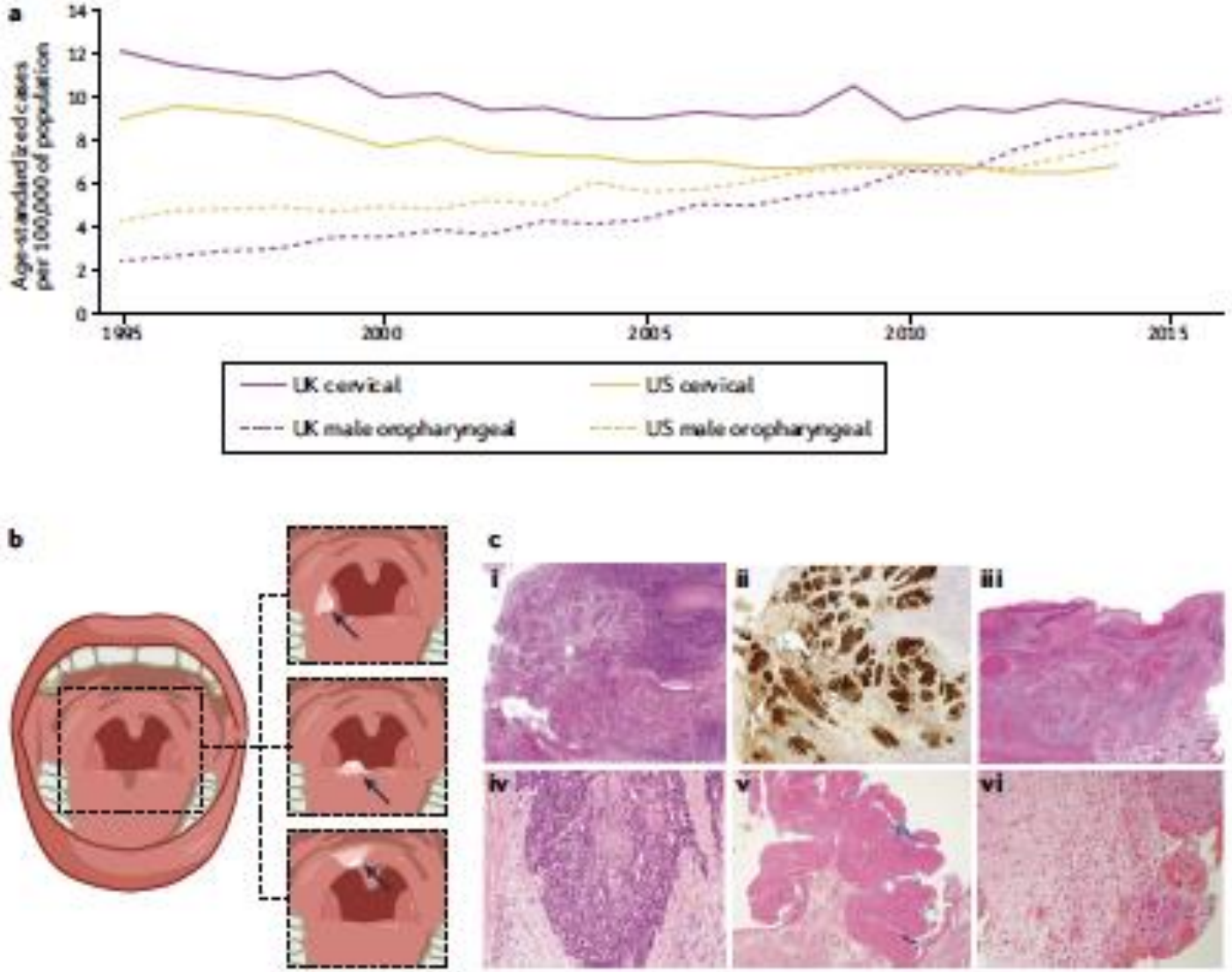
Risk factors for HNC

- Tobacco products
- Alcohol
- **Human Papillomavirus**
- Occupation, Food, Oral hygiene, Hormonal factor, Physical inactivity, SES/income

Age-Adjusted Incidence of HNC



SEER Database. Cancer. Nov 2019.

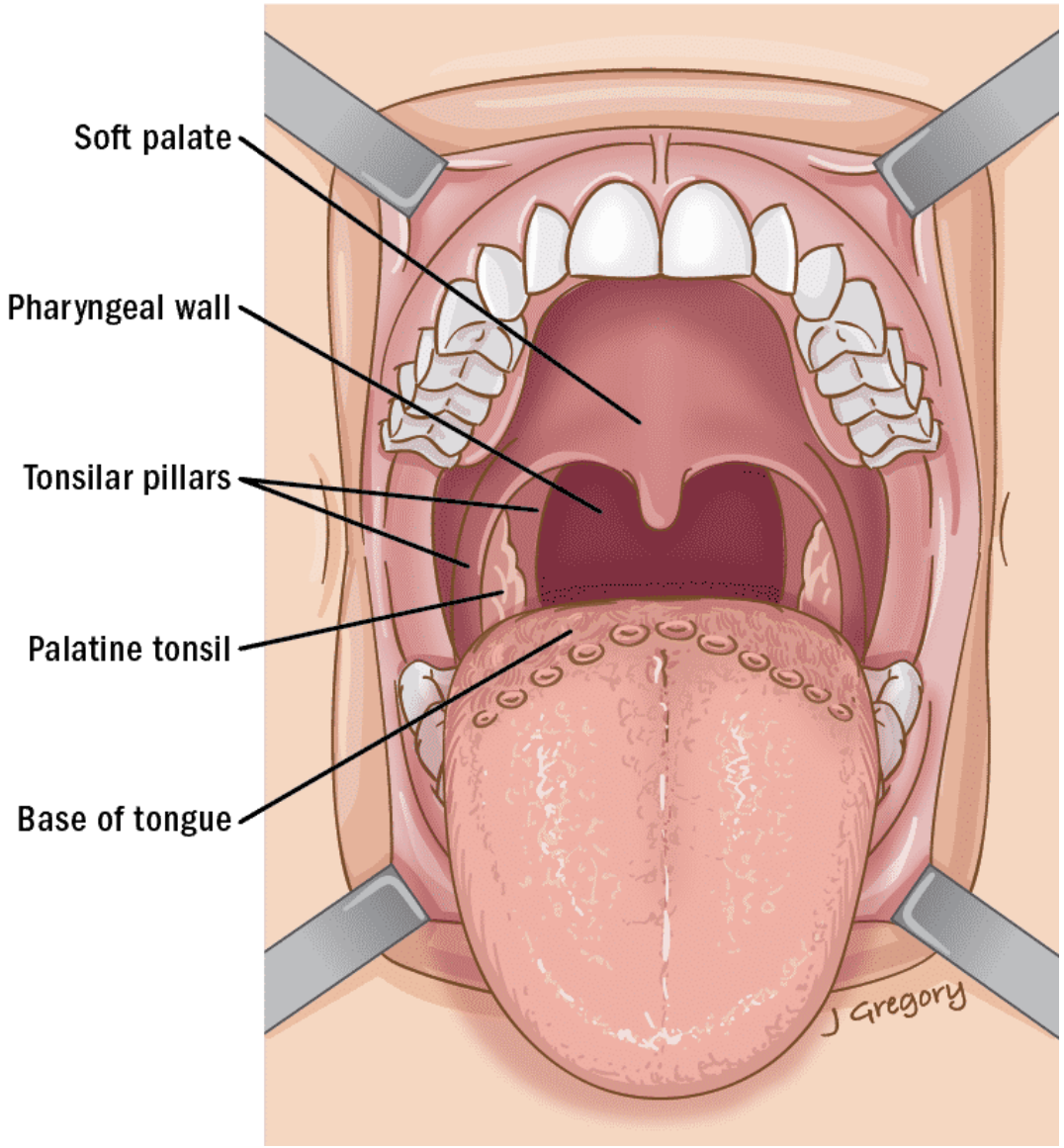


Nature Reviews May 2022

Increasing Incidence of Oropharynx Cancer

- From 1973 until 2001 in people age 20-44
- Oral tongue cancer increased 2.1% per year
- Base of tongue cancer increased by 1.7% per year
- Palatine tonsil cancer increased 3.9% per year
- Incidence at all other sites declined

Oropharynx Subsites



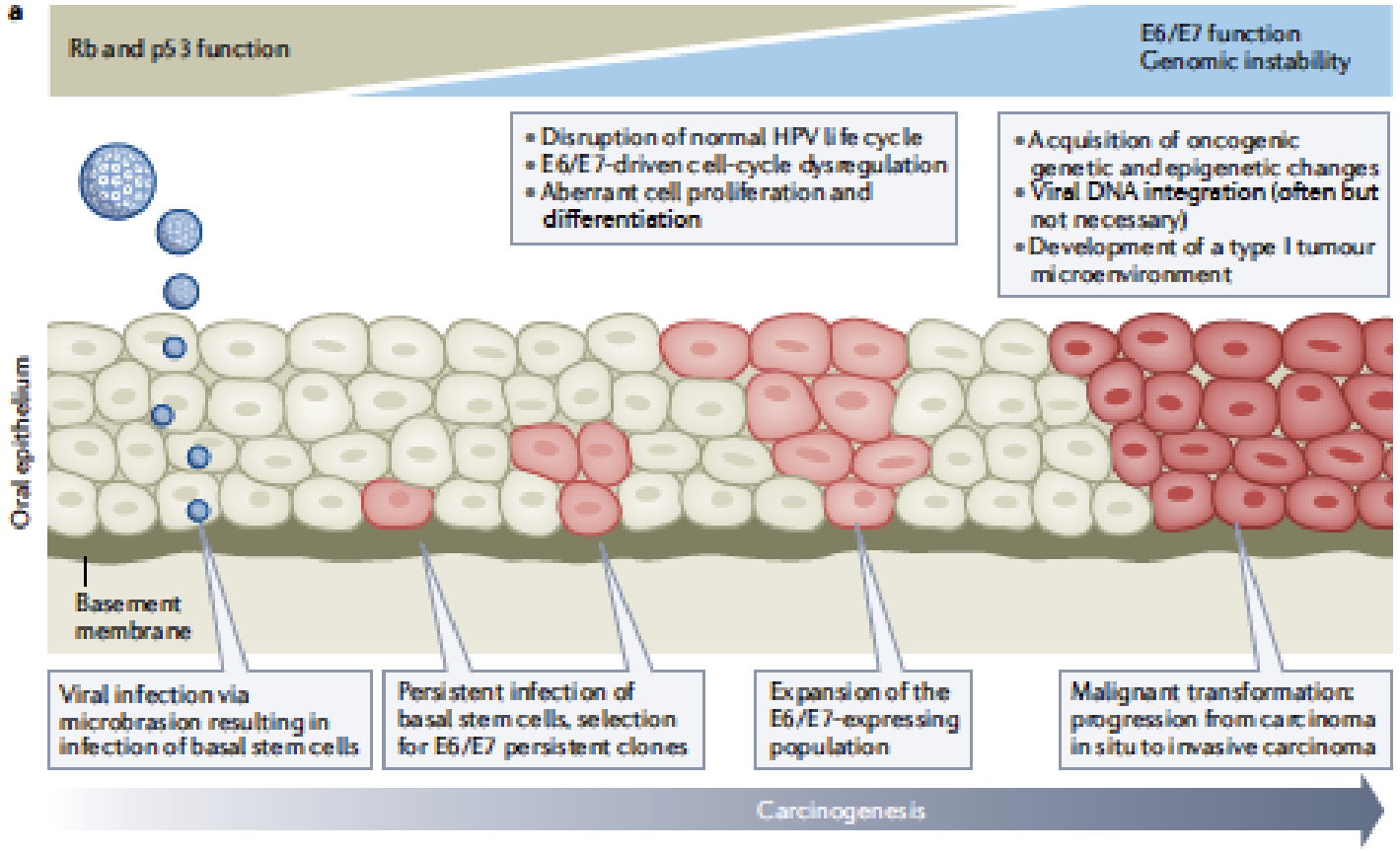
Human Papilloma Virus

- 200 subtypes identified
- HPV is sexually transmitted infection (STI)
- Cervical
  - High risk: 16, 18, 45, 46 (SCC)
  - Low risk: 6, 11 (genital warts)
- Head and Neck
  - High risk: 16, 18
  - Low risk: 6, 11 (papilloma, RRP)

HPV

- World Health Organization: HPV is the most common sexually transmitted infection worldwide
- US CDC reports that up to 75% of US reproductive age population have been exposed to HPV
- At any one time 6.9% of individual are harbouring detectable levels of HPV in the oral cavity or oropharynx

HPV Tumourogenesis Pathway



Nature Reviews May 2022

New Risk Factors for HNC

- High lifetime number of vaginal-sex partners (26 or more)
- High lifetime number of oral-sex partners (6 or more)

Clinical Presentation HPV-related OPC

- Younger and healthier (median age dx 54 years)
- High SES
- Minimal to no smoking history
- Presentation painless neck mass or minimal symptoms
- Lower T stage, higher N stage

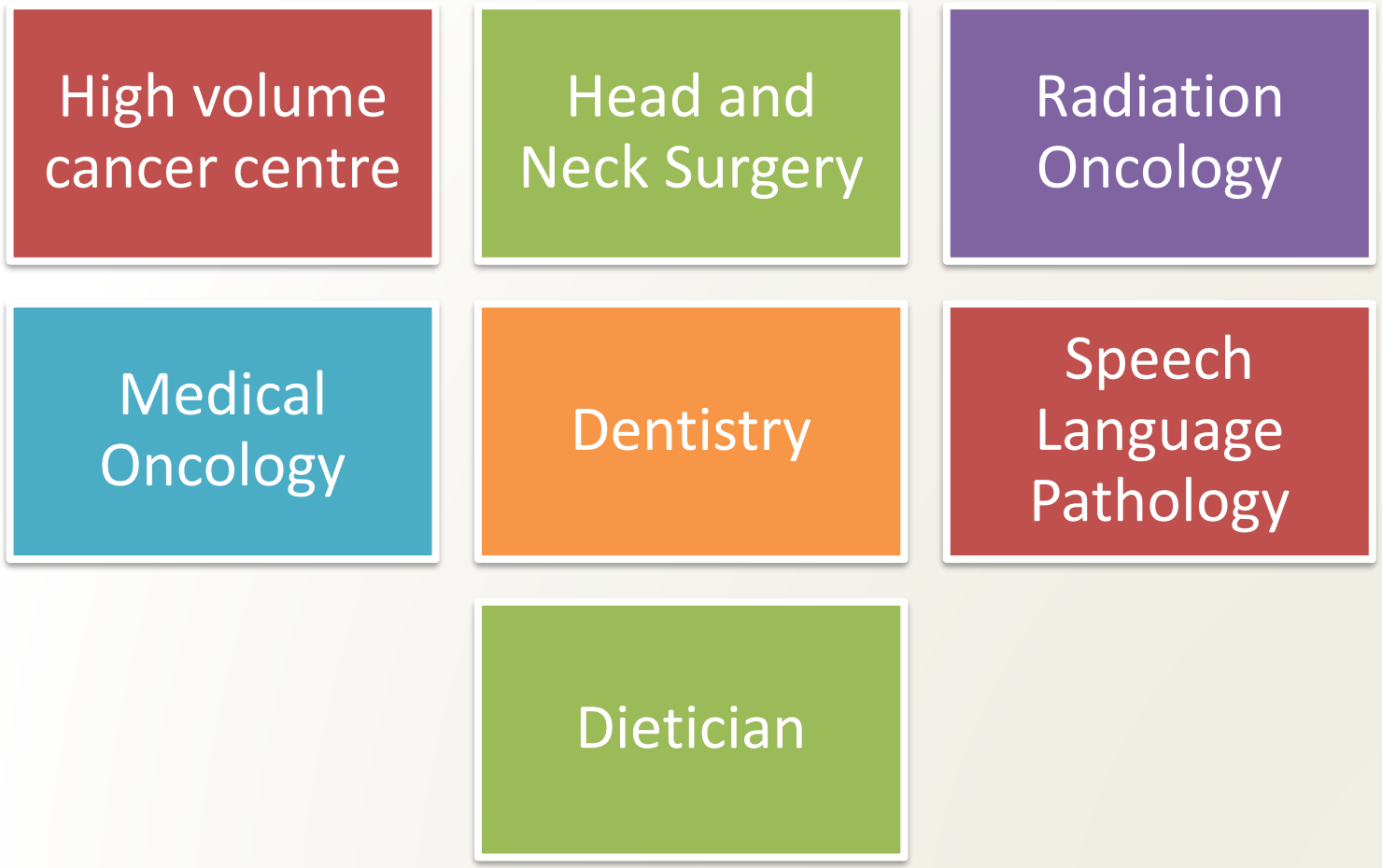
Presenting Symptoms of HPV related Oropharynx Cancer

- Mass in the neck
- Mass in the back of the throat
- Throat pain/discomfort
- Difficulty swallowing
- Voice changes
- Unilateral Ear pain

Diagnostic Workup

- Referral to Otolaryngologist-Head and Neck Surgeon
- History/Physical/Flexible laryngoscopy
- FNA/core needle biopsy neck node
- Primary site biopsy
- HPV detection by p16 immunohistochemistry, HPV in-situ hybridization
- CT/MRI/PET

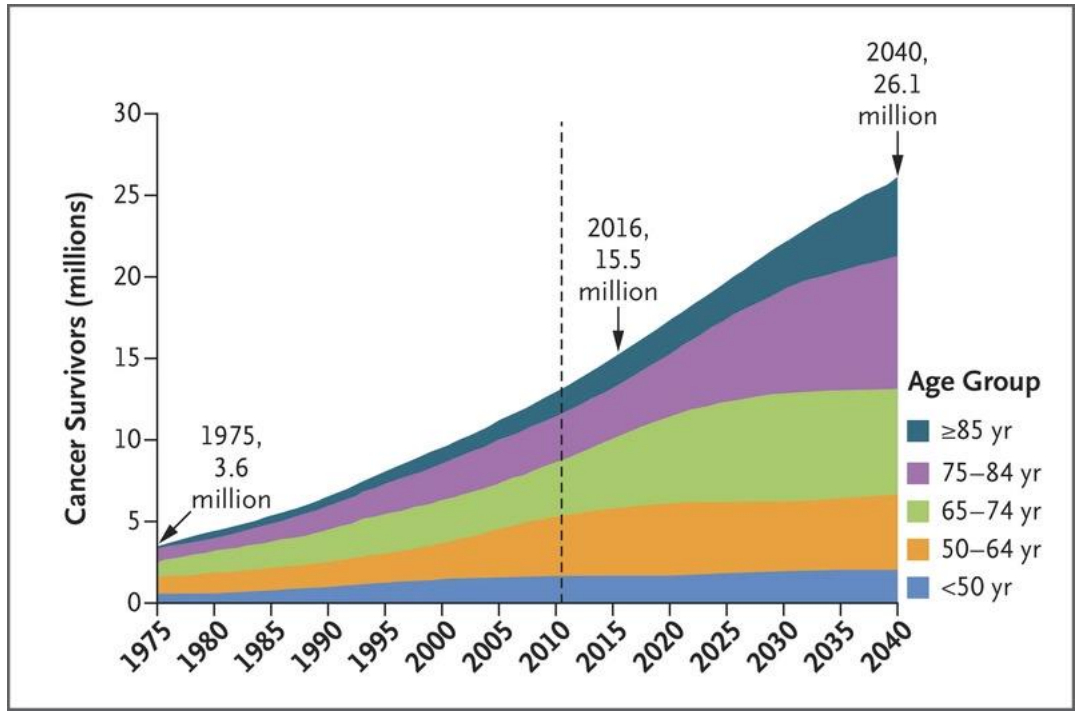
Multidisciplinary Consultation



Treatment Considerations

- Concurrent cisplatin-based chemoradiotherapy
- Long-term overall survival of >90%
- Quality of Life implications
  - Dry mouth
  - Loss of taste
  - Swallowing difficulty (g tube dependence)
  - Psychological distress
  - Survivorship

HNC Survivorship



NEJM Dec 2018

LRCP Head & Neck Cancer Survivors - video

https://www.youtube.com/watch?v=Z-oE1K3-ByE

Western

UNIVERSITY · CANADA

Panellist:

Dr. Cheryl Cable BSc, DDS, MBA, Cert Prosthodontics and Maxillofacial Prosthodontics, FRCD(C)

Associate Professor, Faculty of Medicine and Dentistry, U.Alberta

Specialist in Prosthodontics and Maxillofacial Prosthodontics

Lead Alberta Head and Neck Cancer Dental Leadership Team

President, Canadian Association of Women Dentists

Objective 2: Describe the head and neck cancer diagnostic and therapeutic journey of the patient

The Tsunami of Head and Neck Cancers in Canada: Addressing the Issues

Head and Neck Cancer Diagnostic and Therapeutic Journey

Dr Cheryl E Cable BSc, DDS, MBA, FRCD(C)
Prosthodontist and Maxillofacial Prosthodontist
Lead, Alberta Head and Neck Cancer Dental Leadership Team

SPEAKER

Cheryl Cable

BSc, DDS, MBA Cert Prosthontics, FRCD(C)

Dr Cheryl E Cable is an associate professor at the University of Alberta in the Faculty of Medicine and Dentistry

She completed her undergraduate BSc and DDS degrees at the University of Alberta, received her Prosthodontics and Maxillofacial Prosthodontics certifications at the Mayo Clinic in Rochester, Minnesota and her MBA from the Haskayne School of Business in Calgary, Alberta as well as at the University of Alberta.

Dr. Cable has developed innovative programs in implant dentistry as well as business education at the undergraduate and postgraduate levels.

She has been past President of the Alberta Academy of Prosthodontics, Alberta Society of Dental Specialists, and member of several committees and working groups within the Alberta Dental Association and College. She has worked with Alberta Health on the Oral and Maxillofacial Devices and Services Program and has been an examiner of the Royal College of Dentists of Canada for dental specialists. She is the founding President of the Canadian Association of Women Dentists.

Dr Cable is the Lead of the Alberta Head and Neck Cancer Dental Leadership Team. This group is focused on raising awareness of head and neck cancer realities locally, nationally and world-wide. They advocate the benefits of preventive programs such as vaccine protocols, develop communication tools and facilitate dental rehabilitation in a local and timely manner.

Dr Cable maintains her private practice serving Alberta and northern Canada with patients with head and neck reconstruction, and she prides herself on timely, compassionate care that puts her patients first.

Presenter Disclosure:

- All content and opinions are my own – do not represent any commercial interests
- I may recommend off label indications as an active practicing clinician in Canada
- Consent has been received for clinical images presented
- Honorarium received for this presentation

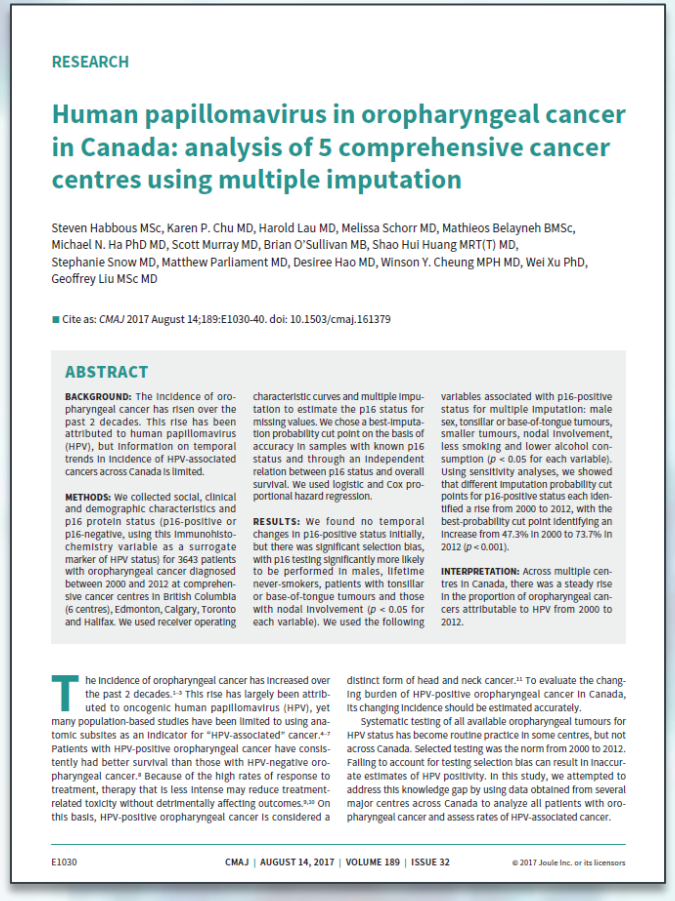
Epidemiology of Oral HPV Infection: Association with Head & Neck Cancer

Over a decade of evidence has determined that human papillomavirus (HPV) is **the principal cause of an increase in incidence** of certain head and neck squamous cell cancers in some regions of the world.

Case-control studies have **established oral HPV infection as the principal risk factor** for HPV-positive oropharyngeal cancer

Gillison ML, Chaturvedi AK, Anderson WF, Fakhry C. Epidemiology of Human Papillomavirus-Positive Head and Neck Squamous Cell Carcinoma. *J Clin Oncol*. 2015;33(29):3235–3242. https://www.ncbi.nlm.nih.gov/pubmed/26351338

HPV Attribution in Head & Neck Cancers
Canada



RESEARCH

Human papillomavirus in oropharyngeal cancer in Canada: analysis of 5 comprehensive cancer centres using multiple imputation

Steven Habbous MSc, Karen P. Chu MD, Harold Lau MD, Melissa Schorr MD, Mathieos Belayneh BMSc, Michael N. Ha PhD MD, Scott Murray MD, Brian O'Sullivan MB, Shao Hui Huang MRT(T) MD, Stephanie Snow MD, Matthew Parliament MD, Desiree Hao MD, Winson Y. Cheung MPH MD, Wei Xu PhD, Geoffrey Liu MSc MD

Cite as: *CMAJ* 2017 August 14;189:E1030-40. doi: 10.1503/cmaj.161379

ABSTRACT

BACKGROUND: The incidence of oropharyngeal cancer has risen over the past 2 decades. This rise has been attributed to human papillomavirus (HPV), but information on temporal trends in incidence of HPV-associated cancers across Canada is limited.

METHODS: We collected social, clinical and demographic characteristics and p16 protein status (p16-positive or p16-negative, using this immunohistochemistry variable as a surrogate marker of HPV status) for 3643 patients with oropharyngeal cancer diagnosed between 2000 and 2012 at comprehensive cancer centres in British Columbia (6 centres), Edmonton, Calgary, Toronto and Halifax. We used receiver operating characteristic curves and multiple imputation to estimate the p16 status for missing values. We chose a best-imputation probability cut point on the basis of accuracy in samples with known p16 status and through an independent relation between p16 status and overall survival. We used logistic and Cox proportional hazard regression.

RESULTS: We found no temporal changes in p16-positive status initially, but there was significant selection bias, with p16 testing significantly more likely to be performed in males, lifetime never-smokers, patients with tonsillar or base-of-tongue tumours and those with nodal involvement ($p < 0.05$ for each variable). We used the following variables associated with p16-positive status for multiple imputation: male sex, tonsillar or base-of-tongue tumours, smaller tumours, nodal involvement, less smoking and lower alcohol consumption ($p < 0.05$ for each variable). Using sensitivity analyses, we showed that different imputation probability cut points for p16-positive status each identified a rise from 2000 to 2012, with the best-probability cut point identifying an increase from 47.3% in 2000 to 73.7% in 2012 ($p < 0.001$).

INTERPRETATION: Across multiple centres in Canada, there was a steady rise in the proportion of oropharyngeal cancers attributable to HPV from 2000 to 2012.

The incidence of oropharyngeal cancer has increased over the past 2 decades.[1-3] This rise has largely been attributed to oncogenic human papillomavirus (HPV), yet many population-based studies have been limited to using anatomic subsites as an indicator for "HPV-associated" cancer.[4-7] Patients with HPV-positive oropharyngeal cancer have consistently had better survival than those with HPV-negative oropharyngeal cancer.[8] Because of the high rates of response to treatment, therapy that is less intense may reduce treatment-related toxicity without detrimentally affecting outcomes.[9,10] On this basis, HPV-positive oropharyngeal cancer is considered a distinct form of head and neck cancer.[11] To evaluate the changing burden of HPV-positive oropharyngeal cancer in Canada, its changing incidence should be estimated accurately.

Systematic testing of all available oropharyngeal tumours for HPV status has become routine practice in some centres, but not across Canada. Selected testing was the norm from 2000 to 2012. Failing to account for testing selection bias can result in inaccurate estimates of HPV positivity. In this study, we attempted to address this knowledge gap by using data obtained from several major centres across Canada to analyze all patients with oropharyngeal cancer and assess rates of HPV-associated cancer.

5 Cancer Centres Across Canada

BC CANCER

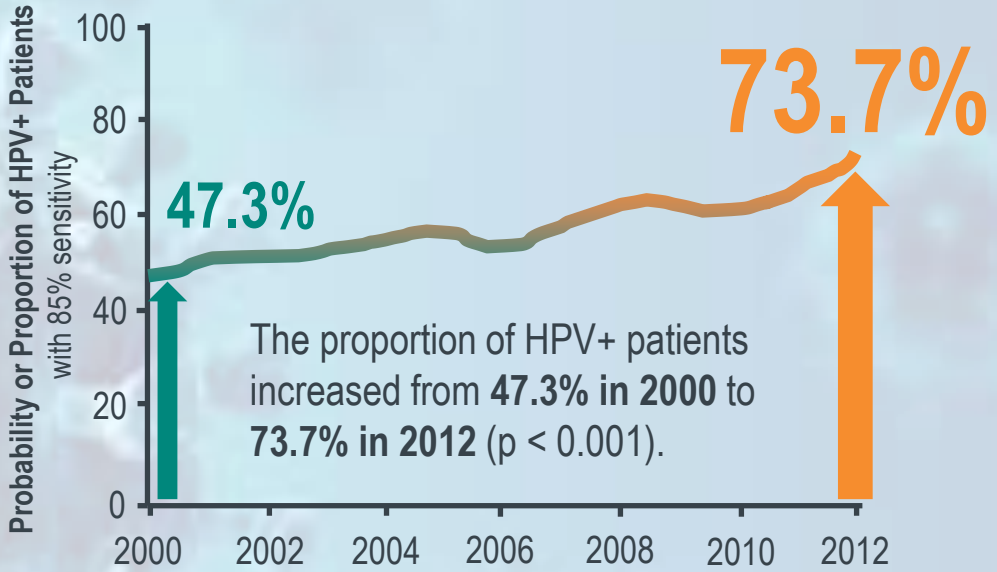
UHN Princess Margaret Cancer Centre

nova scotia health authority

Tom Baker Cancer Centre

Alberta Health Services

Cross Cancer Institute



> Across multiple centres in Canada, there was **a steady rise** in the proportion of oropharyngeal cancers attributable to HPV from 2000 to 2012.

Habbous S, Chu KP, et al. CMAJ 2017 August 14;189:E1030-40.

Pathology and Diagnosis

of HPV-Related Head & Neck Cancer

Anatomy of the Head and Neck

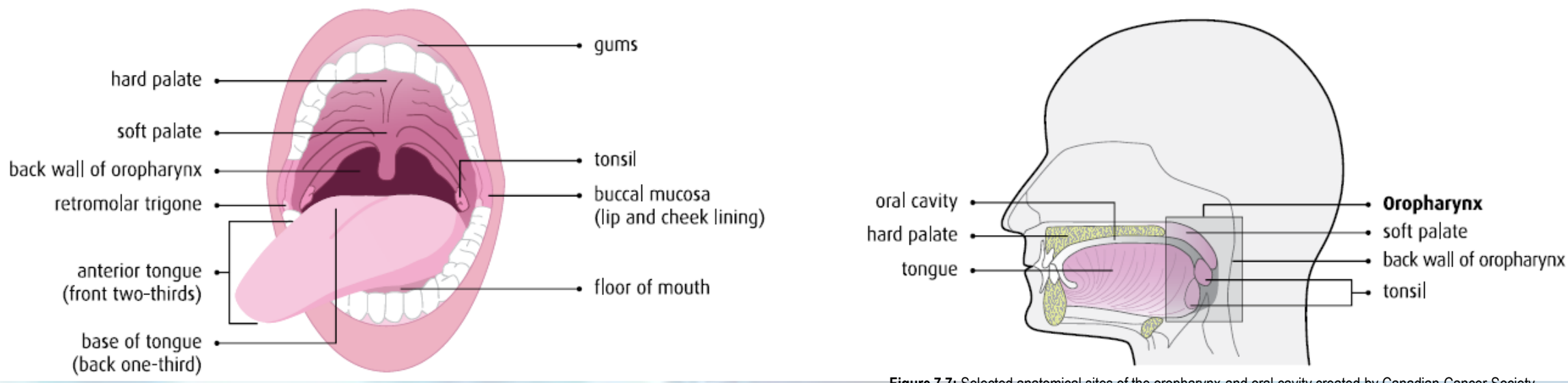


Figure 7.7: Selected anatomical sites of the oropharynx and oral cavity created by Canadian Cancer Society

Oropharyngeal cancers (OPC)

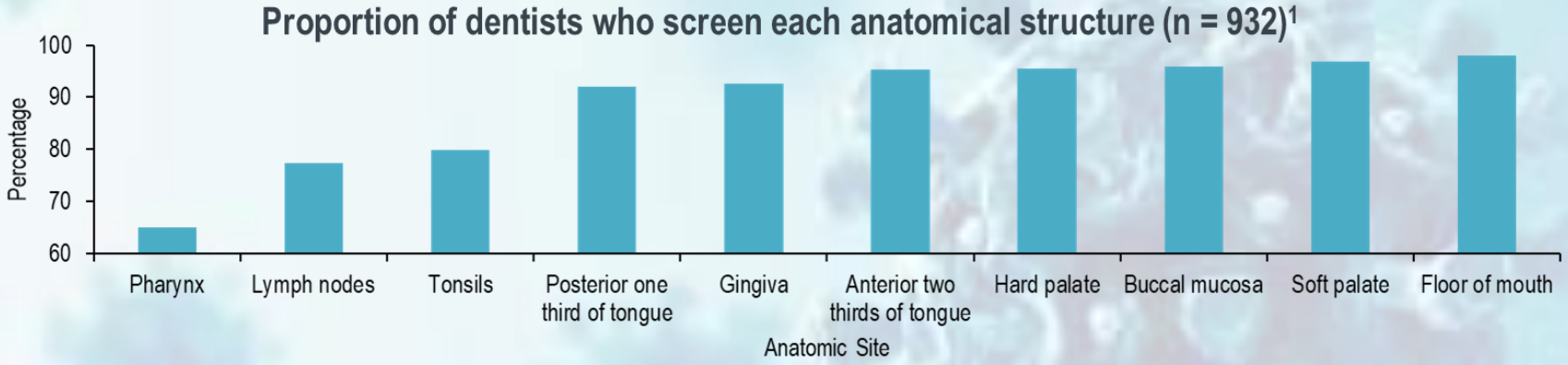
Head and neck cancers at sites known to be related to HPV (mainly the base of the tongue, tonsils and other oropharynx)

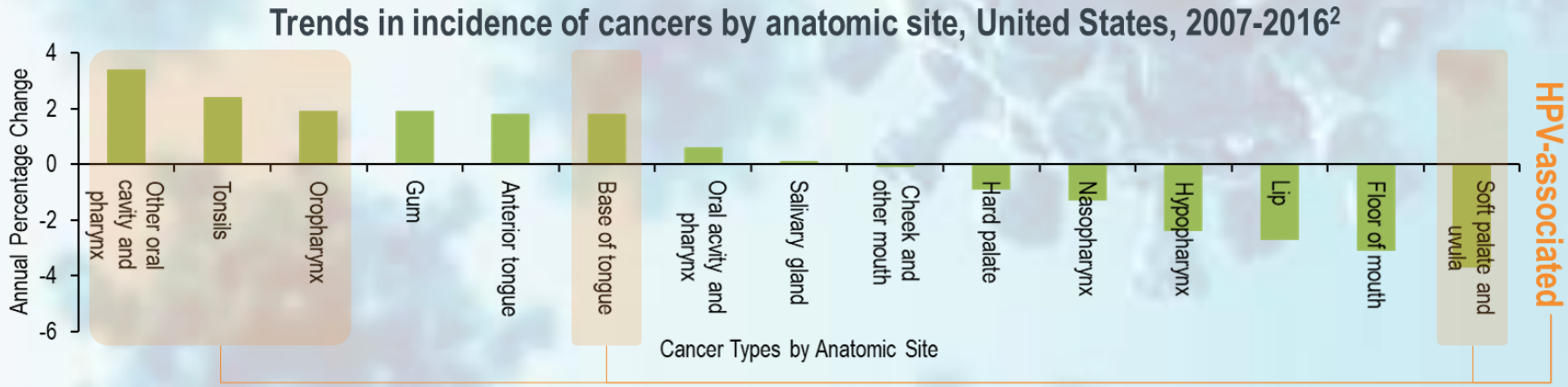
Oral cavity cancers (OCC)

Cancers of oral sites that show a stronger association with tobacco and alcohol

Canadian Cancer Society's Advisory Committee on Cancer Statistics. Canadian Cancer Statistics 2016.

Dentists' Capacity to Mitigate the Burden of Oral Cancers:
Ontario, Canada





92.4%

believed that they are adequately trained to recognize the early signs and symptoms of oral cancer[1]

35.4%

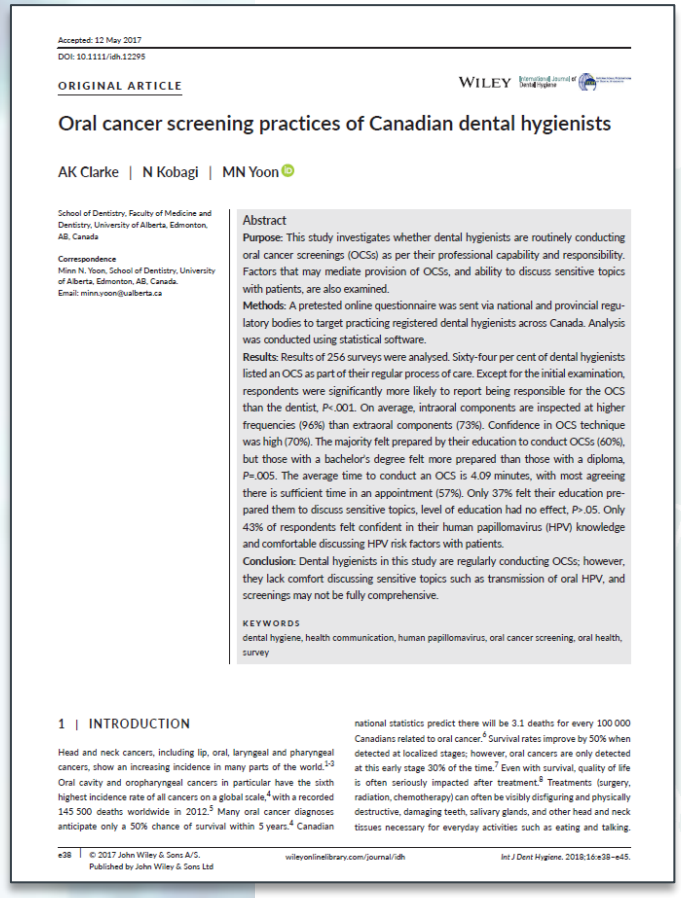
believed said that they are adequately trained to obtain biopsy samples from suspected lesions[1]

<40%

believed said that they are adequately trained to address relevant risk factors (smoking, alcohol use, HPV)[1]

1. J Can Dent Assoc. 2020 Feb;86:k2. **2.** MMWR Morb Mortal Wkly Rep. 2020 Apr 17;69(15):433-438.

Oral Cancer Screening Practices of Canadian Dental Hygienists: Canada



Accepted: 12 May 2017
DOI: 10.1111/idh.12295

ORIGINAL ARTICLE

WILEY International Journal of Dental Hygiene

Oral cancer screening practices of Canadian dental hygienists

AK Clarke | N Kobagi | MN Yoon

School of Dentistry, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, AB, Canada

Correspondence
Minn N. Yoon, School of Dentistry, University of Alberta, Edmonton, AB, Canada.
Email: minn.yoon@ualberta.ca

Abstract

Purpose: This study investigates whether dental hygienists are routinely conducting oral cancer screenings (OCSs) as per their professional capability and responsibility. Factors that may mediate provision of OCSs, and ability to discuss sensitive topics with patients, are also examined.

Methods: A pretested online questionnaire was sent via national and provincial regulatory bodies to target practicing registered dental hygienists across Canada. Analysis was conducted using statistical software.

Results: Results of 256 surveys were analysed. Sixty-four per cent of dental hygienists listed an OCS as part of their regular process of care. Except for the initial examination, respondents were significantly more likely to report being responsible for the OCS than the dentist, $P<.001$. On average, intraoral components are inspected at higher frequencies (96%) than extraoral components (73%). Confidence in OCS technique was high (70%). The majority felt prepared by their education to conduct OCSs (60%), but those with a bachelor's degree felt more prepared than those with a diploma, $P=.005$. The average time to conduct an OCS is 4.09 minutes, with most agreeing there is sufficient time in an appointment (57%). Only 37% felt their education prepared them to discuss sensitive topics, level of education had no effect, $P>.05$. Only 43% of respondents felt confident in their human papillomavirus (HPV) knowledge and comfortable discussing HPV risk factors with patients.

Conclusion: Dental hygienists in this study are regularly conducting OCSs; however, they lack comfort discussing sensitive topics such as transmission of oral HPV, and screenings may not be fully comprehensive.

KEYWORDS
dental hygiene, health communication, human papillomavirus, oral cancer screening, oral health, survey

1 | INTRODUCTION

Head and neck cancers, including lip, oral, laryngeal and pharyngeal cancers, show an increasing incidence in many parts of the world.[1-3] Oral cavity and oropharyngeal cancers in particular have the sixth highest incidence rate of all cancers on a global scale,[4] with a recorded 145 500 deaths worldwide in 2012.[5] Many oral cancer diagnoses anticipate only a 50% chance of survival within 5 years.[4] Canadian national statistics predict there will be 3.1 deaths for every 100 000 Canadians related to oral cancer.[6] Survival rates improve by 50% when detected at localized stages; however, oral cancers are only detected at this early stage 30% of the time.[7] Even with survival, quality of life is often seriously impacted after treatment.[8] Treatments (surgery, radiation, chemotherapy) can often be visibly disfiguring and physically destructive, damaging teeth, salivary glands, and other head and neck tissues necessary for everyday activities such as eating and talking.

64% dental hygienists listed an oral cancer screening as part of their regular process of care

Intraoral Components

are inspected at higher frequencies (96%) than extraoral components (73%)

The average time to conduct an oral cancer screening

4.09 minutes

37% felt their education prepared them to discuss sensitive topics

43% felt confident in their HPV knowledge and comfortable discussing HPV risk factors with patients

Dental hygienists (n=256) in this study regularly conducts oral cancer screenings; however, they lack comfort discussing sensitive topics such as oral HPV, and screenings may not be fully comprehensive.

Int J Dent Hyg. 2018 May;16(2):e38-e45.

Therapeutic journey

Inquiry

- Something is wrong
  - Dentistry
  - Family medicine

Therapeutic journey

Testing / Diagnosis

- Testing (Pathology / Surgery)
  - Biopsy
    - FNA
    - tissue
  - Scoping
  - Imaging
    - CT
    - MRI
    - PET scan

Therapeutic journey

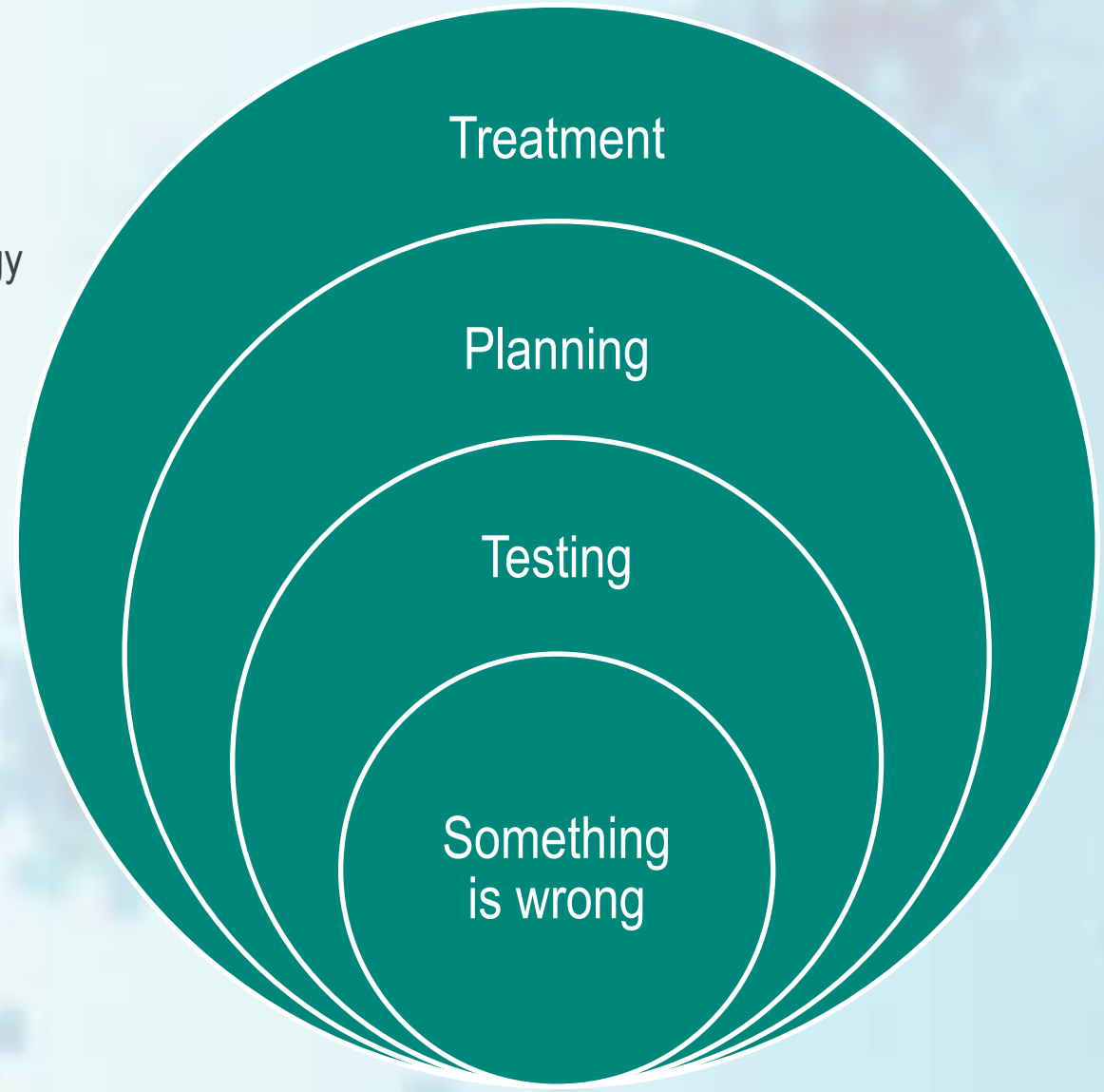
Planning

- Multidisciplinary planning
  - Surgery
  - Radiation oncology
  - Medical oncology
  - Pathology
  - Radiology
  - Dentistry

Therapeutic journey

Treatment

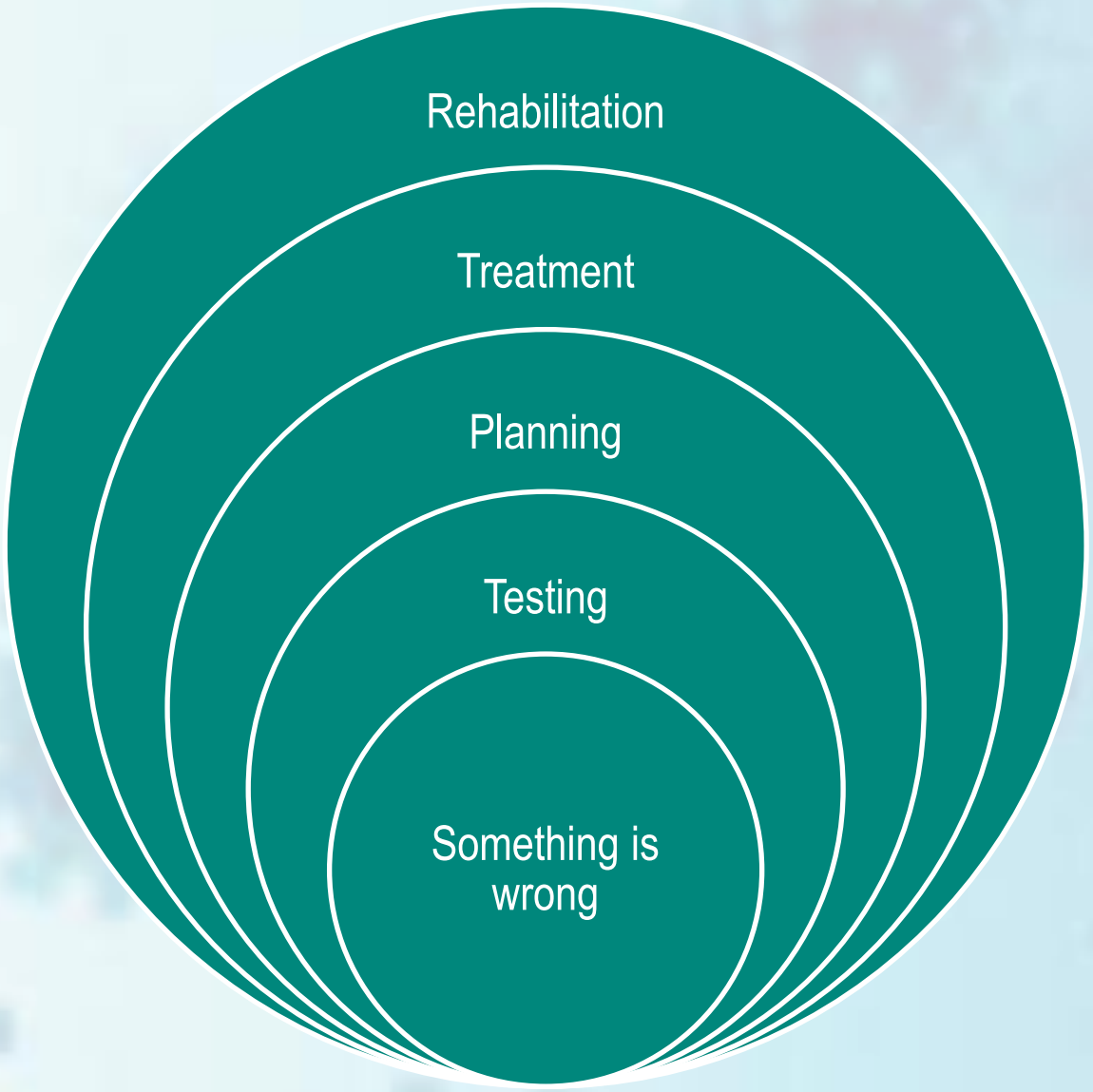
- Surgery
- Radiation oncology
- Medical oncology



Therapeutic journey

Rehabilitation

- Surgery
- Dentistry
- Speech Pathology
- Dietician
- Psychiatry
  Psychology
- Family Medicine



Ringing out
Ring this bell
Three times well
Its toll to clearly say,
My treatment's done
This course is run
And I am on my way!
— Irve Le Moyne

https://www.mdanderson.org/publications/conquest/radiation-bells.h37-1586679.html

The cure may be worse than the disease …

- Radiation
  - Short term effects
  - Long term effects
- Chemotherapy
  - Short term effects
  - Long term effects
- Surgery

Case Presentation:

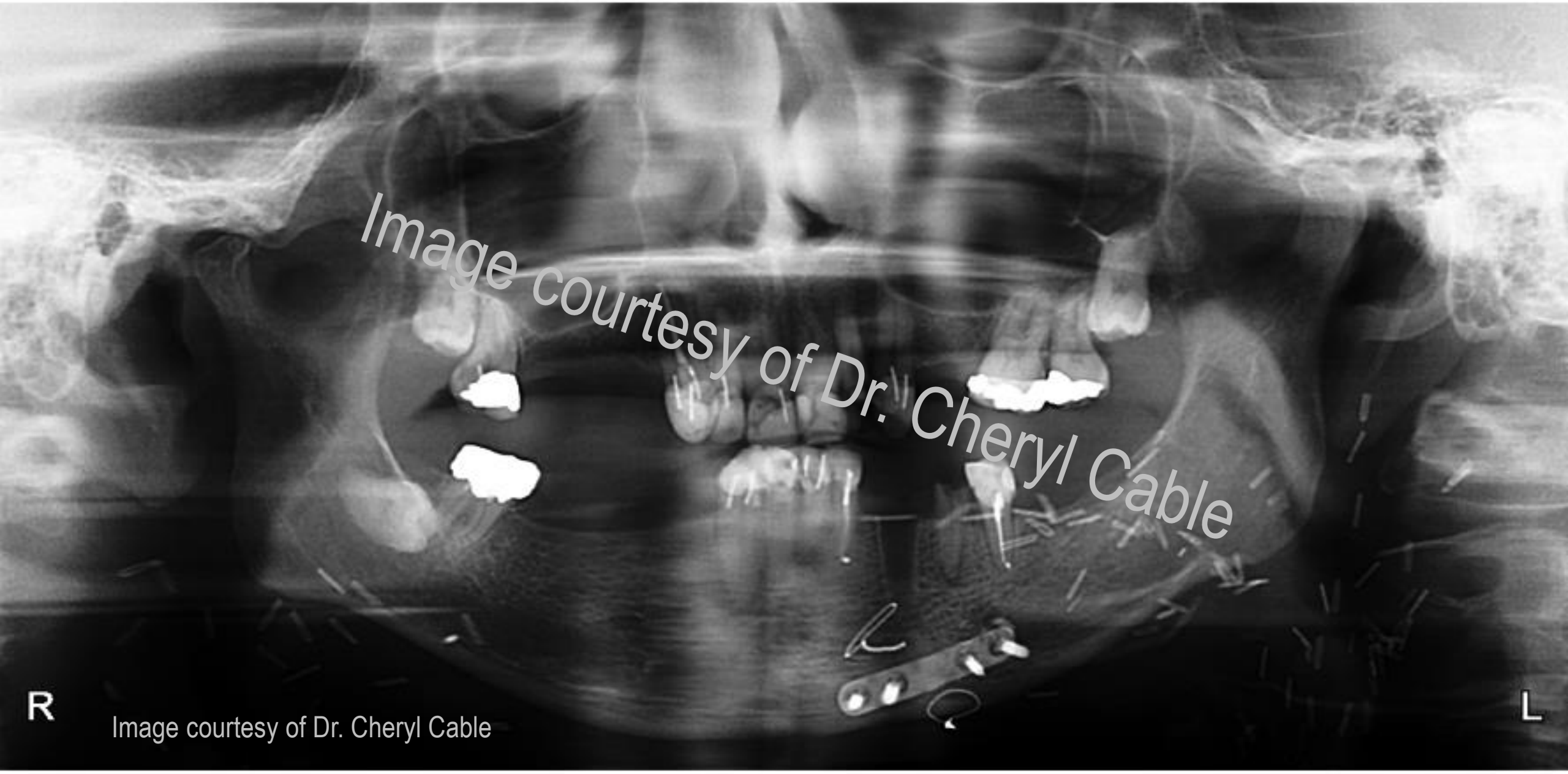
female HPV-related oropharyngeal cancer patient

History and Patient Presentation

- This patient was referred to a maxillofacial prosthodontist for continued care by a general dentist as the case is complex.
- She was diagnosed with squamous cell carcinoma on the left base of the tongue.
- The biopsy was HPV positive.
- Surgical treatment of the lesion included removal of a salivary gland. She also went through a course of radiation therapy.

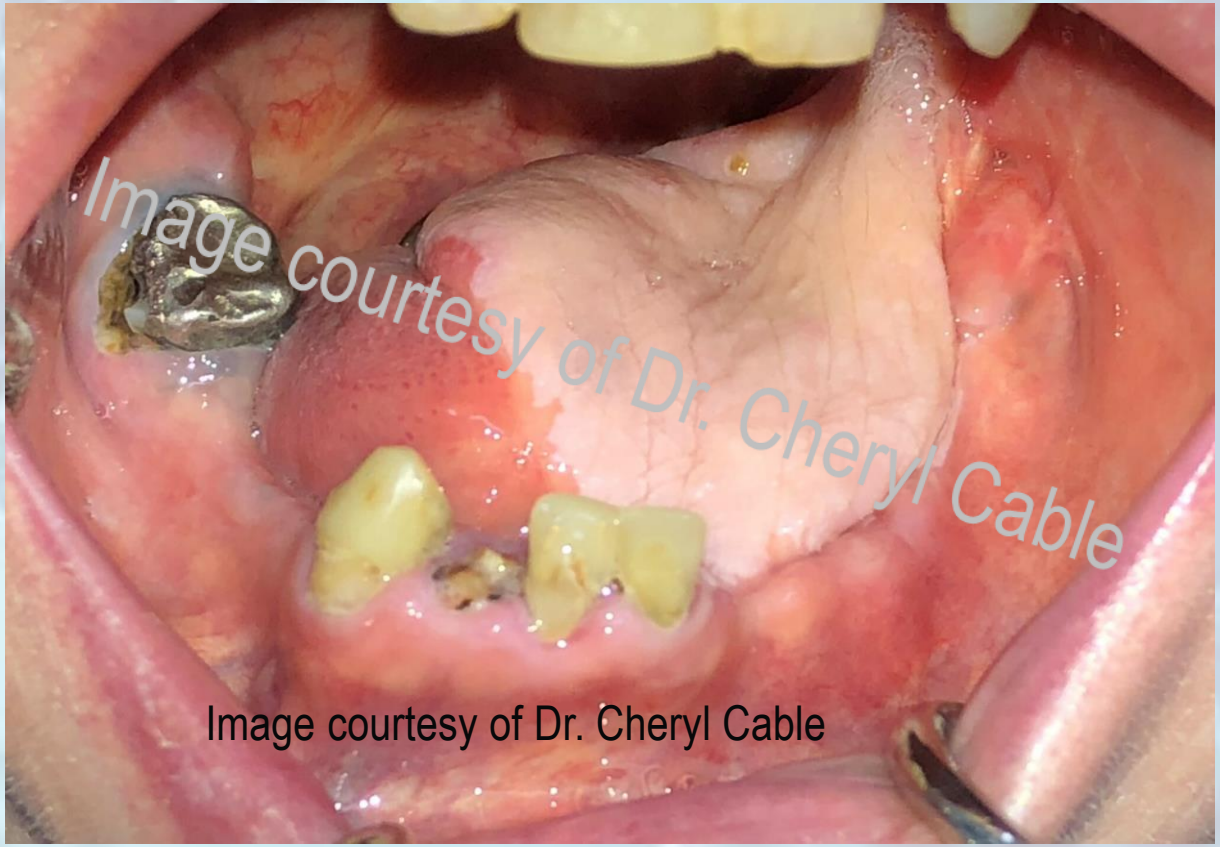
- She has severe xerostomia,
- eats only on the right side,
- has a cast partial upper denture that could not be used due to friable tissues.
- Her oral health had deteriorated following her cancer diagnosis, resulting in generalized caries and large failing restorations.
- She was depressed and overwhelmed by how her life had changed post treatment and was contemplating initiating an end-of-life protocol.

Image courtesy of Dr. Cheryl Cable



Maxillary arch

Mandibular arch and tongue (courtesy of Dr. Cheryl Cable)



The difference a year makes…


Image courtesy of Dr. Cheryl Cable
Image courtesy of Dr. Cheryl Cable
L

Image courtesy of Dr. Cheryl Cable

Psychosocial Impact

of Head & Neck Cancer

Risk of Suicide for Head & Neck Cancer Survivors: United States

An analysis of SEER data for over 4 million cancer survivors from 2000-2014 found that for survivors of head & neck cancers :

- There was a **27% increase in the risk of suicide** in 2010-2014 compared with 2000-2004
- Suicide rates were **twice as high** (63.4/100,000) as for other cancers (23.6/100,000)

- Sources of distress unique to head & neck cancer survivors that may result from treatment:

- facial disfigurement
- difficulty swallowing
- loss of taste or smell

- difficulty speaking
- depression

Osazuwa-Peters N, Simpson MC, Zhao L, et al. Suicide risk among cancer survivors: Head and neck versus other cancers. *Cancer.* 2018;124(20):4072-4079. https://www.ncbi.nlm.nih.gov/pubmed/30335190

Socioeconomic Burden

of Head & Neck Cancer

Socioeconomic Burden of HPV-Related Head & Neck Cancers: Canada

Data used several Manitoba Health clinical and administrative databases to identify **all persons diagnosed with an HPV-related disease** in Manitoba

Direct Medical Costs of Diseases Associated with HPV Infection:
all costs incurred in relation to the diagnosis and treatment

TREATMENT COST
One episode of
cervical dysplasia
$220

One episode of
cervical carcinoma in situ
$1,300

TREATMENT COST
One case of
Cervical cancer
$15,000

One case of
Oral cancer
$33,000

Righolt C H et al. (2018) The Direct Medical Costs of Diseases Associated with Human Papillomavirus Infection in Manitoba, Canada. Appl Health Econ Health Policy. https://doi.org/10.1007/s40258-017-0367-1

HPV Prevention:

Recommendations and Position Statements

NACI: National Advisory Committee on Immunization

Government of Canada

- 2vHPV, 4vHPV or 9vHPV recommended for **FEMALES** age 9-26 years old
- May be used in females over age 26 years old **(no upper age limit)**
- **Is recommended for those with current or past history of pap abnormalities, cervical cancer and EGW**

- 4vHPV or 9vHPV vaccine recommended for **MALES** age 9-26 years old for prevention of EGW, AIN, anal cancer, PIN and penile cancer
- 4vHPV or 9vHPV vaccine may be used in males over age 26 years old **(no upper age limit)**

National Advisory Committee on Immunization (NACI), March 2017; National Advisory Committee on Immunization (NACI), July 2016.

Office of the Chief Dental Officer of Canada

Government of Canada

OVERVIEW

Human papillomavirus and oral health

Office of the Chief Dental Officer of Canada[1]

Abstract

Canada is among the world leaders in oral health. Despite this, there are growing concerns about the rising rates of HPV-related mouth and throat cancers. The link between human papillomavirus (HPV) and cervical cancer is well established; fortunately, thanks to detection and vaccination, Canada has one of the lowest incidence rates of cervical cancer in the world. The HPV-related mouth and throat cancers, however, present a different picture. In Canada, about 25% to 35% of mouth and throat cancers are related to oral HPV infection; and in 2012, the incidence rate of HPV-associated oropharyngeal cancer was more than 4.5 times higher in males than females. Furthermore, HPV vaccination uptake in Canada is higher among females than males. Physicians and nurses in public health and clinical settings have a role to play in the fight against HPV transmission, as do oral health professionals. Oral health professionals can play a key role in preventing HPV infection and HPV-related oropharyngeal cancers by raising awareness, educating and offering counselling to their clients, and promoting evidence-based preventive and diagnostic interventions.

Affiliation

[1] Office of the Chief Dental Officer of Canada, Public Health Agency of Canada, Ottawa, ON

Correspondence:
claudia.gorenko@canada.ca

Suggested citation: Office of the Chief Dental Officer of Canada. Human papillomavirus and oral health. Can Commun Dis Rep 2020;46(11/12):380–3. https://doi.org/10.14745/ccdr.v46i1112a03
Keywords: HPV, oral cancer, oral sex, awareness, oral health professionals

Introduction

Canada is considered to be among the world leaders in oral health (1). Oral health is defined by the Canadian Dental Association as "a state of the oral and related tissues and structures that contribute positively to physical, mental and social well-being and the enjoyment of life's possibilities, by allowing the individual to speak, eat and socialize unhindered by pain, discomfort or embarrassment" (2). It might come as a surprise to most Canadians that there are growing concerns about the rise in numbers of human papillomavirus (HPV)-related mouth and throat cancers (3). Sexually transmitted infections (STIs) are a significant public health concern in Canada (4). However, when one first thinks about STIs, their impact on oral health is often not top of mind. HPV infection is a good example of such an overlooked connection. HPV is both very common and very contagious; and different types of HPV are transmitted through sexual activities. More than 70% of sexually active Canadian men and women will have a sexually transmitted HPV infection at some point in their lives (5). While most people will contract this virus in their genital area, it can also be contracted in the mouth and throat (3). People are generally unaware of this fact, and of the potential consequences of an oral HPV infection (6). This overview will provide a synopsis of HPV, HPV-related oropharyngeal cancer (OPC), and how oral health professionals can contribute to reducing the burden of OPC on individuals and health care.

Human papillomavirus epidemiology

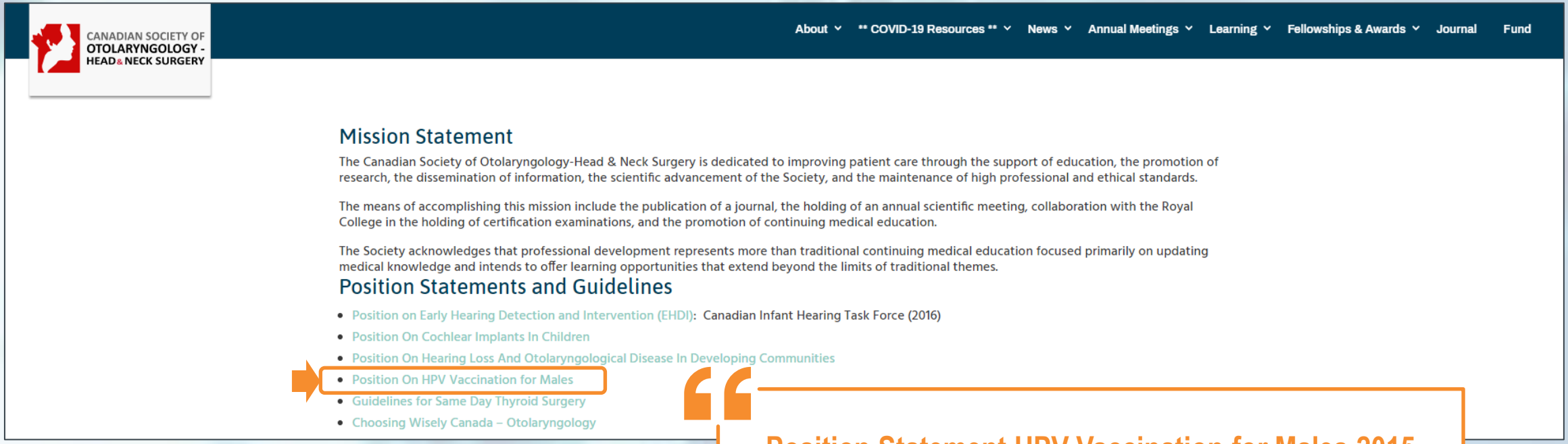
There are over 100 types of HPV and the virus can infect different parts of the body (5). Low-risk strains cause minor ailments, such as warts, whereas high-risk strains can cause cancer (7). HPV is the most common STI in Canada and around the world, and most sexually active Canadians will eventually become infected with the virus (5). In many cases, the infection will disappear on its own, but in the small portion of cases, where the infection remains, it may lead to the development of cancers of the cervix, vagina, penis, anus, mouth or throat (8). It can take years before an infection by the high-risk persistent form of the virus can develop, in some cases, into cancer. Therefore, preventing transmission and immunizing pre-adolescents, teenagers, young adults and other potentially vulnerable groups is important (9).

The causal relation between HPV and cervical cancer is well established (10). HPV is the cause for nearly all cervical cancer (11). Indeed, according to a recent article, "cervical cancer continues to be a major public health problem affecting middle-aged women, particularly in less-resourced countries" (12). According to the World Health Organization, cervical cancer is the fourth most frequent cancer in women worldwide (13). In Canada however, we have seen a sharp decline in both incidence and mortality over time, with one of the lowest incidence rates of cervical cancer in the world (14). The combination of an early adoption of wide-spread screening tests and the introduction of the HPV vaccine played a key role in that decline (15).

> Oral health professionals can play a key role in preventing HPV infection and HPV-related oropharyngeal cancers by raising awareness, educating and offering counselling to their clients, and promoting evidence-based preventive and diagnostic interventions.
>
> *November 5, 2020*

https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2020-46/issue-11-12-november-5-2020/human-papillomavirus-oral-health.html

Position statements:
Canadian Society of Otolaryngology-Head & Neck Surgery



Position Statement HPV Vaccination for Males 2015

Recognizing that human papillomavirus (HPV) is the most common sexually transmitted infection in men and women and that males suffer from the consequences of being infected with HPV, the CSOHNS calls on the Canadian Government to fund HPV vaccination programs for boys and men.

https://www.entcanada.org/cso/position-statements/position-statement-hpv-vaccination-for-males/

Position statements:
Alberta Dental Association & College

https://www.dentalhealthalberta.ca/preventing-hpv-positive-oropharyngeal-cancer/

Position statements:
American Dental Association

ADA American Dental Association®
America's leading advocate for oral health

Coronavirus Updates | About ADA | Contact | Join | Renew | Login

MEMBER CENTER | EDUCATION/CAREERS | CLINICAL RESOURCES | ADVOCACY | PUBLICATIONS | PUBLIC PROGRAMS

ADA News
- Current Issue
- ADA News Archive
- ViewPoint
- ADA CareerCenter
- ADA Marketplace

Home > Publications > ADA News > ADA News Archive > ADA adopts policy supporting HPV vaccine

Share

ADANews

Current Issue

ADA adopts policy supporting HPV vaccine
October 22, 2018

By Michelle Manchir

Honolulu — The ADA urges dentists to support the use and administration of the human papillomavirus virus vaccine, recognizing it as a way to help prevent infection of the types of HPV associated with oropharyngeal cancer, according to a resolution the ADA House of Delegates passed Oct. 22 at ADA 2018 – America's Dental Meeting.

> The ADA urges dentists to support the use and administration of the human papillomavirus virus vaccine, recognizing it as a way to help prevent infection of the types of HPV associated with oropharyngeal cancer, according to a resolution the ADA House of Delegates passed Oct. 22 at ADA 2018 – America's Dental Meeting.

https://www.ada.org/en/publications/ada-news/2018-archive/october/ada-adopts-policy-supporting-hpv-vaccine

We must act cohesively:

- **Advocate**
  - advocate the benefits of preventive programs such as vaccine protocols
  - Goal: funding vaccine programs for every patient who wants and needs one
- **Develop communication tools**
  - Clear and concise language – common language between physicians, nurses, pharmacists, dentists…
  - To our colleagues and to decision makers
- **Facilitate**
  - facilitate dental rehabilitation in a local and timely manner.
  - Protect the vulnerable patients and ensure their care is supported not just short term, but long term. This disease and the sequelae are for life.
    - Close to home
    - Competent, certified clinicians
    - Financial support
      - Currently – not good

Thank you

ALBERTA
HEAD & NECK
CANCER
DENTAL LEADERSHIP TEAM

Panellist:

Dr. Vivien Brown MD, CM, CCFP, FCFP, NCMP

Assistant Professor, University of Toronto

Family Physician

VP North America, Medical Women's International Association

Objective 3: Provide counselling suggestions adapted to various head and neck patients and their families

Counseling Patients with Head and Neck HPV Cancer

Vivien Brown MDCM, CCFP, FCFP, NCMP

Assistant Professor, Department of Family & Community Medicine

University of Toronto

Disclosures

Item	Company / Other
Grants/Research Support:	None at present
Speakers Bureau/Honoraria:	Allergan, Amgen, Biosyent, GSK, Merck, Novartis, NovoNordisk, Pfizer, , Sunovion, Searchlight
Consulting Fees / Advisory:	As above
Other:	Board Member: Immunize Canada Women's Brain Health Past President FMWC VP North America, Medical Women's International Association

Goal of Counseling

- What do we say and how do we say it?
- 1. Transmission
- 2. Prevention
- 3. Duration and risk of spread
- 4. Protecting partners

A Patient-Centered Approach to Counseling Patients With Head and Neck Cancer Undergoing HPV Testing: A Clinician's Guide

Topic	Question	Answer
Transmission	How, when, or from whom did I get HPV?	HPV is a sexually transmitted virus. Most sexually active people will get HPV in their lifetimes. It is impossible to know with certainty from whom or when you acquired HPV because most people do not know they have it.
Prevention	How can I avoid transmitting HPV to others?	Lifetime mutual monogamy or abstinence are the best ways to prevent transmission. Condom use and fewer sexual partners are considered the mainstay of prevention. Experts are still determining what risks, if any, sexual partners of patients with HPVOPC have in developing cancer.
Duration of infection and progression to cancer	Will I always have HPV?	A healthy immune system suppresses the virus in most infected people. Experts are still determining whether HPV remains in the body, when HPV is no longer contagious, and how long it takes between HPV infection and development of oropharyngeal cancer.
Treatment	What are the best treatment options for HPVOPC?	There is currently no method for detecting the cancer in a precancerous stage, such as with the Pap test in cervical cancer. However, studies show that patients with HPVOPC who are also nonsmokers respond better to cancer treatment and have better overall survival than patients with HPV-negative oropharyngeal cancer.
Information for partners	What should I tell my partner about my HPV status?	Most infected people control HPV and do not develop signs or symptoms. If you decide to tell your partner about your HPV testing result, it is best to talk openly and honestly. Partners who have been together often share HPV, but it is impossible to know the direction of transmission. HPV is a common virus. It does not imply infidelity or promiscuity. There should be no shame or blame associated with an HPV diagnosis.

Abbreviations: HPV, human papillomavirus; HPVOPC, HPV-positive oropharyngeal cancer.

CHU et al. *TheOncologist* 2013;18:180–189

Canadian physician questionnaire: Practices regarding HPV counseling & vaccination in head and neck cancer

Background:

- Human papillomavirus (HPV) has recently been implicated as a causative agent in a rapidly growing number of oropharyngeal cancers.
- Emerging literature supports the hypothesis that HPV vaccination may protect against HPV-related head and neck cancer (HNC) in addition to HPV-related cervical and anogenital disease.
- While the association between HPV infection and cervical cancer is widely understood, its relation to HNC is less well known.

The purpose of this study was to better understand HPV counseling practices for infection and vaccination in relation to HNC of primary care physicians (PCPs), Obstetricians/Gynecologists (OBGYNs), and Otolaryngology - Head and Neck Surgeons (OHNSs) in Canada.

Methods:

- A Canada-wide electronic questionnaire regarding counseling practices on HPV infection, transmission, and vaccination was designed and distributed to PCPs, OBGYNs, and OHNSs across Canada through electronic and paper-based methods.
- Basic Descriptive statistics were used to analyze responses.

Canadian physician questionnaire: Practices regarding HPV counseling & vaccination in head and neck cancer

Results:

- In total, 337 physicians responded (239 family physicians, 51 OHNSs, 30 OBGYNs, and 17 pediatricians).
- Three out of four PCPs reported routine counseling of their patients regarding HPV infection, transmission, and vaccination.
- Among this group, 68% reported “never” or “rarely” counseling patients that HPV can cause HNC.
- The most commonly reported reason that PCPs cited for not counseling was a lack of knowledge.
- The majority of OHNSs (81%) and OBGYNs (97%) counseled patients regarding HPV infection, transmission, and vaccination.
- However, very few OHNSs (10%) regularly counseled patients with HPV-related HNC about HPV-related anogenital cancer.
- Similarly, very few OBGYNs (18%) regularly counseled patients with HPV related cervical/anogenital cancer about HPV related HNC.

Conclusions: The rate of counseling on HPV infection, transmission, and vaccination in relation to HNC among PCPs is low. The most common reason is a lack of knowledge. Specialists rarely counsel patients with confirmed HPV-related cancer about other HPV-related malignancies. More research is needed.

Anderson et al. Journal of Otolaryngology - Head and Neck Surgery (2017) 46:61 DOI 10.1186/s40463-017-0237-8

Counselling and HPV Persistence in Coinfected Couples

Introduction. Human papillomavirus (HPV) infection is a very common sexually transmitted disease. A variable concordance and clearance time between partners of infected heterosexual couples have been shown.

Aim. Aims of this study were evaluation of prevalent sites of HPV infection, frequency, genotype concordance, and course of viral infection in counseled and non-counseled infected heterosexual couples.

Results.

- The study was completed by 49 couples.
- The specific HPV-type concordance among couples was 69.4%.
- Among couples who declared performing oral sex, oropharyngeal infection was 22.7% of couples

Thereafter, couples were randomly divided in two groups: a control group of 24 couples followed up for HPV-related lesions, and an experimental group counseled of 25 couples followed up for HPV-related lesions and counseled to avoid known risk factors for HPV infection.

- In patients who received counseling, the number of infected sites diminished faster during the follow-up and a higher number of couples had clearance.
- Only in the counseled group were there no infected couples at the end of the 24-month follow-up period.

Garolla et al. J Sex Med 2014;11:127–135

Information for Family Members/Partners

- Am I contagious?
- Can I give an oral HPV infection to others? ▫
- HPV is not spread through casual physical contact, such as touching, sharing drinks or kissing on the cheek or lips. ▫
- Spouses/Long-term partners: Since HPV is sexually transmitted, it is likely that your sexual partners have HPV. You and your spouse/partner do not need to make any changes in your sexual practices.
- What should my partner(s) do? If your partner has a cervix, they should follow cervical cancer screening guidelines. In Ontario, this is a Pap test every three years if sexually active. ▫There are no other routine or standard HPV screening guidelines for those who do not have a cervix. Your partner(s) should talk to their healthcare provider about signs and symptoms to watch for.

Information for Family Members/Partners

- Does HPV mean my partner had other sexual partners during our relationship?
- No, having an oral HPV infection does not mean your partner was/is unfaithful. ▫
- There should be no shame or blame associated with an HPV diagnosis. ▫
- Some people with an Oral HPV infection report never having had oral sex, or have had only a few lifetime oral partners in their lifetime

Will HPV Vaccine be Advised?

- The HPV vaccine prevents people from getting new HPV infections. It will not help clear an HPV infection you already have. ▫
- It is not known at this time whether the vaccines can prevent cancer recurrences in the oropharynx. ₸here is good data though around decreasing risk of recurrence in those people with cervical cancer, both in the cervix and in other locations
- The HPV vaccine is approved by Health Canada for people up to the age of 45. Unvaccinated people aged 45 and under should talk to their doctor about the benefits of the vaccine.
- Now approved in Canada and the US to decrease risk of Head and Neck Cancers

Is my spouse/partner at a higher risk of this cancer?

- The rate of Oral HPV infection among spouses/partners is the same as the general population. ▫
- The risk of developing HPV-associated cancers among spouses/partners may be slightly higher than the general population.
- These cancers are rare. ▫
- Your partner should discuss any symptoms or concerns with their family doctor

Does an HPV status affect the chance of my cancer being cured?

- HPV-positive OPSCC have higher cure rates than HPV-negative OPSCC because they seem to be more sensitive to chemotherapy and radiation therapy.
- Researchers are still studying why this happens. ▫
- People with cancer who do not use tobacco or alcohol live longer and are less likely to get new cancers. ▫People with any head and neck cancer should stop using alcohol and tobacco

Can I get another cancer from HPV?

- The risk of getting a second cancer from HPV in the future is low. But not impossible as a patient, you have already showed you are unable to clear persistent HPV.
- Therefore vaccination may decrease the risk of other related HPV cancers
- You will be regularly checked by your oncologist for at least 5 years. Report any new symptoms or concerns to your doctors.

Barriers to Immunization

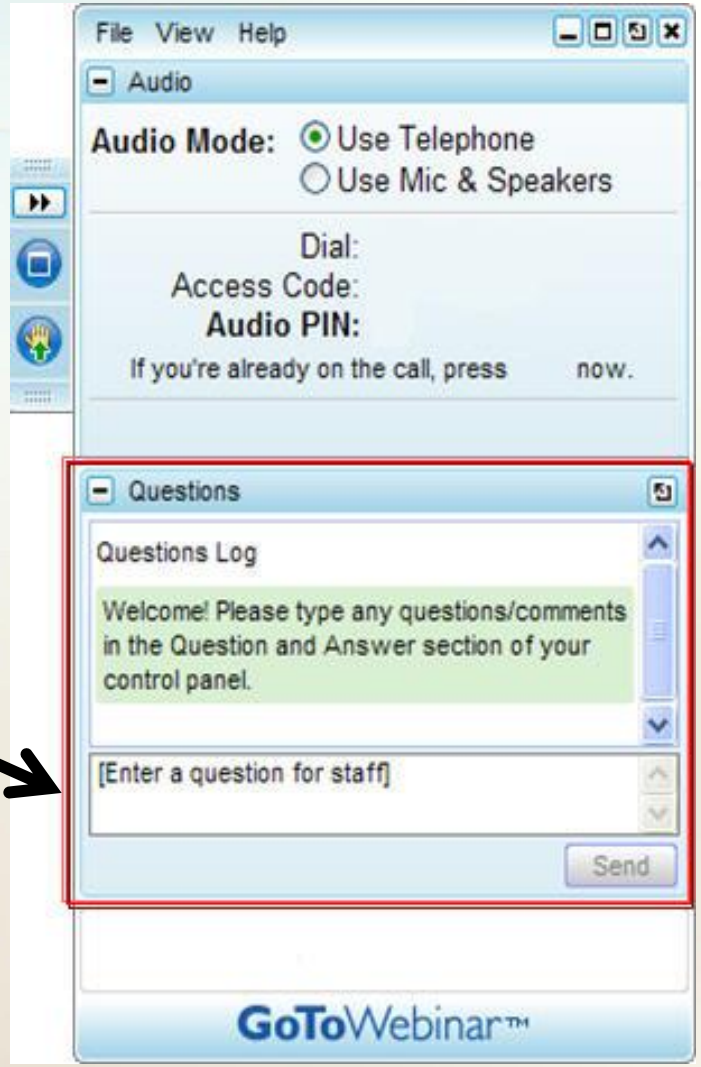
- Lack of strong recommendations from their physician and/or nurse (and even office staff)
- Misrepresentation of the risks of vaccines and benefits of disease prevention
- Lack of understanding of specific vaccine safety and efficacy
- Missed opportunities for receiving the vaccine at health care encounters
- Cost

2006 Canadian Immunization Guide

Discussion/Question & Answer Period

Objective 4: Outline ways to improve prevention of head and neck cancers and discuss the roles of different specialties in increasing awareness and prevention

Submit your text question using the Questions pane



The Tsunami of Head and Neck Cancers in Canada: Addressing the issues

CIDC
Consortium for Infectious Disease Control

Evaluation: https://questionpro.com/t/ASLvBZsrb7

Slide Set, Video recording, HPV documents at: www.CIDCgroup.org

Find out about news and upcoming events….

….Join the **Canadian HPV Prevention Network** at: www.CIDCgroup.org

(it's free! Fill out the 'Contact' form on the website)

Thank you for participating!

More Info: Info@CIDCgroup.org

This educational program is made possible through the support of **Merck Canada Inc.**