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Ontario Dentists' Capacity to Mitigate the Burden of Oral Cancers

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October 4, 2018

PHO Rounds

Contributors

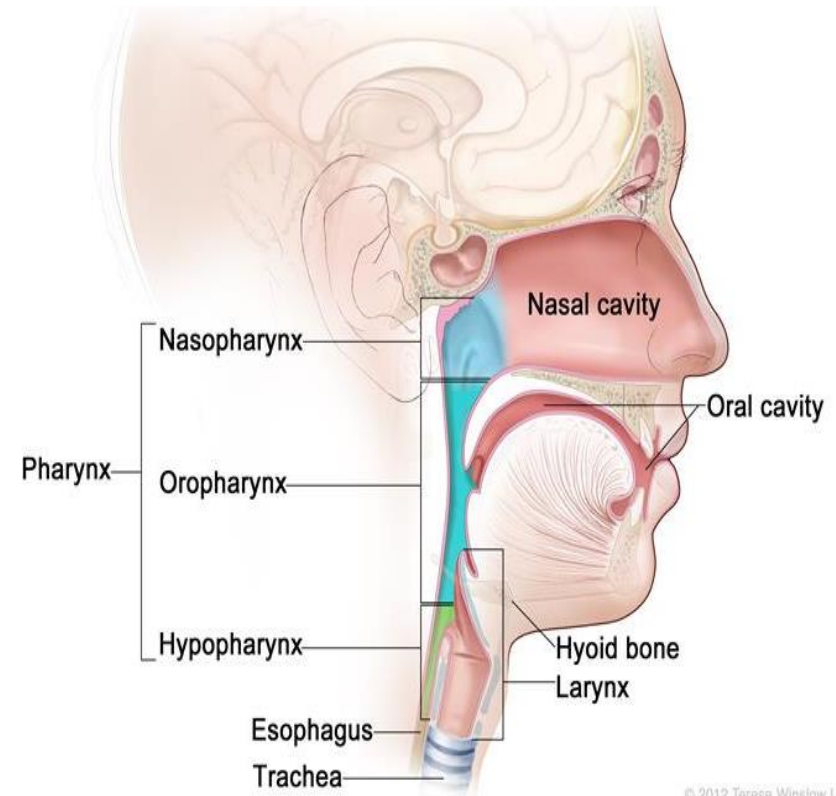
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Major findings

- Large capacity to detect OCs
 - Relatively smaller capacity to detect OPCs
- Limited capacity to diagnose OCs
- Limited capacity to prevent OCs

Anatomy and Risk factors

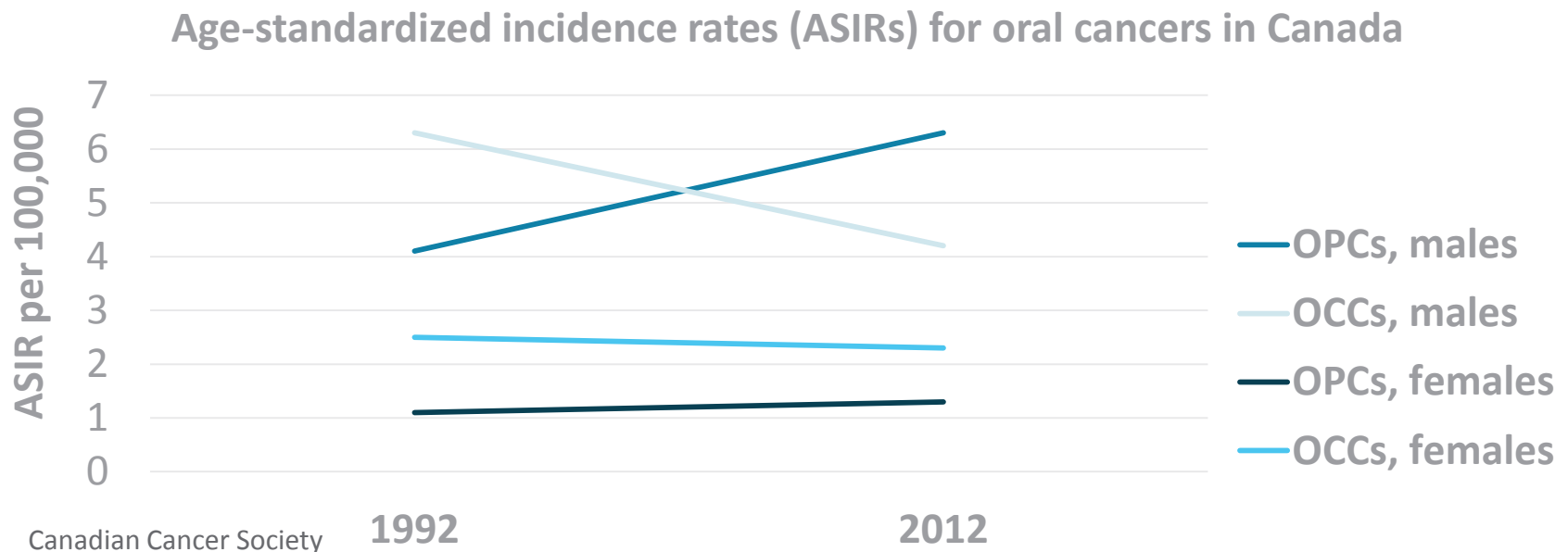
- Oral cancers (OCs) based on the involved anatomical areas:
 - Oral cavity cancers (OCCs)
 - Traditional risk factors
 - Oral pharyngeal cancers (OPCs)
 - Human papilloma virus (HPV)



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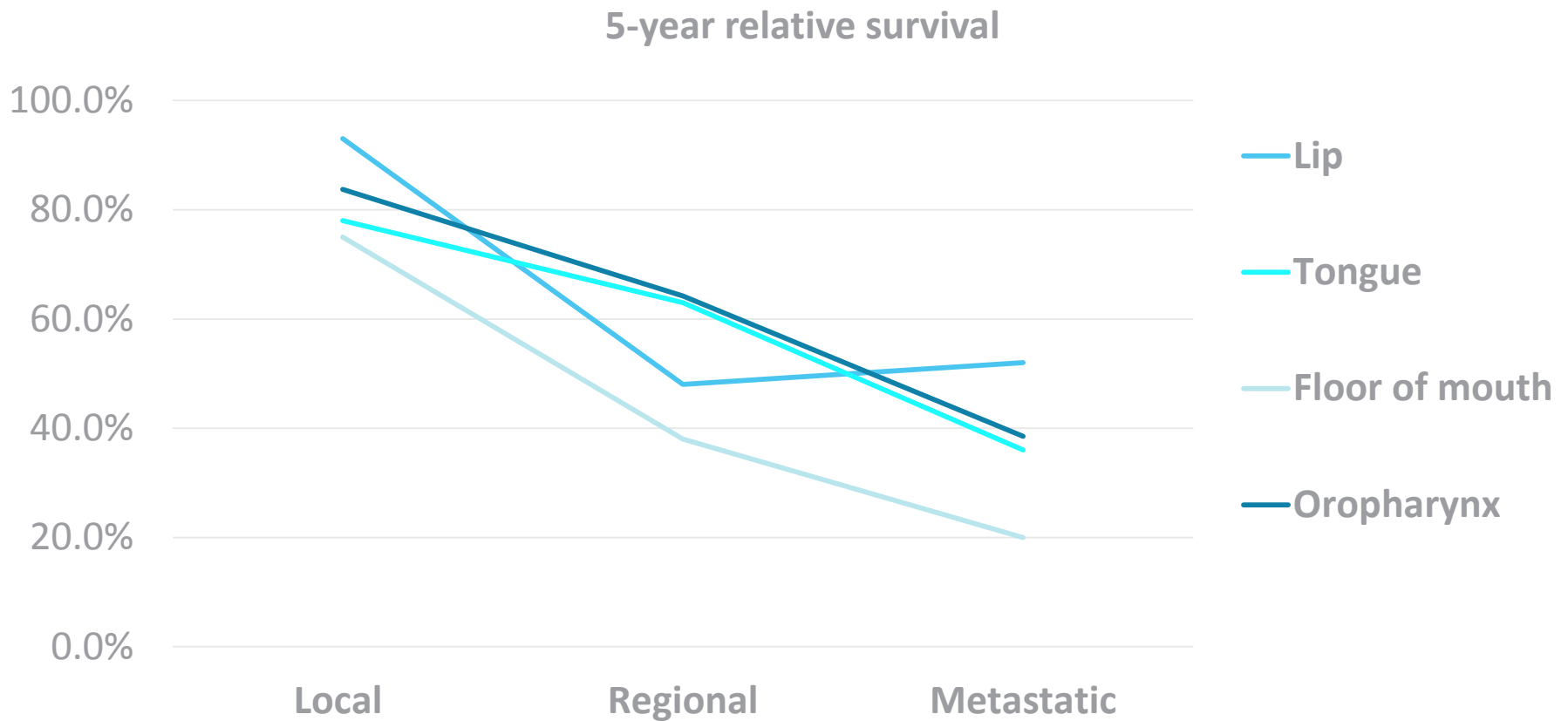
Epidemiology

- Paradigm shift from OCCs to OPCs, especially among men
- The rate of OPCs in males will soon surpass the rate of cervical cancer in females if the same trends continue



Survival rates

- The importance of early diagnosis



Canadian Cancer Society

Public health problem

- OCs have substantial impact at individual, societal, and health care system levels
- Two public health concerns:
 - The upward trends of OPCs
 - Delayed diagnosis

Proposed solutions

- To minimize the burden of OCs:
 - Prevention is a key factor
 - Early detection and diagnosing

Rationale

- Dentists can play key roles
- No information about Ontario dentists' capacity to mitigate the burden of OCs

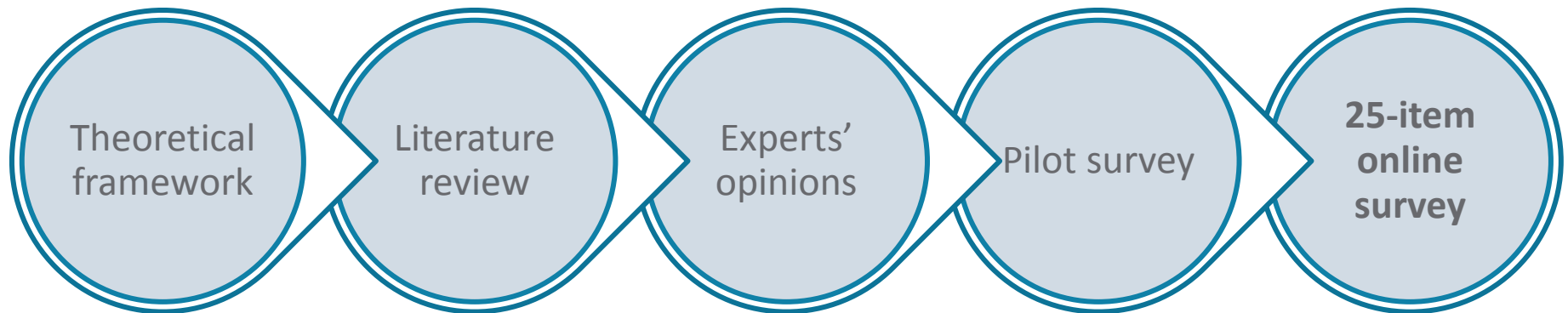
Objectives

- To evaluate Ontario dentists' capacity to mitigate the burden of OCs
- To assess the determinants of Ontario dentists' readiness to mitigate the burden of OCs
- To understand barriers and facilitators to provide oral cancer examinations

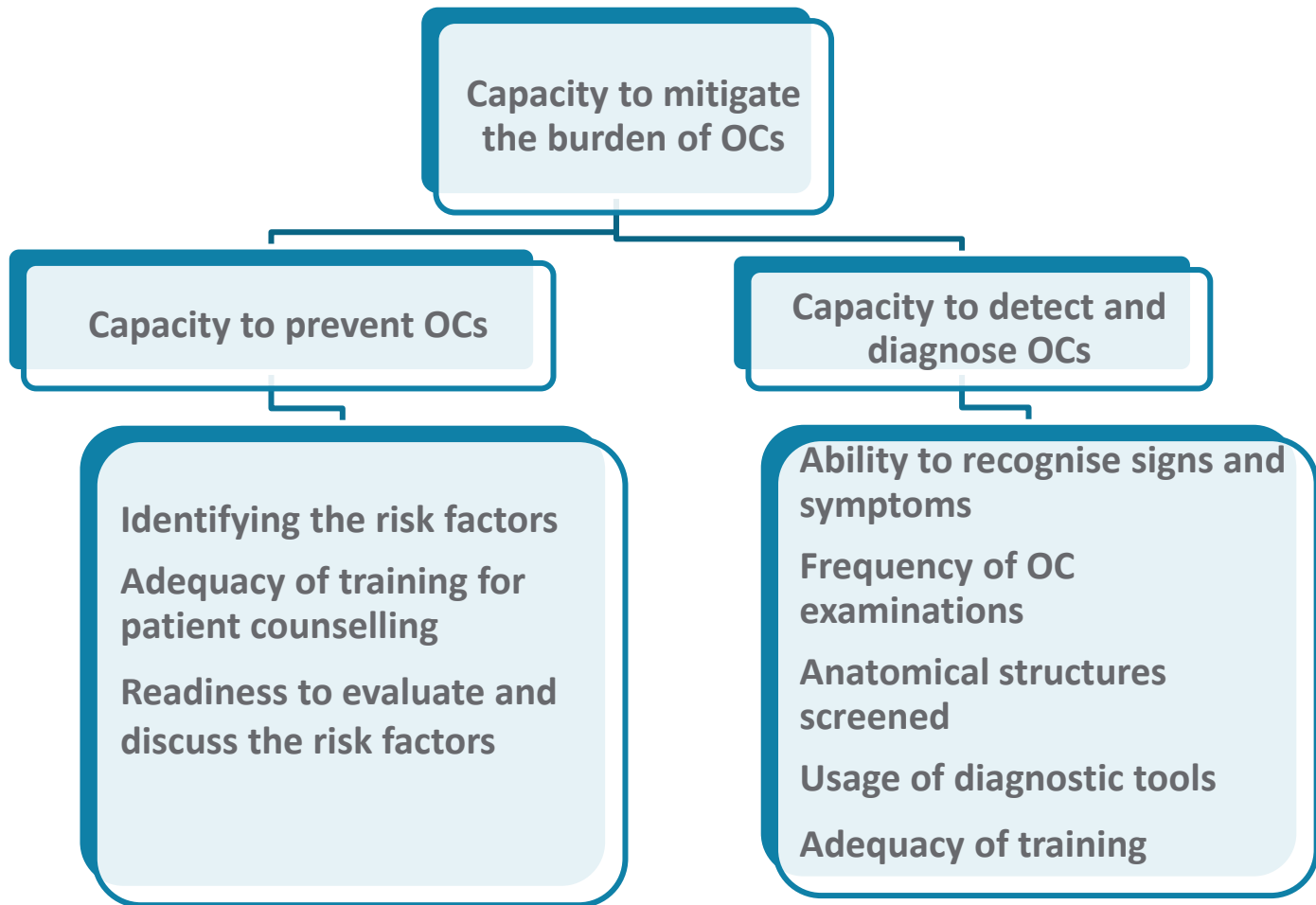
Methods: Study design

- Cross-sectional
- Study population
 - Dentists registered with the Royal College of Dental Surgeons Ontario (RCDSO)
 - N= 9,975 dentists
- Ethics approval obtained from Public Health Ontario

Methods: survey instrument




Dentists' capacity to mitigate the burden of OCs



Methods: dentists' readiness to assess and discuss the risk factors

- Stages of change

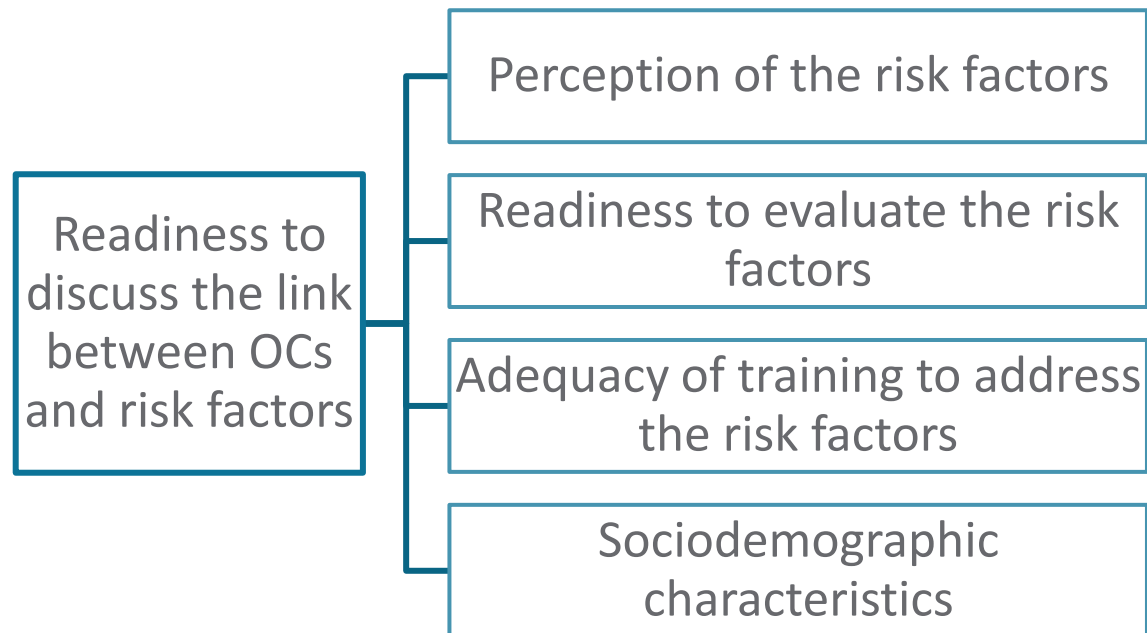


Precontemplation No intention to take action within the next six months	Preaction stages (PASs)
Contemplation Intends to take action within the next six months	
Preparation Intends to take action within the next six months and has taken steps to change the behavior	
Action Changed behavior for less than six months	Postpreparation stages (PPSs)
Maintenance Changed behavior for more than six months	
Termination No temptation to relapse	

Methods: determinants of dentists readiness to prevent OCs

- Discuss the link between OCs and the risk factors
 - Tobacco, alcohol, and HPV
- Assess history of HPV infections
- Recommend HPV vaccine

Methods: determinants of readiness to discuss the link between OCs and the risk factors



Methods: determinants of dentists' readiness to assess history of HPV infections

- Sociodemographic characteristics
- POC
 - Agreement with nine statements derived from four POC
 - Knowledge (consciousness raising)

POC	I do not assess patients' sexual history because...	Agree	Disagree
Dramatic relieve	I am not comfortable asking about sexual history.	<input type="checkbox"/>	<input type="checkbox"/>
	patient of the opposite sex.	<input type="checkbox"/>	<input type="checkbox"/>
	of the large age difference between me and patients.	<input type="checkbox"/>	<input type="checkbox"/>
	I worry about confidentiality issues.	<input type="checkbox"/>	<input type="checkbox"/>
Helping relationships	minor patients.	<input type="checkbox"/>	<input type="checkbox"/>
	a staff member as patient's sex have to be in the room.	<input type="checkbox"/>	<input type="checkbox"/>
Stimulus control	not enough time to discuss sexual history with patients.	<input type="checkbox"/>	<input type="checkbox"/>
	of the physical layout of the clinic.	<input type="checkbox"/>	<input type="checkbox"/>
Self-reevaluation	it is not my role to discuss sexual topics with patients.	<input type="checkbox"/>	<input type="checkbox"/>

Methods: determinants of dentists' readiness to recommend HPV vaccine

- Sociodemographic characteristics
- POC
 - Agreement with five statements derived from three POC
 - Knowledge (consciousness raising)

POC	I do not recommend HPV vaccine because...	Agree	Disagree
Dramatic relieve	I am not comfortable asking about sexual history.	<input type="checkbox"/>	<input type="checkbox"/>
	I am concerned about liability issues.	<input type="checkbox"/>	<input type="checkbox"/>
	I am concerned about the safety of HPV vaccine.	<input type="checkbox"/>	<input type="checkbox"/>
Stimulus control	Appointments are not long to adequately discuss this topic.	<input type="checkbox"/>	<input type="checkbox"/>
Self-reevaluation	I do not believe it is my role to recommend HPV vaccine.	<input type="checkbox"/>	<input type="checkbox"/>

Methods: barriers and facilitators

- Barriers and facilitators to provide OC examinations
 - Preferred mode for continuing education

Methods

- Statistical analyses
 - Proportions
 - Logistic regression analyses
 - Five binary outcomes (PASs vs. PPSs)
 - Readiness to discuss the link between OCs, and tobacco, alcohol, and HPV
 - Readiness to assess history of HPV infections
 - Readiness to recommend HPV vaccine
 - SPSS V.24

Results: sociodemographic characteristics

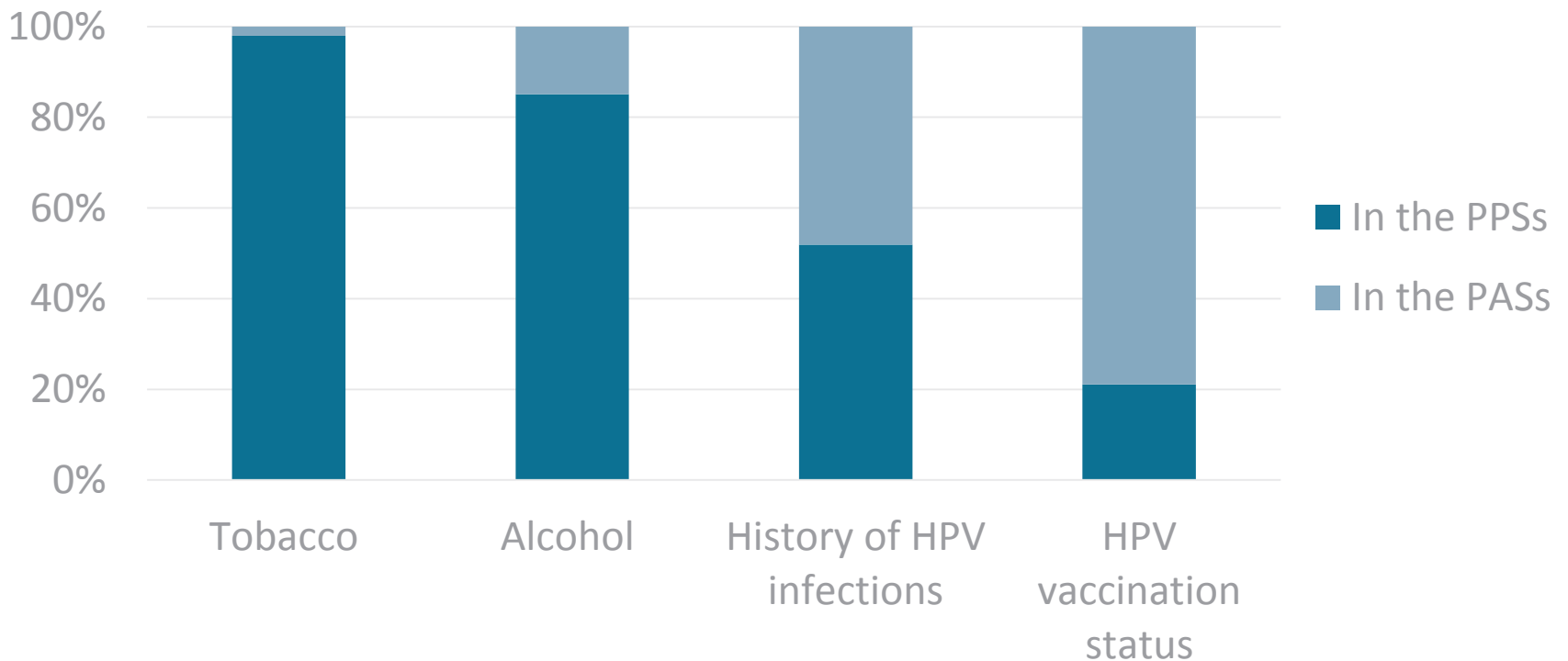
**9,975
dentists
contacted**

932 dentists completed the survey	57.0%	Male dentists
	49.0%	50 years old and over
	84.1%	Private general dentists
	60.0%	Canadian trained
	65.0%	Practicing in Canada for ≥ 10 years
	66.9%	Practicing in urban areas

Results: dentists' capacity to prevent OCs

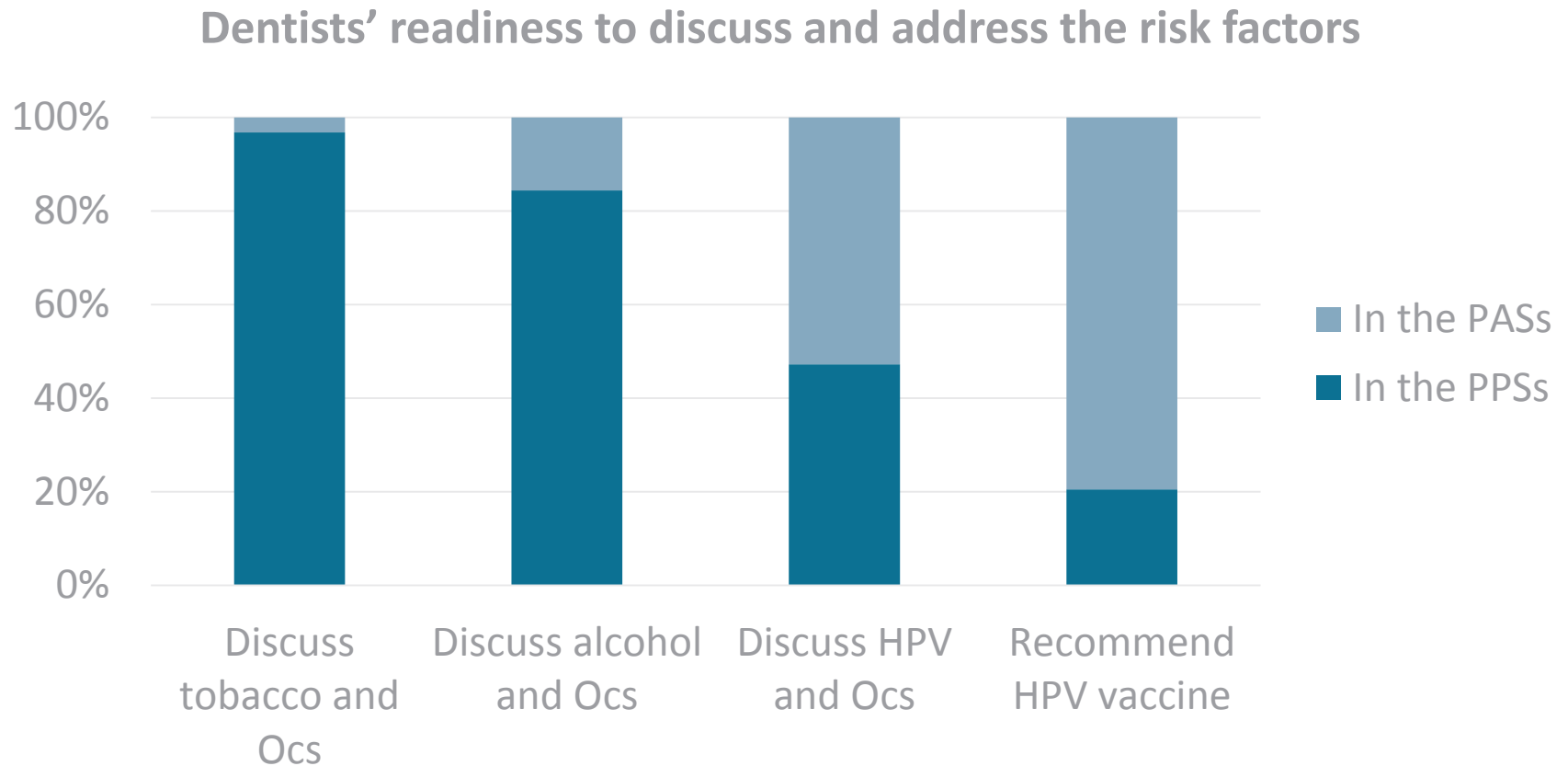
- Readiness to assess the risk factors

Dentists' readiness to assess the risk factors



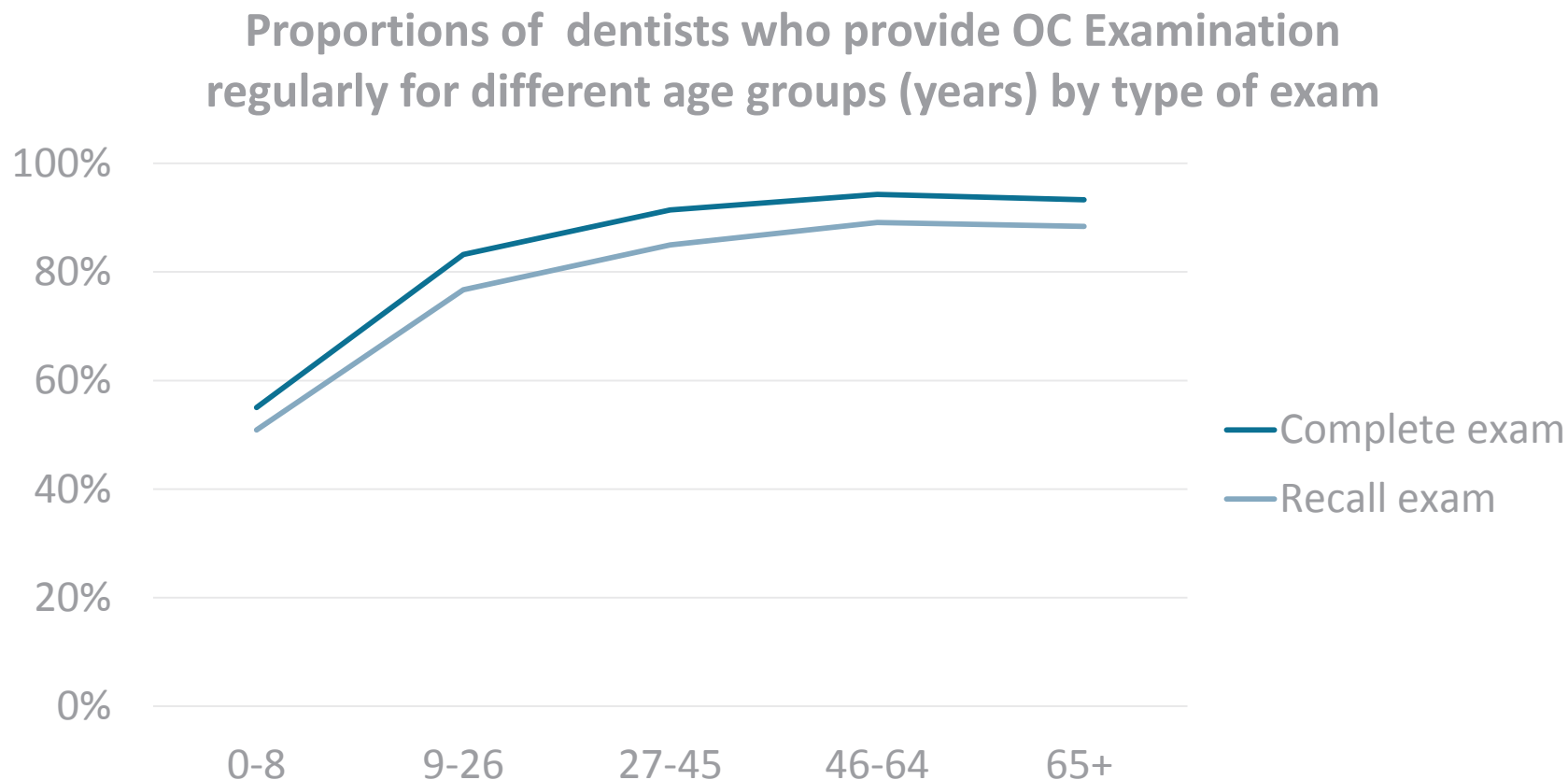
Results: dentists' capacity to prevent OCs

- Readiness to discuss and address the risk factors



Results: dentists' capacity to detect and diagnose OCs

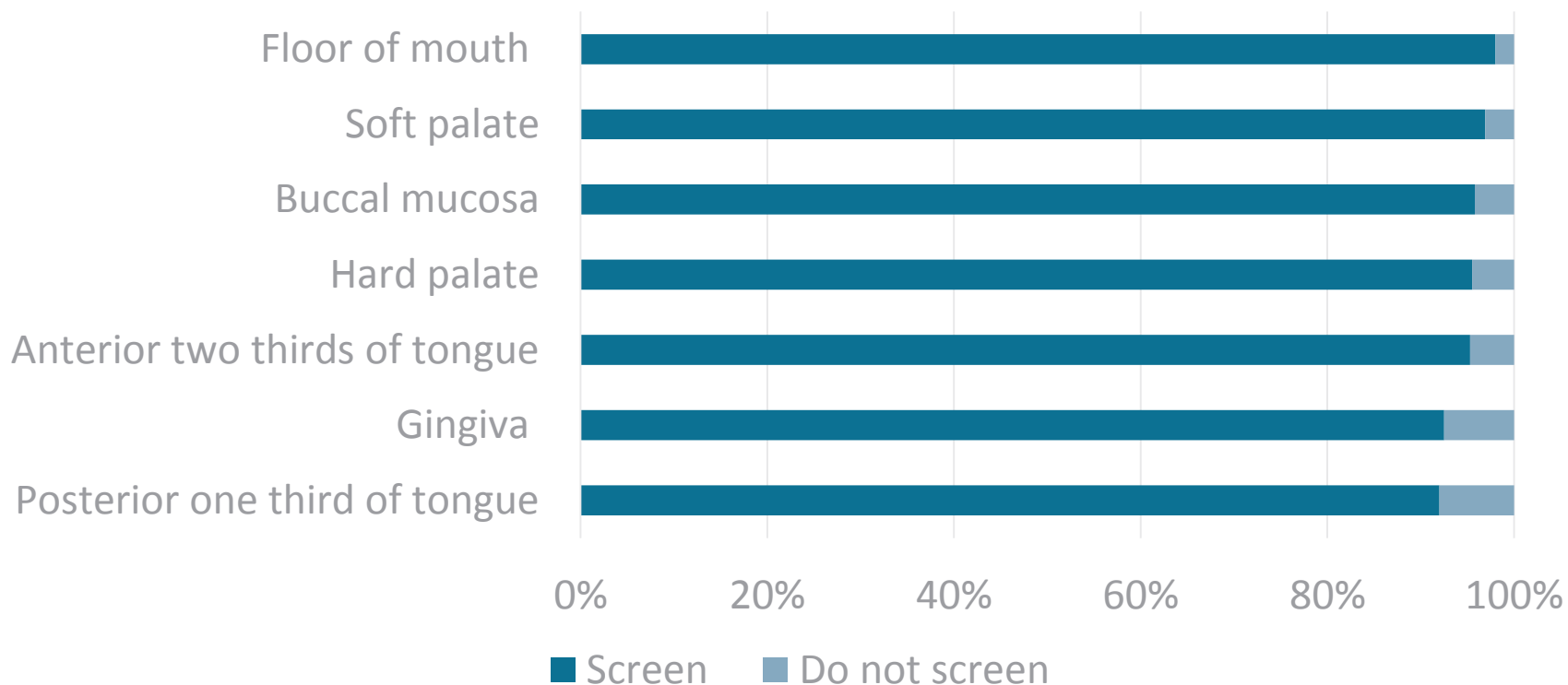
- Frequency of OC examinations



Results: dentists' capacity to detect and diagnose OCs

- Anatomical structures screened

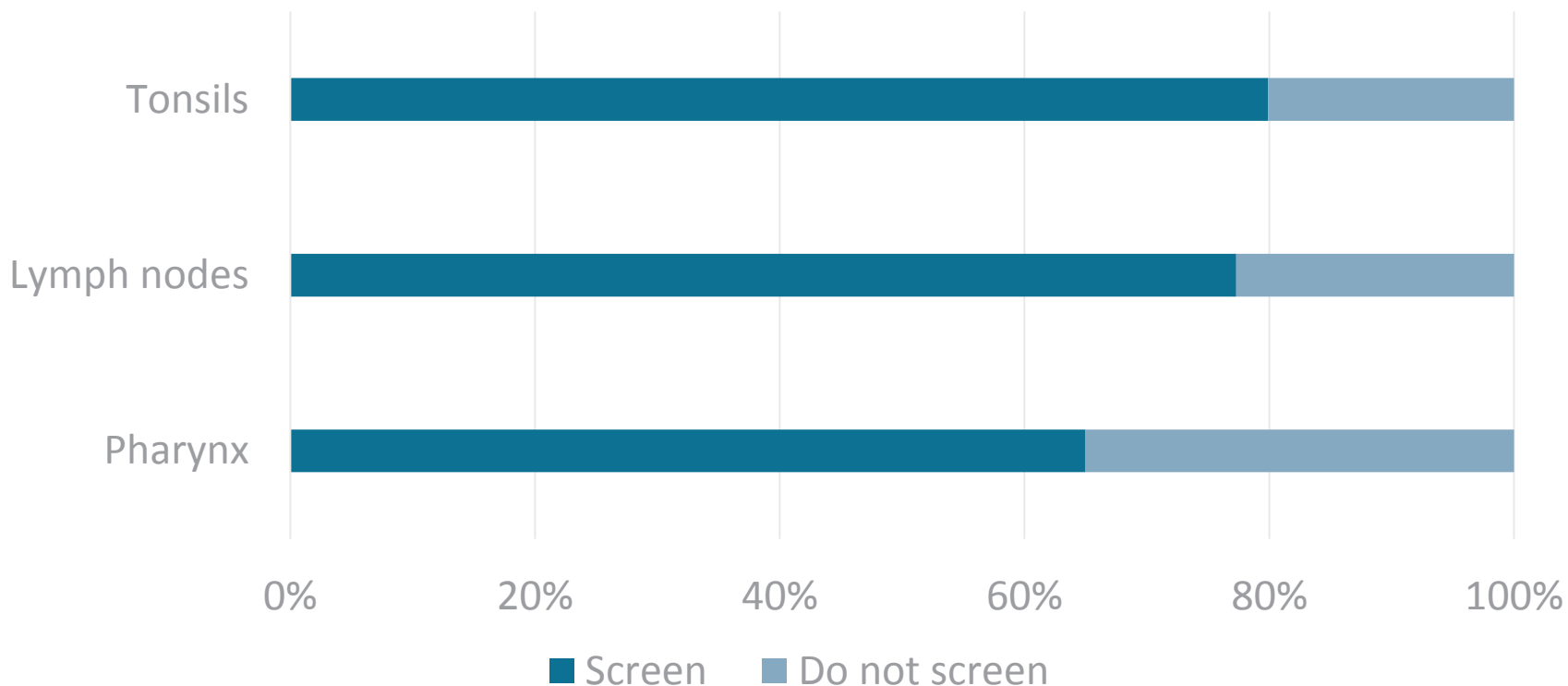
Proportions of dentists who screen each anatomical structure



Results: dentists' capacity to detect and diagnose OCS

- Anatomical structures screened

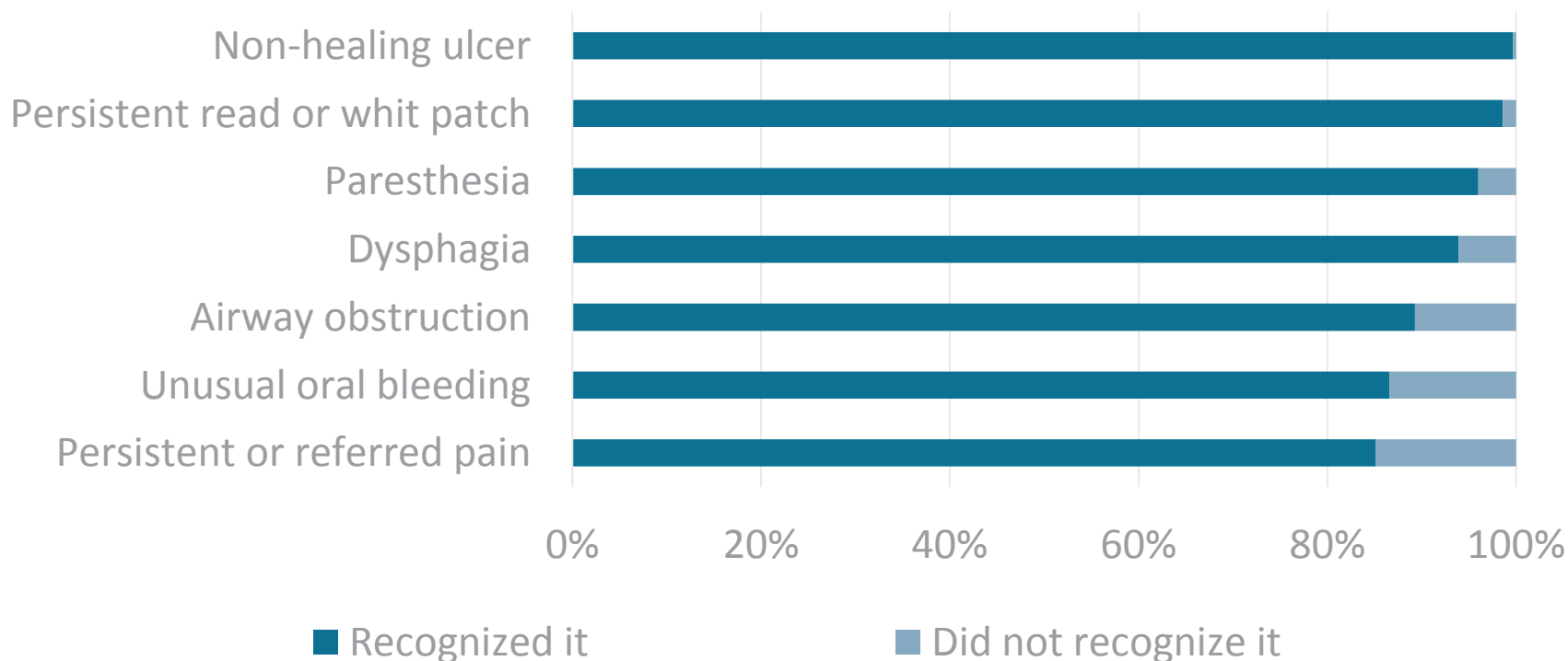
Proportions of dentists who screen each anatomical structure



Results: dentists' capacity to detect and diagnose OCs

- Ability to recognize OC signs and symptoms

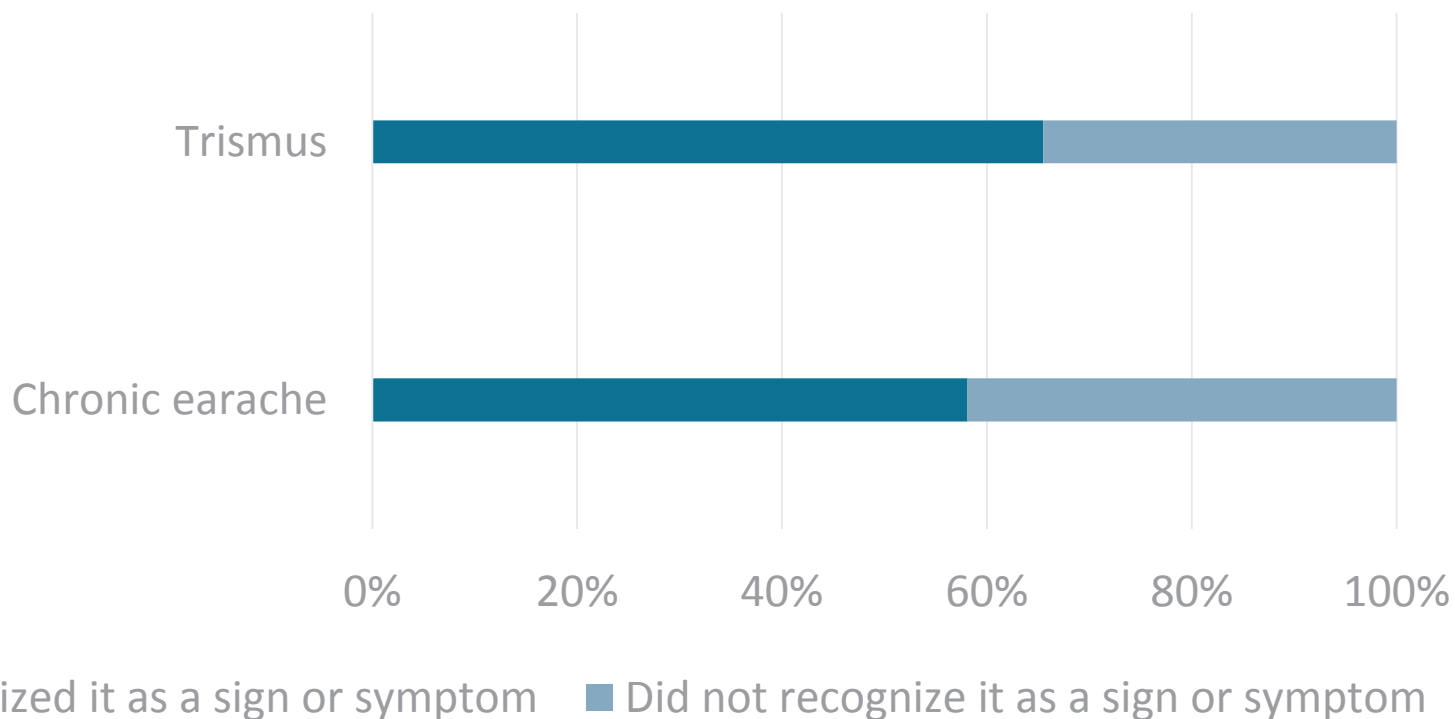
Dentists' ability to recognize OCs signs and symptoms



Results: dentists' capacity to detect and diagnose OCs

- Ability to recognize OC signs and symptoms

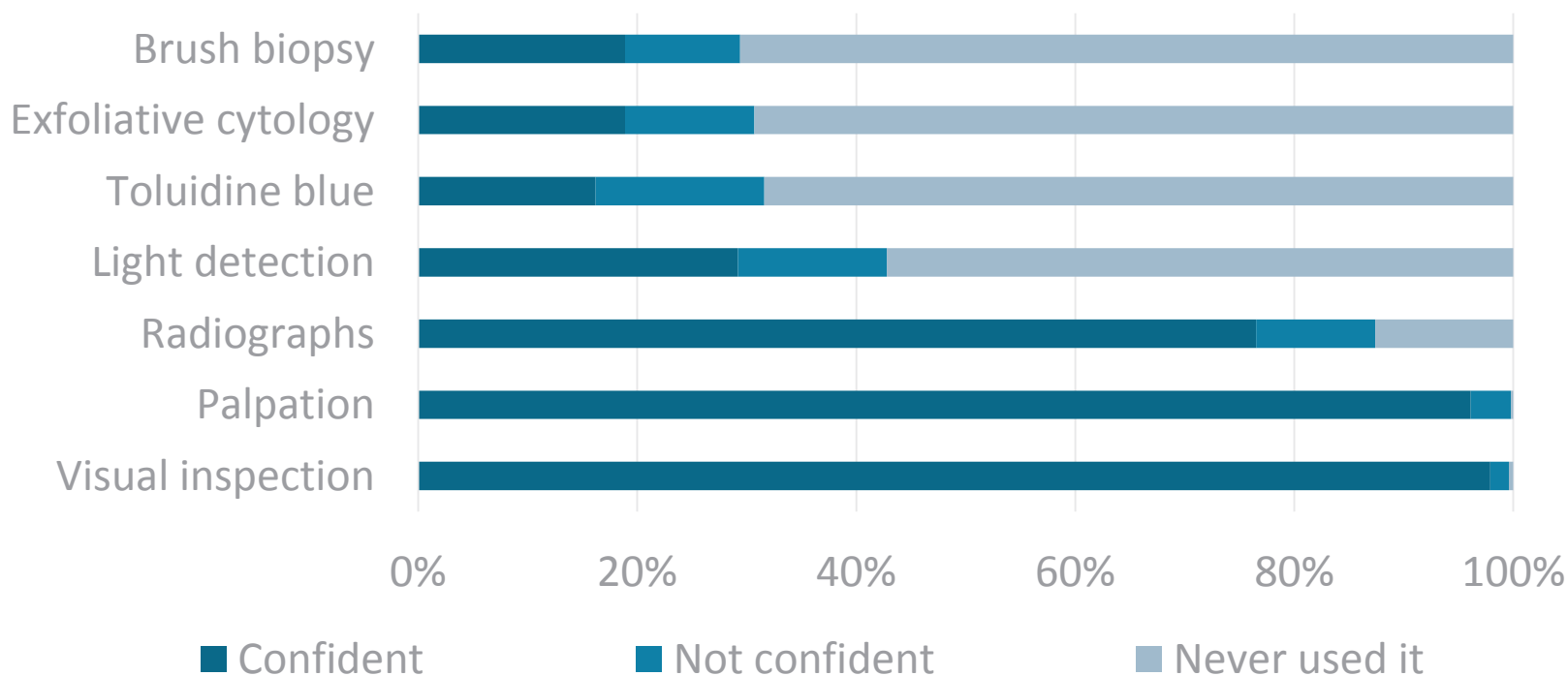
Dentists' ability to recognize OCs signs and symptoms



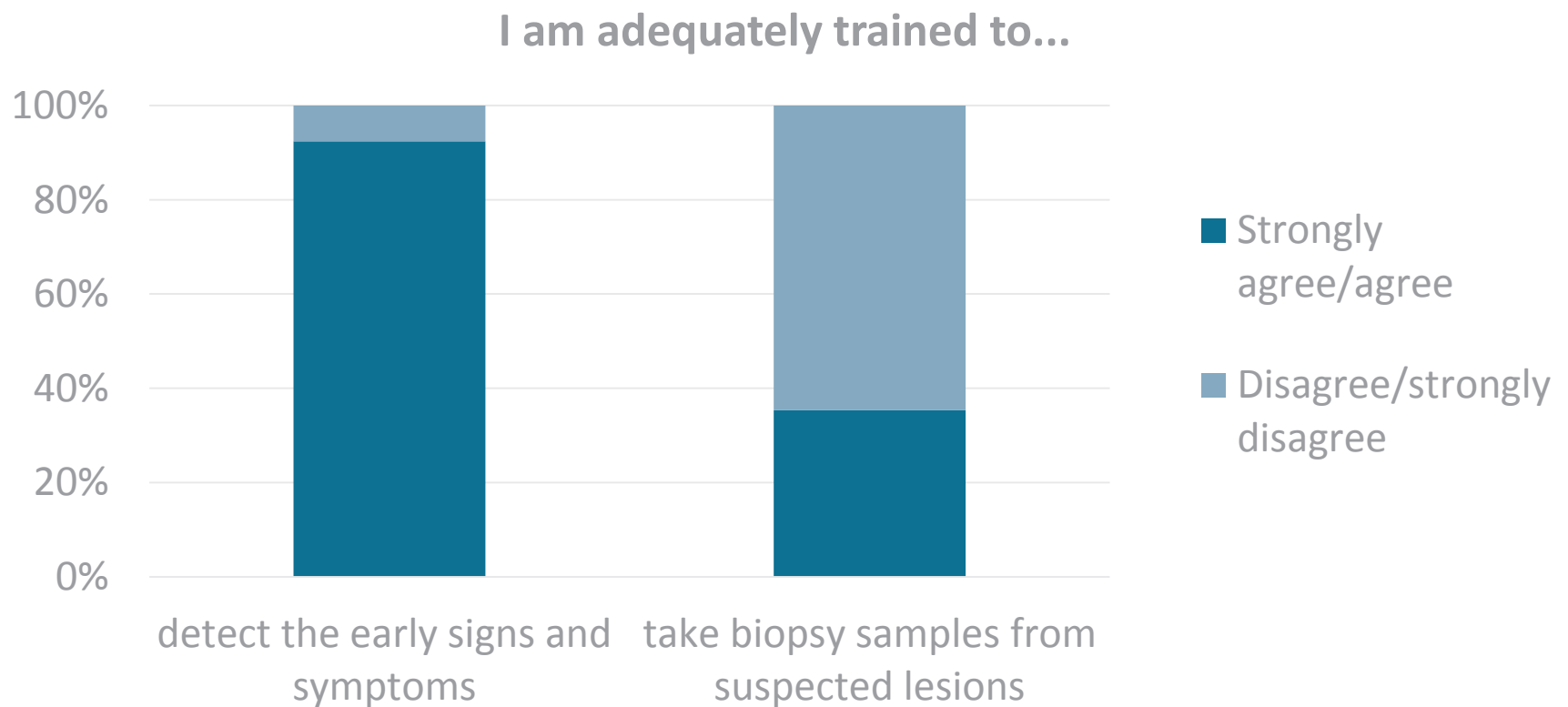
Results: dentists' capacity to detect and diagnose OCs

- Usage of diagnostic tools

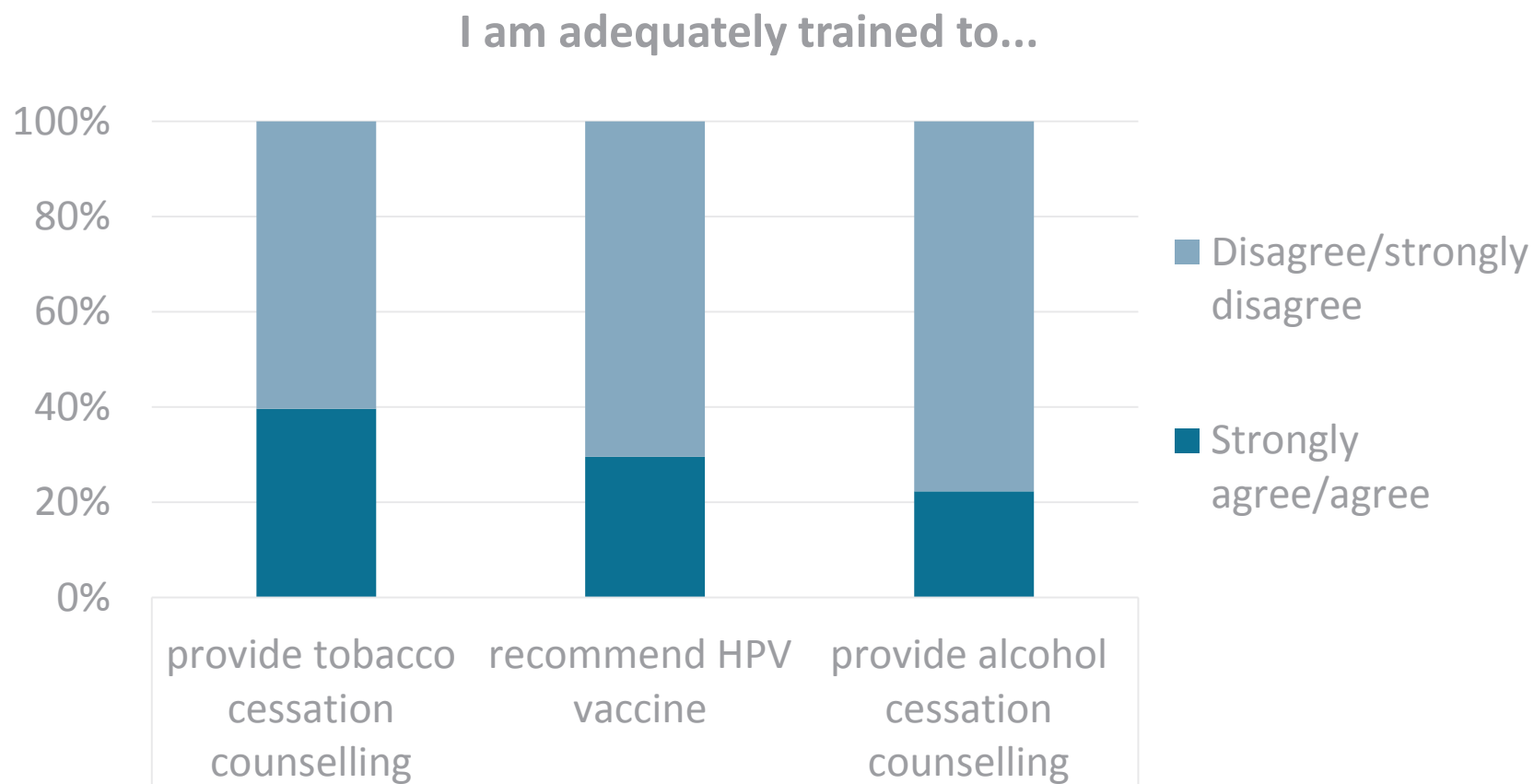
Dentists' confidence in use of diagnostic tools



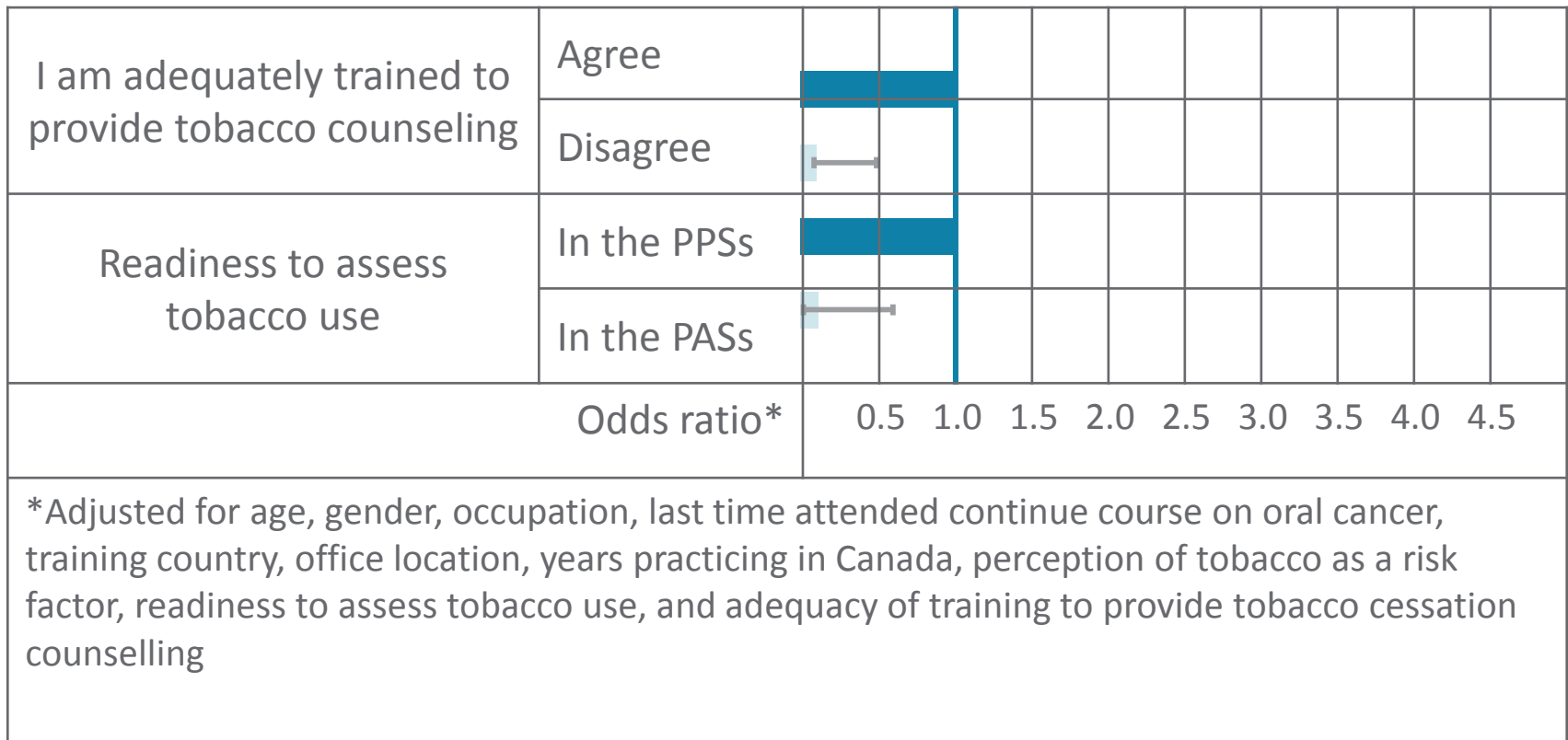
Results: adequacy of training to detect and diagnose OCs







Results: adequacy of training for patient counselling



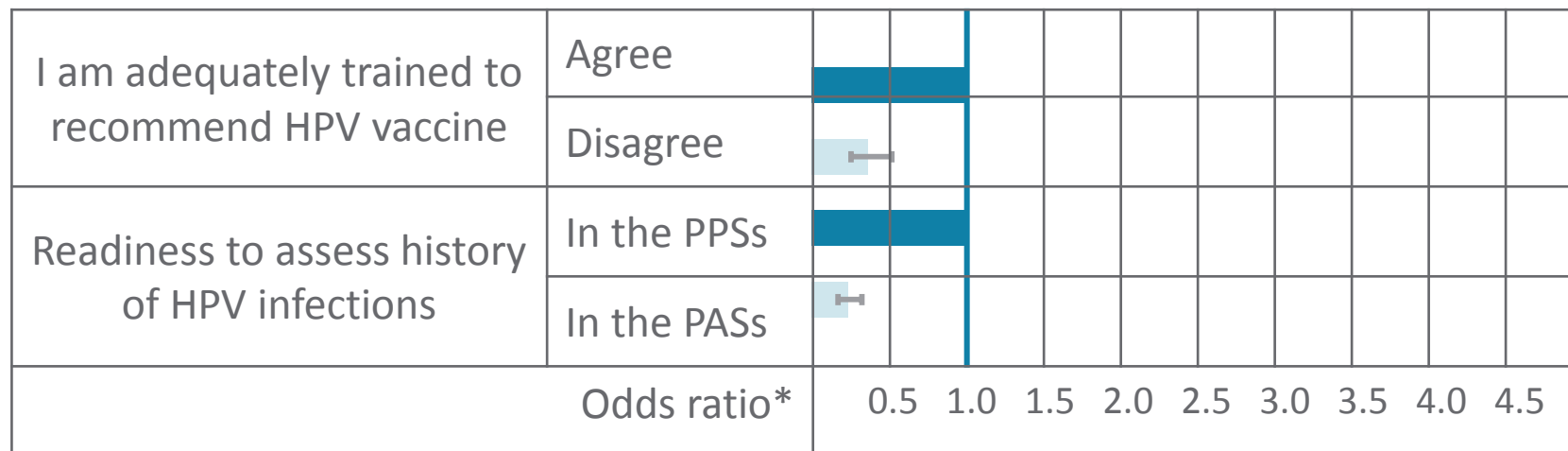
Results: determinants of dentists' readiness to discuss the connection between tobacco and OCs



Results: determinants of dentists' readiness to discuss the connection between alcohol and OCs

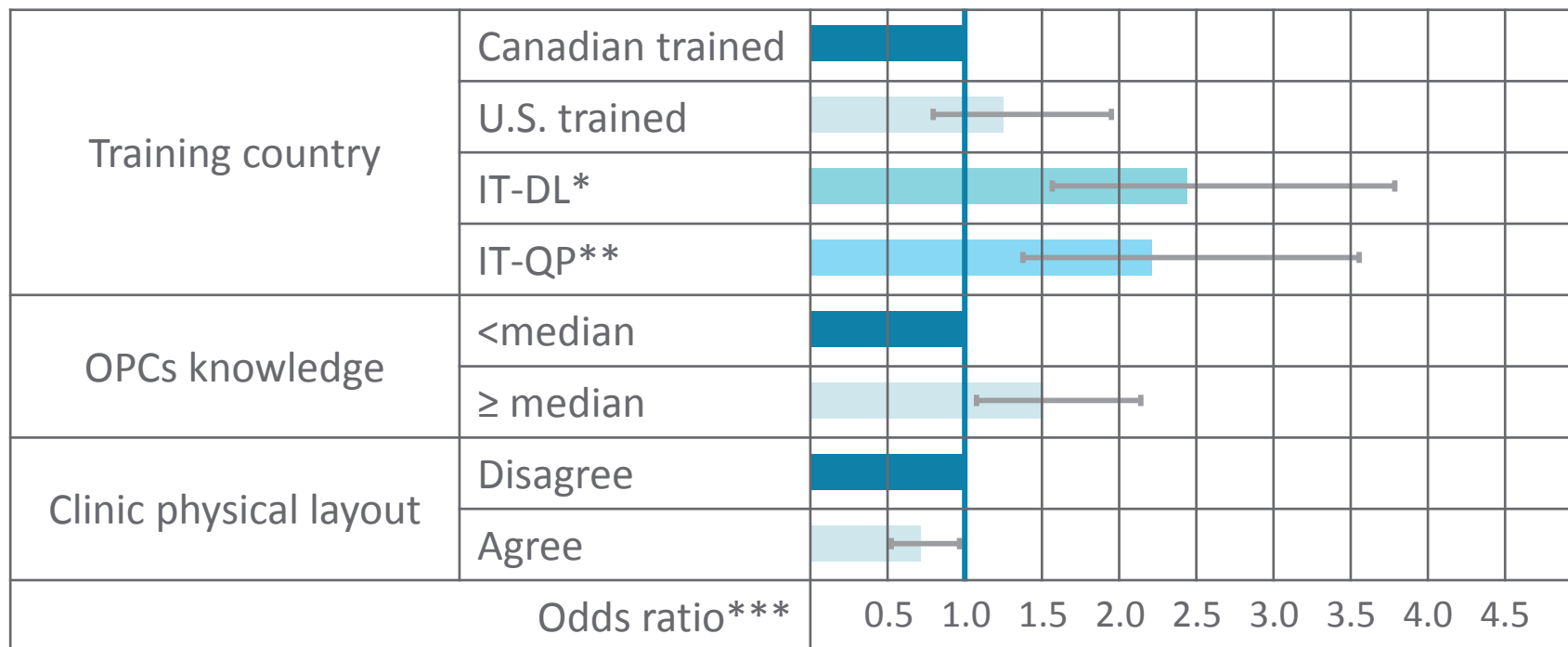
I am adequately trained to provide alcohol counseling	Agree	
	Disagree	
Readiness to assess alcohol use	In the PPSs	
	In the PASs	
Odds ratio*		0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5
<p>*Adjusted for age, gender, occupation, last time attended continue course on oral cancer, training country, office location, years practicing in Canada, perception of alcohol as a risk factor, readiness to assess alcohol use, and adequacy of training to provide alcohol cessation counselling</p>		

Results: determinants of dentists' readiness to Discuss the connection between HPV and OCs



*Adjusted for age, gender, occupation, last time attended continue course on oral cancer, training country, office location, years practicing in Canada, perception of HPV as a risk factor, readiness to assess history of HPV infections, and adequacy of training to recommend HPV vaccine

Results: determinants of dentists' readiness to assess history of HPV infections

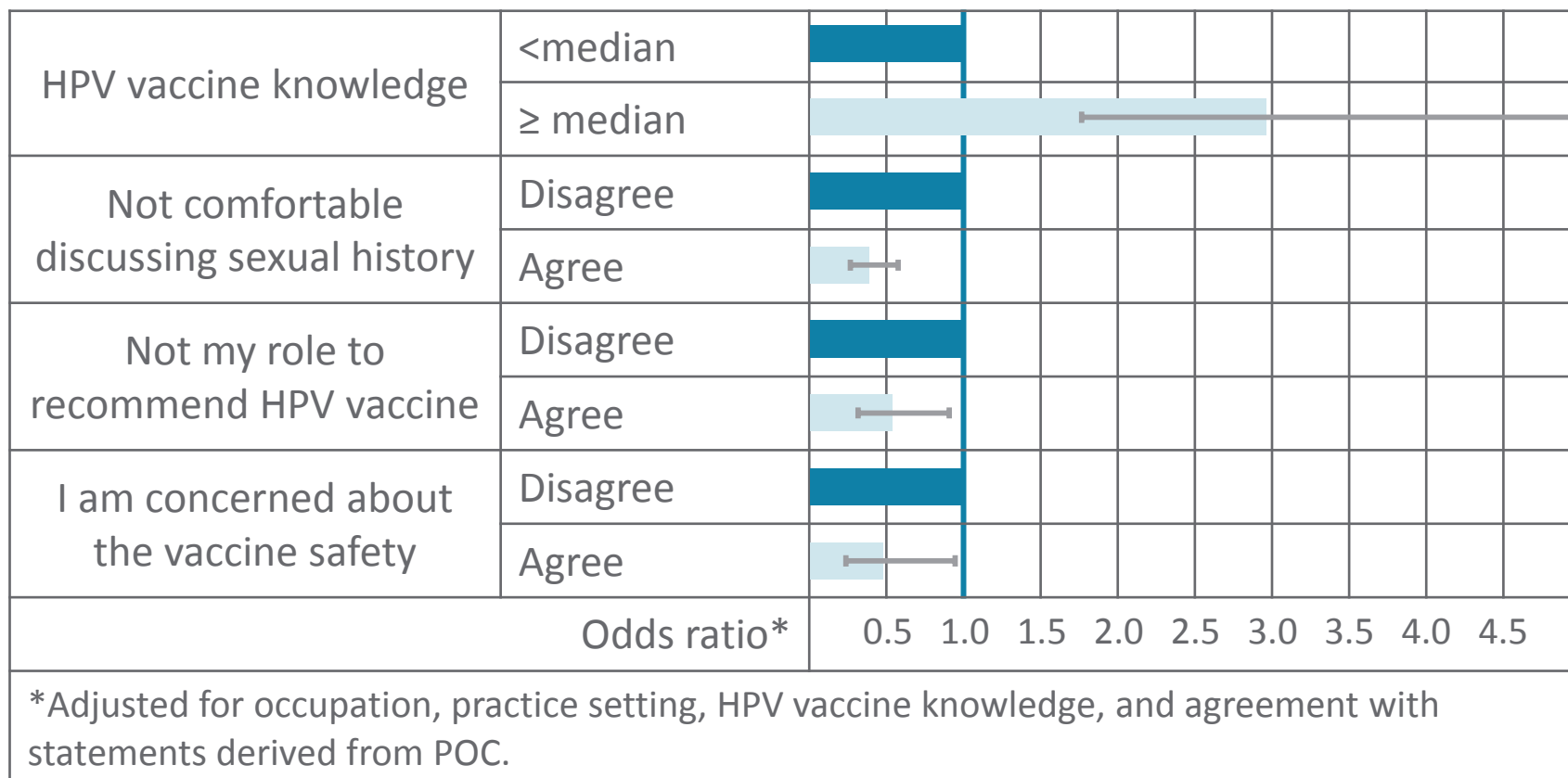


*Internationally trained practicing through direct licensure

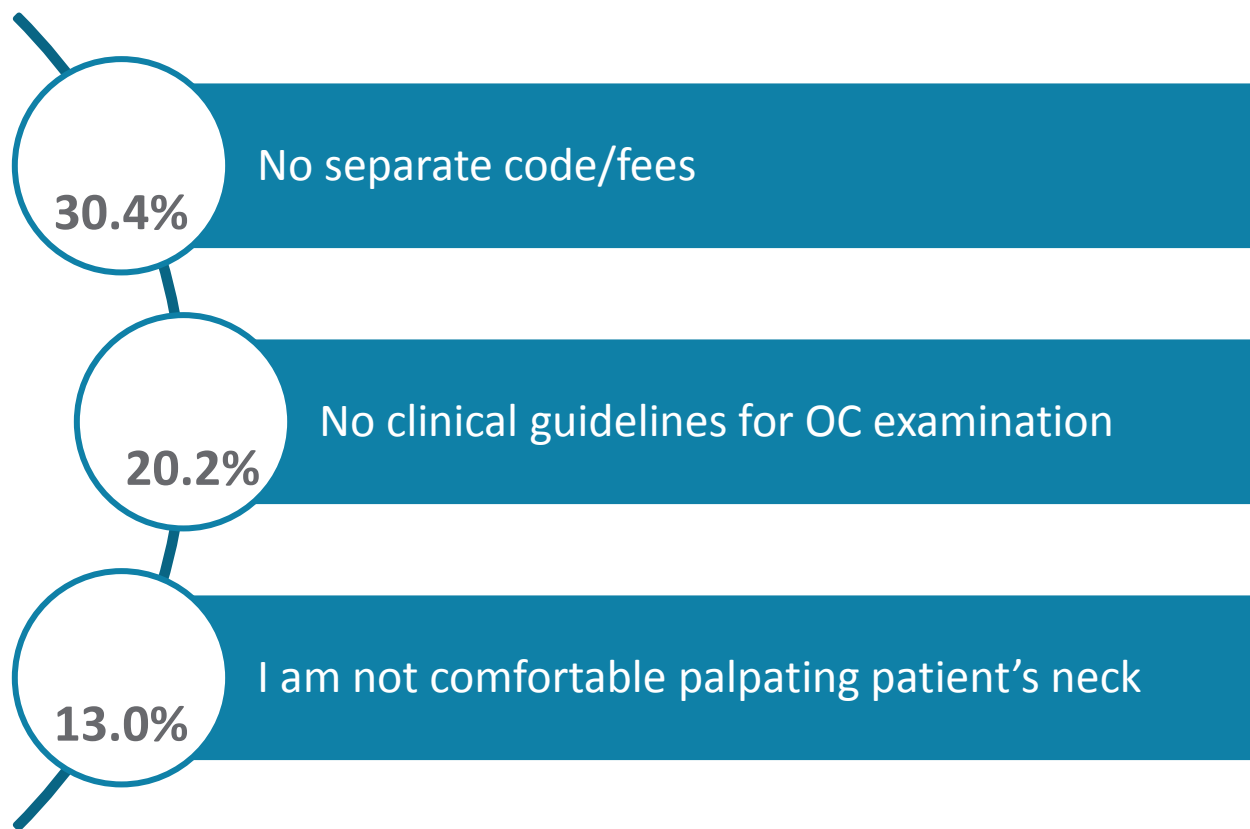
**Internationally trained practicing after attending a qualifying program

***Adjusted for training country, occupation, years practicing in Canada, OPCs knowledge and agreement with statements derived from POC

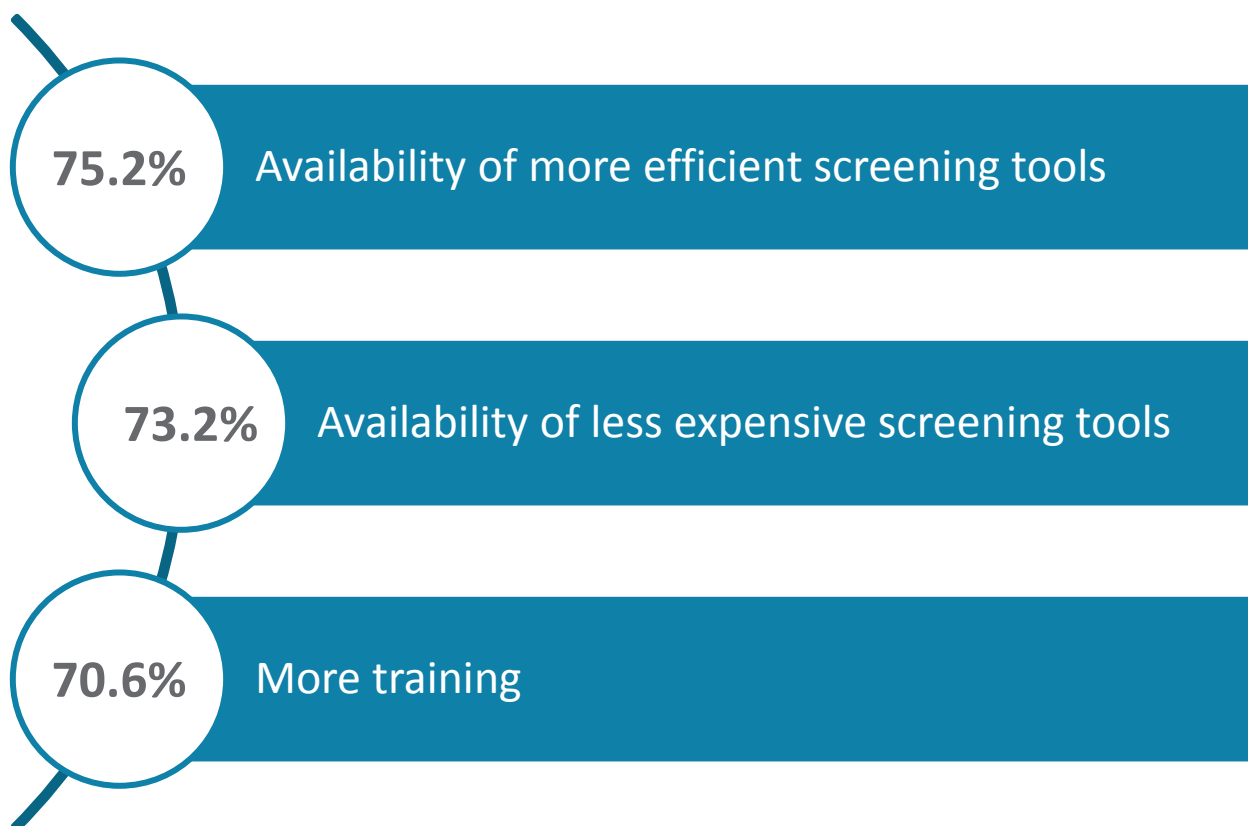
Results: determinants of dentists' readiness to recommend HPV vaccine



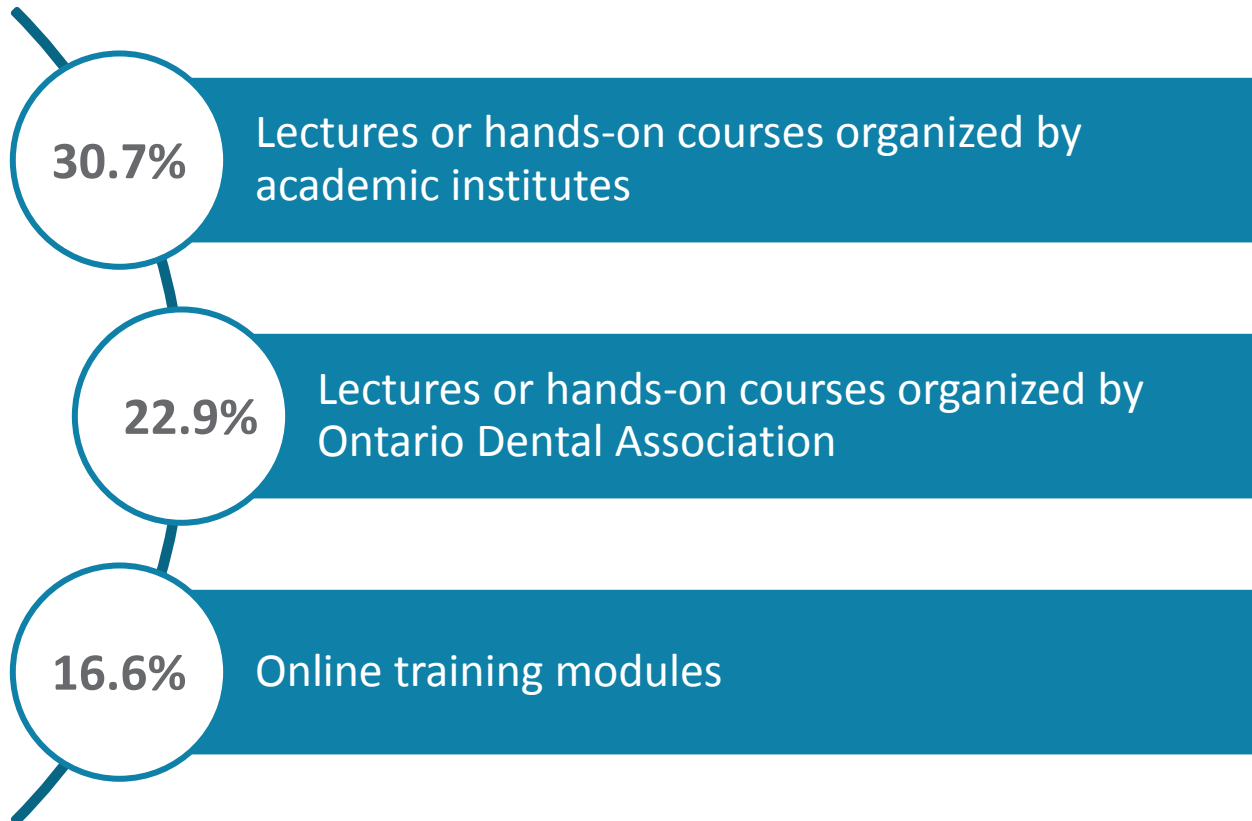
Results: frequently reported barriers to provide OCs examinations



Results: frequently reported facilitators to provide OCs examinations



Results: preferred format for continuing education



Recap of major findings

- Large capacity to detect OCs
 - Relatively smaller capacity to detect OPCs
- Limited capacity to diagnose OCs
- Limited capacity to prevent OCs

Implications

- This study highlights intervention areas to improve dentists' readiness to assess history of HPV infections and recommend HPV vaccine
- Academic and professional institutions can play key roles to
 - Develop guidelines
 - Provide training/continuing education
 - Make diagnostic tools available and affordable

Discussion

- Strengths
 - First Canadian study that addresses HPV as an emerging risk factor
 - Theory-informed research
- Limitations
 - Low response rate
 - Influence of sociodemographic
 - Mediation effects of POC could not be confirmed
 - SOC were dichotomized into PASs and PPSs

Conclusion

There is a need to expand dentists' capacity to diagnose and prevent OCs and to detect OPCs through more professional education that focuses on relevant communication and clinical skills

Acknowledgments

- Public Health Ontario staff
- Royal College of Dental Surgeons of Ontario

Thank you!

Questions