Oral Cancer Control: Policies to Address a Complex Health Burden

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Learning Objectives

Attendees will be familiarized with:

- U.S. Oral Cancer Control Research Findings (1996-2016)
- The Status of Oral Cancer in Comprehensive Cancer Control Programming in the U.S.
- Policy Options for Improving Oral Cancer Control in the U.S.
No Conflicts of Interest to Declare
What can we make of the information presented by my colleagues?

Oral cancer incidence and survival rates vary
- By head and neck sub-site
- By race/ethnicity/sex
- Over time

Reducing risk is challenging because
- There are many risk factors
- They are often interactive
- Most are poorly understood
- Different populations have different risk profiles
- Risk profiles vary over time within the same populations
Defining Cancer Control

“Cancer control aims to
  ◦ **reduce** the **incidence** and **mortality** of cancer,
  ◦ and to **enhance the quality of life** of those affected by cancer,
  ◦ through an **integrated and coordinated approach** directed to
  ◦ primary prevention,
  ◦ early detection,
  ◦ treatment,
  ◦ rehabilitation and
  ◦ palliation."

The Focus of this Talk is on Public Health and Policy Alternatives for Oral Cancer Control

Prevention
  ◦ Risk Reduction

Early Detection
  ◦ Self Exams
  ◦ Clinical Exams

Comprehensive, Coordinated, Inter-Disciplinary Care Delivery
  ◦ The Real Key
## Published Reports on Interventions 1996-2016: PubMed Searches (U.S. only)

<table>
<thead>
<tr>
<th>Mouth neoplasms</th>
<th>Paired with:</th>
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<tbody>
<tr>
<td>And</td>
<td>Health services accessibility</td>
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<tr>
<td>Oropharyngeal neoplasms</td>
<td>Health status disparities</td>
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<tr>
<td></td>
<td>Healthcare disparities</td>
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<tr>
<td></td>
<td>Minority health</td>
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<td></td>
<td>Risk reduction behavior</td>
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<tr>
<td></td>
<td>Risk assessment</td>
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<td></td>
<td>Preventive health services</td>
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<td></td>
<td>Early detection of cancer</td>
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</table>
Summary of Reported Research Findings

Studies of population awareness
  ◦ Limited Knowledge (1-14)

Studies of health education resources
  ◦ Poor Quality (15-19)

Studies of educational interventions
  ◦ Intensive campaigns can increase knowledge and demand for services (20, 21)

Studies of provider behavior
  ◦ Not consistently counseling or examining (22-39)

Studies of interventions to change provider behavior
  ◦ Easy to change intentions (26; 40)
  ◦ Difficult to change behavior in the long term (41)
National Comprehensive Cancer Control Program (NCCCP)

Create coalitions.
Look at the cancer burden in their area.
Prioritize proven strategies for cancer control.
Create cancer control plans and put them into action.

https://www.cdc.gov/cancer/ncccp/about.htm
Priorities Specified by CDC

Emphasizing *primary prevention* of cancer
- Quitting smoking
- Eating a healthy diet
- Keeping a healthy weight

Promoting early detection

Post-diagnostic support

Promoting cancer control policies in populations where most needed

Promoting access to quality health care for all people, including those in communities with a higher burden of cancer.

Evaluating policies and programs to see if they work well.

https://www.cdc.gov/cancer/ncccp/about.htm
The Plans

50 States
District of Columbia
8 Territories
7 Tribal Organizations
Expirations 2007-2022
38 Plans either expired or rolled over (still checking)
NCCCP Priorities for Oral Cancer

56 Plans specifically mention oral/mouth cancers
12 Plans specifically mention head and neck cancers
47 Plans specifically mention oropharyngeal/pharynx cancers
Also mentioned:
  ◦ Lip (8)
  ◦ Tongue (7)
  ◦ Throat (14)
  ◦ Cheek/Buccal Mucosa (3)
  ◦ Gums/Gingiva (3)
  ◦ Floor of Mouth (2)
  ◦ Palate (1)
22 Plans specify oral cancer is a priority
Objectives Adopted to Reduce Oral Cancer Burden

Tobacco control—37 plans
Alcohol—11 plans
HPV Awareness/Vaccination—16 plans
Betel/Areca Nut use—2 plans
Goal Setting

Surveillance (Incidence/Mortality) Rates Reported—27 Plans
Targets for Reduction in Risk or Outcomes—18 Plans
Maryland’s CCCP: 2016-2020

Identifies Oral Cancer as a Priority
Identifies Tobacco as a Cause of Oral Cancer
Identifies Alcohol as Increasing Risk for Oral Cancer
Identifies HPV as linked to Oropharyngeal Cancer
Targets Sex and Race Disparities in Incidence and Mortality
Provides Baseline Data on:
  ◦ Oral Cancer Incidence and Mortality Rates
  ◦ Screening Rates
Maryland CCCP Specifies Goals for 2020

Reduce Incidence Rate from 10.5 to 9.6 per 100,000
Reduce Mortality from 2.1 to 1.8 per 100,000

Goals for Reducing Disparities

Stop upward trend in oropharynx cancers for whites
Reduce Black oral cancer rate from 8.3 to 5.5
Reduce White mortality rate from 2.0 to 1.7 per 100,000
Reduce Black mortality rate from 2.7 to 2.0 per 100,000
Maryland Strategies for Accomplishing Goals (Not Explicitly Tied to Oral Cancer)

- Reduce Prevalence of Tobacco Use
- Reduce Exposures to Secondhand Smoke in High School Children
- Reduce Obesity Rates
- Increase Fruit and Vegetable Consumption
- Increase Physical Activity
- Decrease Alcohol Consumption
- Increase HPV Vaccinations
  - Girls
  - Boys
- Reduce UV Exposures

None of these strategies is directly tied to Oral Cancers, but to cancers generally.
NCCCP Current Plan Strategies to Reduce the Oral Cancer Burden (Tobacco Control)

<table>
<thead>
<tr>
<th>TOBACCO CONTROL STRATEGIES</th>
<th>ORAL HEALTH PROVIDERS IDENTIFIED IN STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoked Tobacco n = 7 78%</td>
<td>No</td>
</tr>
<tr>
<td>Smokeless Tobacco n = 4 44%</td>
<td>Yes (n = 1)</td>
</tr>
<tr>
<td>E Cigarettes n = 2 22%</td>
<td>No</td>
</tr>
<tr>
<td>Hookah n = 1 11%</td>
<td>No</td>
</tr>
<tr>
<td>Youth Tobacco Use n = 7 78%</td>
<td>No</td>
</tr>
</tbody>
</table>
### Historical Adult Smoking Rates in the U.S.

<table>
<thead>
<tr>
<th>Year</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>52.9%</td>
<td>31.5%</td>
</tr>
<tr>
<td>2015</td>
<td>16.7%</td>
<td>13.6%</td>
</tr>
</tbody>
</table>

The Continuing Need for Tobacco Control

Current Smoking Among Adults in 2015 (States)

- In 2015, current smoking ranged from about 9 of every 100 adults in Utah (9.1%) to nearly 26 of every 100 adults in Kentucky (25.9%).

https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/
The Need for Smokeless Tobacco Control

As shown in the graph below, smokeless tobacco use among females has remained low throughout the years. Among males, use decreased during 1986-2000 but has been increasing since then.¹

https://www.cdc.gov/tobacco/data_statistics/fact_sheets/smokeless/use_us/
NCCCP Current Plan Strategies to Reduce the Oral Cancer Burden (Alcohol Use Reduction)

<table>
<thead>
<tr>
<th>ALCOHOL REDUCTION STRATEGIES</th>
<th>ORAL HEALTH PROVIDERS IDENTIFIED IN STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider Counselling  n = 3 33%</td>
<td>No</td>
</tr>
<tr>
<td>Mass Media  n = 4 44%</td>
<td>No</td>
</tr>
<tr>
<td>Other  n = 3 33%</td>
<td>No</td>
</tr>
</tbody>
</table>
NCCCP Current Plan Strategies to Reduce the Oral Cancer Burden (HPV)

<table>
<thead>
<tr>
<th>HUMAN PAPILLOMAVIRUS CONTROL</th>
<th>ORAL HEALTH PROVIDERS IDENTIFIED IN STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Awareness Campaign</td>
<td>89%  No</td>
</tr>
<tr>
<td>Provider Counselling</td>
<td>67%  No</td>
</tr>
</tbody>
</table>
HPV Prevalence in the U.S. by Age Group

Figure 46. Human Papillomavirus — Cervicovaginal Prevalence of Types 6, 11, 16 and 18 Among Women Aged 14–34 Years by Age Group and Time Period, National Health and Nutrition Examination Survey, 2003–2006 and 2009–2012

NOTE: Error bars indicate 95% confidence interval.


https://www.cdc.gov/std/stats15/figures/46.htm

Females
• At least 1 dose 63%
• At least 2 doses 52%
• At least 3 doses 42%

Males
• At least 1 dose 50%
• At least 2 doses 39%
• At least 3 doses 28%

www.cdc.gov/mmwr/volumes/65/wr/mm6533a4.htm
## NCCCP Current Plan Strategies to Reduce the Oral Cancer Burden (Early Detection)

<table>
<thead>
<tr>
<th>EARLY DETECTION STRATEGIES</th>
<th>ORAL HEALTH PROVIDERS IDENTIFIED IN STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Self Examination</td>
<td>n = 1 11% No</td>
</tr>
<tr>
<td>Access to Care Promoted</td>
<td>n = 2 22% Yes</td>
</tr>
<tr>
<td>Providers to Do Exams</td>
<td>n = 3 33% Yes</td>
</tr>
<tr>
<td>Oral Health Provider Training</td>
<td>n = 4 44% Yes</td>
</tr>
<tr>
<td>Non-Dental Provider Training</td>
<td>n = 1 11% Not specified</td>
</tr>
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Adult (18-64) Access to Oral Health Care: Dental Visit Past Year 2014

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<tbody>
<tr>
<td>Males</td>
<td>58.1%</td>
</tr>
<tr>
<td>Females</td>
<td>65.8%</td>
</tr>
<tr>
<td>Whites</td>
<td>63.3%</td>
</tr>
<tr>
<td>Blacks</td>
<td>54.8%</td>
</tr>
</tbody>
</table>

Source: Centers for Disease Control and Prevention, Health in the United States, 2015.
Theories of Health Behavior and Behavior Change: What is Required?

Information
◦ Knowledge of Risks/Opportunities for Improvement

Motivation to change
◦ To Pursue Opportunities
◦ Perception of Advantage in Change
◦ Norms Supporting Change

Belief that change is possible
◦ Perceived Ability to Take Action

The ability to execute planned change
◦ Tools and Supports for Action Available

Sustaining change
◦ Continuous Support
Challenges in Prevention Campaigns

Many different risk factors
Emerging risk factors
Different population risk profiles
  ◦ These challenges spread resources thin
  ◦ It is difficult to focus sustainably on one thing
Risks associated with pleasurable activities
  ◦ The struggle to reduce tobacco use has gone on since 1964
Risks associated with private activities
Provider reluctance to counsel
Challenges in Early Detection Campaigns

Lack of Awareness of Need
Lack of Access to Clinical Services
Provider Skills Limited
Lack of Policy Support
The Healthcare Delivery System

Dentists are best able to identify and manage early lesions

Most people don’t visit a dentist regularly
  ◦ Don’t view it as a priority
  ◦ Lack access

The highest risk populations are among those least likely to visit a dentist

Oral health care remains segregated from the rest of the health care system
Envisioning a Health Care System Designed to Reduce the Oral Cancer Burden

Oral health is viewed as systemic health

Healthcare is delivered in an integrated, inter-disciplinary system which includes oral health providers

Access to primary oral health care is widespread and utilization rates are high

Referral from oral health care to tertiary specialty cancer care is seamless

Cancer patients return to primary care settings where oral health providers are informed and prepared to manage cancer treatment sequelae
THANK YOU!

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References