Health Canada and the Public Health Agency of Canada
Santé Canada et l'Agence de la santé publique du Canada
Canada

Evaluation of the Office of the Chief Dental Officer (OCDO) July 2012 to March 2016

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Health Canada and the Public Health Agency of Canada

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Table of Contents

Acronyms

ADM	Assistant Deputy Minister
CDC	Centres for Disease Control and Prevention
CDO	Chief Dental Officer
CHMS	Canadian Health Measures Survey
COHF	Canadian Oral Health Framework
CPHO	Chief Public Health Officer
DGs	Director Generals
FDI	La Fédération Dentaire Internationale (World Dental Federation)
FNIHB	First Nations Inuit Health Branch
FPTDD	Federal/ Provincial/ Territorial Dental Directors Group
FPTDWG	Federal, Provincial and Territorial Dental Working Group
HHS	Department of Health and Human Services
HPCDP	Health Promotion and Chronic Disease Prevention Branch
HRSA	Health Resources and Services Administration
JCDA	Journal of the Canadian Dental Association
NGO	Non-governmental organizations
NHS	National Health Service
NIHB	Non-Insured Health Benefits
OCDO	Office of the Chief Dental Officer
ECD	Organisation for Economic Co-operation and Development
OGD	Other government departments
OSPP	Office of Strategic Policy and Planning
PHAC	Public Health Agency of Canada
WHO	World Health Organization

Executive Summary

The evaluation of the Office of the Chief Dental Officer (OCDO) was carried out to enhance understanding of the Function as it currently operates. The evaluation is intended to support senior management decision-making. The period under review is July 2012 to March 2016.

Conclusions
Internal and external key informants have found the OCDO to be a valuable function, by filling a national level gap that existed prior to its creation. The function's added value was characterized as including: the dissemination of national oral health perspectives and consistent key messaging, establishing a national oral health evidence base, the realization of an oral health convenor for different health professional groups (e.g., dentists, hygienists, physicians) and jurisdictions, as a means to facilitate collaboration and knowledge exchange. There is poor awareness of the OCDO within the Agency, thereby limiting the degree to which the Office has been consulted on initiatives with an oral health component. There are inconsistent expectations and understanding of the OCDO role among senior management, the OCDO, and stakeholders. There is an absence of long-term strategic planning, with priorities often shifting with a change in OCDO leadership.

Recommendations:

1. Agency senior management, in consultation with portfolio members, need to formalize the OCDO mandate and expectations for the Function.
2. The OCDO should develop a strategic plan that clearly defines its roles, priorities, and milestones.
3. A communications plan should be developed to enhance internal awareness of the OCDO at the health portfolio level, and to present a clear OCDO mandate to external stakeholders.

Management Response and Action Plan (or Management Response)

Evaluation of PHAC's Oral Health Function (OCDO): July 2012 to March 2016

Recommendations	Response	Action Plan	Deliverables	Expected Completion Date	Accountability	Resources
Recommendation as stated in the evaluation report	Identify whether program management agrees, agrees with conditions, or disagrees with the recommendation, and why	Identify what action(s) program management will take to address the recommendation	Identify key deliverables	Identify timeline for implementation of each deliverable	Identify Senior Management and Executive (DG and ADM level) accountable for the implementation of each deliverable	Describe the human and/or financial resources required to complete recommendation, including the source of resources (additional vs. existing budget)
1. **Agency senior management in consultation with portfolio members need to formalize the OCDO mandate and expectations for the Function.**	Agree. A written mandate for the OCDO does not currently exist.	HPCDP ADM will work with Agency, Portfolio and OGD partners, as well as key oral health stakeholders, to develop a Mandate document for the OCDO. Document to be approved by PHAC executive committee prior to addressing recommendation #2 and #3.	Mandate document	01 September 2017	HPCDP ADM	OSPP staff, assisted as requested/required by OCDO staff, within existing resources.
2. **The OCDO should develop a strategic plan that clearly defines its roles, priorities, and milestones.**	Agree, subject to the outcome of #1 above. An OCDO strategic framework does not currently exist.	OCDO will develop a strategic framework that clearly defines its roles, priorities, and milestones.	Strategic Framework.	One month following the completion of #1	CDO	OCDO staff, within existing resources.
3. **A communications plan should be developed to**	Agree, subject to the outcome of #2 above. There is insufficient	OCDO will work with PHAC Strategic Communications to	Communications Plan	Two months following the completion of #2	CDO	PHAC Strategic Communications staff, assisted as

Recommendations	Response	Action Plan	Deliverables	Expected Completion Date	Accountability	Resources
Recommendation as stated in the evaluation report	Identify whether program management agrees, agrees with conditions, or disagrees with the recommendation, and why	Identify what action(s) program management will take to address the recommendation	Identify key deliverables	Identify timeline for implementation of each deliverable	Identify Senior Management and Executive (DG and ADM level) accountable for the implementation of each deliverable	Describe the human and/or financial resources required to complete recommendation, including the source of resources (additional vs. existing budget)
enhance internal awareness of the OCDO at the health portfolio level, and to present a clear OCDO mandate to external stakeholders.	internal and external awareness of the existence, and roles, of the OCDO.	develop a strategic communications plan for OCDO.				requested/required by OCDO staff, within existing resources.

1. Evaluation Scope and Purpose

The evaluation of the Office of the Chief Dental Officer (OCDO) was carried out to enhance understanding of the Function as it currently operates, the needs it aims to address, as well as explore its structure in comparison to international OCDO equivalents. The evaluation is intended to support senior management decision-making in regards to the health portfolio's oral health function. The period under review is July 2012 to March 2016.

The methodology used in the evaluation included a literature, document, and program data review. A total of 15 interviews (6 external and 9 internal) were conducted. Key informants included internal representatives from within the Public Health Agency of Canada (PHAC), Health Promotion and Chronic Disease Prevention Branch (HPCDP), Regional Operations, and the OCDO as well as Health Canada. External interviewees included representatives from professional associations, academia, and provinces/territories.

2. Profile

The Office of the Chief Dental Officer is situated within the HPCDP Branch of the Agency. Established in 2005, originally within Health Canada's First Nations Inuit Health Branch (FNIHB), the OCDO was repositioned under the Agency in the summer of 2012. The Office currently has a resource base of 4 FTEs and an average annual budget of $357,563 for the period of 2012-13 to 2015-16.

OCDO	
Established:	2005 (FNIHB); Repositioned under the Agency in 2012.
Location:	Health Promotion and Chronic Disease Prevention Branch (HPCDP)
Staff:	4 FTEs
Budget:	$357,563/ annually *(*during the period under review)*

The creation of the OCDO was in response to a recommendation outlined in The Federal/ Provincial/ Territorial Dental Directors Group's (FPTDD)[1] 2004 Canadian Oral Health Strategy. The Strategy articulated the need "to improve the oral health status of Canadians and to increase awareness about the prevention of oral diseases".[1]

The focus of the OCDO has evolved over time, and its current activities revolve around: needs assessment and surveillance coordination, policy development, oral health promotion/disease prevention, and collaboration with provincial/territorial governments, federal departments/branches, non-governmental organizations (NGOs), academia, professional associations, and international oral health organizations.[2]

[1] The FPTDD has since been renamed the Federal/ Provincial/Territorial Working Group (FPTDWG).

3. Context

Since much of oral health does not fall under the umbrella of the *Canada Health Act*, oral health services and benefits afforded to citizens varies greatly across the country. Health care services (including oral health) are a provincial and territorial responsibility, with the exception of care provided to First Nations and Inuit meeting federal Non-Insured Health Benefits (NIHB) eligibility criteria and certain populations covered through other federal departments (e.g., veterans, federal prisoners, refugees). As explained in the Federal, Provincial and Territorial Dental Working Group's (FPTDWG) Canadian Oral Health Framework 2013-18 (COHF), "each government decides what public programs it will fund and for whom, with no national structure, standards, principles or guidelines for the provision of oral health".[3]

The vast majority of oral health care in Canada is privately funded, primarily through employee benefits or individually purchased insurance plans. Public sector dental care expenditures only account for 6% of all dental care costs in Canada.[4] This has implications for access to dental care for vulnerable populations. Approximately half of Canadian Health Measures Survey (CHMS) respondents from a low income bracket indicated they did not have dental insurance. A lack of insurance coverage translated to lower rates of annual visits among children and adolescents to a dental professional (72% for those without insurance vs 91% for those with insurance) and higher rates of emergency dental visits (19% without insurance vs 3% with insurance).[5]

4. Oral Health Need in Canada

Understanding oral health as a component of overall health

The mouth is said to be the window to an individual's overall health status.[6] La Fédération Dentaire Internationale (FDI) World Dental Federation reported, "oral diseases are caused or influenced by the same preventable risk factors as over 100 non-communicable diseases."[7] Without proper oral health practices, the mouth can serve as an infection site by allowing harmful bacteria residing in the mouth, as well as the resultant inflammatory mediators, access to the body's blood stream. This process can ultimately progress to negative health impacts in other areas of the body.[8] Evidently, there is a need to understand oral health as a key component of overall health, and have this reflected in corresponding health strategies.

Poor oral health can impact an individual's ability to embrace a healthy lifestyle. Oral health and nutrition have a strong interconnection, as consuming foods with high sugar content can contribute to tooth decay. The resulting mouth pain can influence food choices based on minimizing discomfort rather than maximizing nutritional value. A study by Brodeur et al. found that Canadians with compromised teeth or without their

natural teeth, “preferred soft, easily chewed foods that were lower in fiber and had lower nutrient density than foods eaten by people with intact dentitions”.[9] The CHMS 2007-09 found that 12% of Canadians have avoided eating certain foods due to oral health issues.[10]

The pain resulting from oral conditions can also contribute to trouble sleeping. An ongoing lack of sleep produces negative health impacts including increased risk of high blood pressure, heart disease, stroke, diabetes, and kidney disease.[11] A Quebec study found that based on the degree of jaw pain (mild to severe) experienced by those in the study, 20-59% experienced sleep disturbance as a result, compared to 13% without any pain.[12]

Health Promotion

The World Health Organization (WHO) established oral health promotion as one of its key ‘Global Goals for Oral Health 2020’ and advocates for its integration into general health promotion.[13] By understanding oral health as a component of overall health and thereby collaborating across disciplines on relevant health promotion initiatives, a more comprehensive approach to the prevention of dental disease is possible.[14] The Canadian Oral Health Framework 2013-18 suggests that collaborative efforts should begin at the initial training stages for future health professionals beyond the dental field (e.g., medical school) by incorporating inter-professional approaches to education that would promote knowledge of oral health, thereby addressing it as a part of overall health.[15]

Key informants stressed the importance of oral health promotion and prevention not only at the individual level, by influencing personal health practices (e.g., proper oral hygiene, food choices), but also at the municipal level via water fluoridation. Fluoride serves as an effective oral health intervention, preventing tooth decay through the strengthening of the actual tooth enamel.[16] Water fluoridation has become a high profile issue in Canada, with wavering public support for the oral health intervention that has often been at odds with the Agency’s evidence-based guidance in support of the practice. Both the Centres for Disease Control and Prevention (CDC) and WHO list the fluoridation of drinking water as one of the ten greatest public health achievements of the 20th century,[17,18] and it has been endorsed by 90 national and international government and health organizations.[19] Nevertheless, only 37.4%[20] of Canadians on public water supplies have access to fluoridated drinking water. A recent study, following the defluoridation of Calgary’s drinking water found that within the three years following the shift, tooth decay in children had worsened. The rate of decay per child in Calgary increased by 3.8 tooth surfaces, whereas in Edmonton, a city with fluoridated water, children had tooth decay affecting an average of 2.1 surfaces. [21] Children have approximately 20 teeth with five surfaces per tooth.[22] Key informants indicated a strong

and visible federal voice is needed on this issue, as fluoridation of water can at times be the only source of preventative dental care that vulnerable populations receive.

Vulnerable populations

The significant role of privately insured oral health care has an impact on the ability of vulnerable populations to have timely access to oral health services. While income-related inequalities are a predictor of health status in general, there is no other health category where this determinant results in a more pronounced outcome than in oral health. [23] The Canadian Academy of Health Sciences indicated that "in recent years it has been increasingly recognized that in countries with predominantly private dental care systems, access to oral health care for some groups is emerging as an increasing problem."[24] First Nations and Inuit, Canada's most vulnerable populations, are most adversely affected by tooth decay, with rates two to three times higher than Canada's non-Indigenous population. The Inuit Oral Health Survey Report 2008-09 found that, within the population surveyed, 85% of preschoolers, 97.7% of adolescents, and all of the elderly had experienced dental caries.[25] During the same time, 60.9% of non-indigenous children living in families with public insurance had experienced caries.[26] The incidence rate of caries for First Nations and Inuit preschoolers were comparable, but dentist visits within one year differed greatly among the two populations (78.5% vs 47.7%).[27] NIHB data (2010-11) indicates that only 50% of eligible clients access dental services over a two year period. Within half that time (one year), the non-Indigenous low income Canadian population had a dental services access rate that was 10% higher.[28]

Chief Dental Officer Role

There are approximately 160 countries that have Chief Dental Officers, allowing for representation internationally in advancing oral health as well as cultivating health promotion efforts and overseeing dental care systems domestically.[29] Naturally, CDO responsibilities vary across countries based on the degree to which the dental care system is publically funded. For context, Canada ranks second lowest among OECD nations in regards to mean per capita public dental care expenditures (6%), which is quite different than countries like Japan (77%), Finland (44%), and Sweden (41%).[30] An international comparison is discussed further in section nine. Although Canada's OCDO may have a more narrow focus than its international counterparts, key informants indicated that its role is essential to the field as a source of expertise. The Office provides science knowledge at the federal level by commissioning research that adds to the oral health community's body of knowledge. This evidence base supports oral health programming design and delivery at the federal headquarters and regional, provincial and territorial levels. The Canadian Oral Health Strategy found, "there needs to be a Chief Oral Health Officer within Health Canada, with the mandate to address oral health issues from a national perspective. A strong advocate who is in a position to

help integrate oral health promotion into mainstream health promotion is essential if oral health is to be recognized as a component of general health." [31]

Importance of the OCDO

Stakeholders identified the OCDO as a content expert providing evidence-based oral health perspectives. Internal and external key informants indicated that being consistent with OCDO messaging provides legitimacy to advice given through their respective groups, particularly in the case of water fluoridation. One key informant went as far as to say they depend on the OCDO to push forward support for water fluoridation at local and provincial levels.

The OCDO itself and primarily external key informants indicated that the Office plays a strong facilitator role in the oral health community. The Office serves as a first point of contact on oral health issues for internal and external stakeholders, including Canadians. The Office also serves as a hub to connect the various health communities engaged in oral health, such as dentists, dental hygienists, physicians, and others, whether that be through the chairing of multi-jurisdictional committees or individually connecting key players. Ultimately, key informants found that the OCDO helped facilitate knowledge exchange within the area of oral health.

Overall, key informants most commonly cited the Office's influence in ensuring the inclusion of oral health indicators in the CHMS, as one of its strongest achievements. Although the CHMS was administered before the period under evaluation, key informants indicated that establishing a baseline of oral health status in Canada through the survey has had a lasting impact. The data has filled a gap at both the national and provincial/ territorial levels in regards to oral health status, and has provided additional data specific to First Nations and Inuit populations. The information gathered through the CHMS also allowed the field to identify and assess emerging issues in population oral health, and pinpoint areas requiring further research. The OCDO's work on the CHMS has also been recognized internationally. Between 2006 and 2011, preceding the scope of this evaluation, the Office presented to national and international audiences on 31 occasions, sharing calibration techniques with others to help them develop their own oral health surveillance strategies. The last time a presentation of this sort was given by the OCDO was in 2012, prior to the informal narrowing of the scope of the Office's outreach.

Key informants were in strong agreement that their interactions with the OCDO had proven to be valuable by facilitating networking opportunities across professional groups, jurisdictions and program areas, as well as providing evidence-based expertise and guidance. Analysis across interviews suggests that challenges do exist surrounding

differing expectations of the Function's role, its visibility within PHAC, and questions surrounding the appropriate organizational placement for the Office.

Lack of clarity on the OCDO role and priorities

At its inception, the OCDO's intended mandate was extensive, with internal and external responsibilities, professional standards development, as well as systems integration. The CDO position was created in response to a recommendation coming out of the 2004 Canadian Oral Health Strategy, which stated:

> The mandate of the CDO position in part should be to move forward on:
>
> - Country wide oral health promotion and prevention initiatives;
> - Advice to all branches of Federal government departments with programs or needs related to oral health;
> - Coordination of government programs;
> - Supporting the development of evidence-based clinical guidelines, evidence-based health information, and evidence-based public health initiatives; and,
> - Integrating the dental health care system into the general health care system.[32]

Over time the specifics of the Office's objectives have evolved. In the absence of corporate documentation outlining the OCDO's mandate and priorities across its lifespan, a comparison of the role and/or priorities of the office at three points in time was conducted for this evaluation. In comparing the 2004 Canadian Oral Health Strategy recommendation resulting in the creation of a CDO position[33], the 2009 Journal of the Canadian Dental Association (JCDA) interview with the Department's CDO at the time[34], and the 2016 description of the CDO role as outlined in the March 2016 job posting[35], it is evident that the scope of the role has been in flux.

Across the lifespan of the OCDO, there have been four key themes articulated in the sources listed above: health promotion and prevention; advice and expertise; evidence-based information; as well as integration and collaboration.

Health Promotion and Prevention

Responsibilities related to health promotion and prevention have remained consistent, albeit with more emphasis on collaborative approaches. The remaining categories have experienced a range of shifting foci.

Advice and expertise

Initially, advice and expertise was envisioned as inward facing, relating to coordination of government programs and providing advice to all branches of Federal government programming that have intersections with oral health. A mid-point review indicates that the scope had evolved to include an external audience mainly through professional

associations, academic institutions, provinces, and non-governmental organizations. By 2016, the CDO role had been envisioned to expand to include collaboration with international governmental oral health officials, regulators, and representatives from the oral health private sector.

Without a clearly articulated mandate for the Function, there are inconsistent understandings among senior management and program staff, related to the OCDO's roles and priorities. Currently, some understand the role as being internally focused, whereas others believe the Function best serves as a facilitator within the field at large, with the view that the current focus should be on developing relationships internationally. Furthermore, external key informants expect the CDO to be visible on the national and international stages. A management decision was made to focus the scope of the Office's work; this is reflected in data detailing the number and target audience of the OCDO's presentations. Prior to the directive to narrow the scope of Office's outreach (2006-11), the OCDO gave 47 presentations to professional associations, accounting for 39% of their speaking engagements. By 2012-2016, the OCDO averaged two presentations per year to the professional associations, accounting for 17% of its overall presentations. External key informants confirmed that over time, OCDO's engagement with external audiences has decreased. Certain stakeholders suggested the more recent arms' length relationship has eroded the visibility and presence of the Function in the oral health community within Canada and internationally.

Evidence-based information

Initially, the Canadian Oral Health Strategy simply recommended having the CDO role support the development of evidence-based clinical practice guidelines, health information and initiatives. The OCDO's success in championing the integration of oral health indicators into the CHMS far exceeded the original vision for the Office within the area of health information evidence.

Integration and collaboration

The final theme of integration and collaboration has seen the greatest degree of ebb and flow among the four areas related to the OCDO role. Initially, the focus was on integrating the dental health care system at large into the general health care system. This area of focus was later expressed in the CDO's 2009 interview with JCDA, as integrating health promotion with general wellness initiatives. By March 2016, the CDO job posting had characterized collaboration as, "leading collaborative forums to mitigate national oral health challenges, potential negative impact upon general wellbeing and respond to national/international cross-cutting oral health issues of public or professional interest".[36] A shifting focus, paired with a small staff complement within the Office, makes it challenging to advance the long-term goal of integration. A

concentrated investment of time and effort is required to build relationships and enhance internal stakeholders' ability to identify possible points of intersection within their work that would benefit from OCDO collaboration

Many internal and external stakeholders' understanding of the OCDO's role related specifically to the tasks in which they had collaborated with the Office. Overall, both key informant groups did not have a strong sense of what the official mandate or priorities of the OCDO were. Across key informant groups, there was a vast and varied understanding of what the OCDO does and the extent of its reach. External key informants characterized the OCDO as having a more proactive role (e.g., identifying areas for research, presenting national positions on oral health issues, disseminating information across networks). Internal key informants saw the Office as a more reactive position, responding to task specific requests. The Agency and Department staff interviewed approached the OCDO when they needed additional oral health information or assistance with a project that had an oral health component. Irrespective of how key informants viewed the role of the OCDO, they unanimously felt collaborating with the Office had been valuable as a result of the evidence-based expertise provided. Stakeholders also affirmed that there is a continued need for the Function and the convenor role it plays.

5. The OCDO is not well known within PHAC

Internal interviewees indicated they were not aware of the OCDO prior to working together on a specific project. This poses challenges considering the initial understanding of the OCDO's function was primarily inward facing. Initially, the Office was located within FNIHB, but it did have a target audience of all federal government departments with programming or needs related to oral health. More recently the Office has had a few meetings (four) with Director Generals (DGs) within their Branch and one with the Health Canada Food Directorate in an attempt to raise awareness of its role internally and the ways in which they can collaborate with programs. However, additional meetings have not been scheduled. The OCDO explained continued meetings are not feasible at this point in time due to limitations linked to their small capacity. The Office has experienced a reduction in capacity following the downsizing of the federal public service which saw a change in its staff complement ranging from 8 to, at its smallest point, 2 FTEs.

Poor internal visibility has resulted in missed opportunities for OCDO consultation. Due to a lack of awareness of the existing oral health expertise within PHAC, relevant oral health considerations are not always being incorporated into Agency-wide advice. One key informant gave an example of an external professional association having been

contacted for information on a high profile oral health issue by a program area within the Agency, and the individual was subsequently redirected to the OCDO after having been informed the Function existed. An example with greater impacts to oral health status is linked to the 2015/16 PHAC-led screening process associated with the resettlement of 25,000 Syrian refugees in Canada. The OCDO was not involved in the planning process and refugee health assessments therefore proceeded without an oral health component, despite Agency communication which acknowledged that refugees would most likely be experiencing dental health issues.[37] As a result, the full magnitude of untreated oral health issues faced by incoming refugees was not fully understood or addressed prior to their arrival. Consequently, one key informant indicated, the downstream impact to provincial dental care systems was greater than anticipated. Among Syrian refugees resettled in Ottawa, approximately 40% of adults and 60% of children had oral infections.[2]

Awareness of the Function was not an issue among external key informants. Although, internal and external key informants did identify a more recent shift resulting in limited CDO attendance at key oral health forums and the scope within which the CDO presents. Consequently, external key informants identified reduced external visibility of the Function within the past few years.

6. Suitability of Placement within the Organizational Structure

Internal and external key informants expressed concern about the organizational placement of the OCDO. Many indicated there was a shift in the nature of the work pursued by the Office with its organizational repositioning from FNIHB to PHAC. External key informants noted there was less of an OCDO presence on key issues impacting the field, in terms of publishing or presenting national positions on certain oral health issues (e.g., water fluoridation). Internal key informants accessing OCDO services have felt little negative impact resulting from the Office's relocation. Agency staff explained they are in fact more likely to reach out to the OCDO now that it is no longer under the umbrella of FNIHB. External and internal stakeholders viewed PHAC as the better location for the Function due to a more appropriate alignment with its broader target population of all Canadians rather than the specific subset of First Nations and Inuit.

Having said that, external and some internal key informants indicated a narrowing of priorities as a result of the Office's positioning within the HPCDP branch. Some key informants suggested the narrowing of priorities is due to differing visions for the Office among key decision-makers rather than limitations resulting from its organizational

[2] Pan Canadian data on Syrian refugees arriving with oral infections was not available.

positioning. Program data does indicate that the number of presentations given by the CDO has been reduced over time, due to capacity as well as a management guided narrowing of forums in which the CDO is able to present. Most notably international and municipal presentations have been eliminated altogether. Yet, attributing such changes to a narrowing of priorities resulting from its positioning within HPCDP is difficult considering the Office does not have long-term planning documentation. Furthermore, some internal and external interviewees indicated that the Office's priorities seem to be determined by the CDO in charge at any given time. With three different individuals having occupied the CDO position in a 2.5 year period, and no overarching strategic plan, this impacts the degree of continuity across the OCDO's work and the ease with which priorities can shift. External key informants indicated CDO turnover had impacted the continuity in their collaborative efforts.

Some external and internal key informants indicated that the current reporting structure does not reflect the importance of the OCDO function. As indicated in the literature, there is a need to recognize oral health as a component of overall health. A few key informants advocated for a reporting relationship that could better support the integration of oral health considerations into general health planning and strategic directives by having the CDO serve as a content expert who advises the Chief Public Health Officer (CPHO). Consequently, some key informants expressed that the Office's positioning within a Branch rather than reporting directly to the CPHO narrowed its focus, and to a certain degree its prestige, which was not necessarily in keeping with their vision for the Function. Keeping in mind, as discussed earlier, there continues to be inconsistent understandings across stakeholders as to the role of the OCDO. As a result, decisions related to the most appropriate organizational position should only be pursued once a clear mandate for the Office has been established. At this point in time, its positioning within the cross cutting portfolio of health promotion aligns with the need to have oral health considered as a linking factor to broader health outcomes.

7. International Comparison

Internationally, CDOs in countries with a greater degree of public dental care services have broader areas of responsibility. England, Scotland, New Zealand, Sweden, Italy, and Australia have universal dental coverage for citizens up until their late teenage years.[3] Coverage is available in most countries for certain vulnerable populations, irrespective of age. In England and Scotland, CDOs have responsibilities at the system-level (e.g., service delivery standards, monitoring expenditures, etc.), as well as

[3] Age limits for coverage range from 17-19 years of age. In the case of Italy, coverage is provided for citizens up until the age of 16.

providing advice on dental policy and service provision internally and to oral health professionals.

Similar to Canada, the US operates in a predominantly privatized oral health care system with 4%[38] of its oral health care paid through government programming, compared to 6% in Canada[39]. In the US, CDO leadership is based on a four year term, and the individual occupying the position is required to have a background in public dental health. The three core areas of responsibility for the CDO include: advising the Surgeon General on oral health (e.g., policy level discussions); serving as a convenor for federal level agencies with oral health implications (e.g., CDC, FDA); and clinical components related to workforce and federal population service delivery. The CDO's responsibilities linked to the clinical realm include, "leadership and coordination of their professional category for the [Office of the Surgeon General] and the [Department of Health and Human Services]".[40] The CDO also weighs-in on areas related to recruitment, retention, and career development of officers within the public oral health field. In addition, the CDO plays a consultative role in regards to oral health services under federal jurisdiction (e.g., federal corrections facilities).[41]

It is also important to note the additional government funded oral health areas of expertise within the US. The CDC has an Oral Health Division that is involved in public oral health initiatives including surveillance (similar to CHMS level data)[42], research, health promotion and prevention, capacity building at the state level, investigating relevant outbreaks, or health hazards, and facilitating collaboration. [43] Within the US Department of Health and Human Services (HHS), similar to some other US government departments/agencies, there is a lead oral health expert that liaises with the Chief Dental Officer on high profile issues, but is ultimately in charge of products produced and advice given at the level of their organizational area.

The US Health Resources and Services Administration (HRSA), an agency of the HHS, provides $50 million annually to fund oral health programs. The CDC also offers funding for oral health programming.[44] Conversely, the Canadian OCDO does not have a grants and contributions component to their funding, and health portfolio program areas do not provide equivalent oral health funding opportunities to those at the HHS.

In terms of reporting structure, the CDO in England reports to the Chief Executive of the National Health Service (NHS) and the Scottish CDO reports to the National Medical Director. The National Medical Director then reports to the Chief Executive Officer of the NHS. Within the US, the CDO is one of 11 Chief Professional Officers within the Commissioned Corps that provides guidance and advice to the Surgeon General and relevant administrative committees.

Based on the vast differences in context between Canada and the other countries reviewed, it is difficult to draw conclusions from the environmental scan as to the type of work the CDO should be engaged in or its optimal organizational position. Although the US operates in a system with minimal public coverage of dental care, similar to Canada, the federal oral health network within their system is more widely developed and spans beyond the direct work of the CDO, as evidenced by the dedicated oral health complements within certain administration areas (e.g., CDC, Centers for Medicare and Medicaid Services, HRSA). These areas collaborate with the CDO but ultimately do not directly report to that position, although, their advice aligns with oral health guidance provided by the Function.

8. Conclusion

There is a need for a national oral health focal point to provide expertise and promote efforts that address issues impacting the oral health status of Canadians. Health Canada has stated, “as there is a link between oral health and general health, an improvement in oral health may lead to an improvement in overall general health”.[45] The OCDO has made valuable contributions to the field by contributing to the oral health evidence base, facilitating knowledge exchange across health professional groups and jurisdictions, and developing consistent oral health messaging from a national perspective. At this point in time, although the OCDO has been deemed helpful to both internal and external key informants, an element of confusion exists as to how far the role of the CDO extends and the nature of the CDO priorities. An absence of long-term strategic planning documents leaves a gap in the ability to standardize understandings of the Function across stakeholders, and among senior management and the OCDO. Furthermore, within the Agency there is a lack of awareness of the OCDO and its activities. By creating a more concrete understanding of the OCDO and its activities through corporate planning, it is likely that the Function as a whole will be strengthened.

9. Recommendations

1. **Agency senior management, in consultation with portfolio members, needs to formalize the OCDO mandate and expectations for the Function.**

   The vision for the OCDO function greatly varies across and within internal and external stakeholder groups. Taking into account the needs within the field of oral health and considering those areas of importance within the context of the Agency’s roles and responsibilities, senior management should clearly articulate and formalize the Office’s mandate and scope.

2. **The OCDO should develop a strategic plan that clearly defines its roles, priorities, and milestones.**

   In order to alleviate confusion internally and externally as to the official mandate of the OCDO, a guiding strategic document should be developed by the Office and agreed upon by senior management. This will help ensure continuity in the focus of the Office, irrespective of staff turnover, and manage expectations of stakeholders.

3. **A communications plan should be developed to enhance internal awareness of the OCDO at the health portfolio level, and present a clear OCDO mandate to external stakeholders.**

   Limited visibility of the OCDO internally has impacted the degree to which the Office is being consulted. A communications plan has the potential to raise awareness of the Function and highlight opportunities for collaboration among health portfolio players and other federal; government department programming. Such an approach could also be supported by the continuation of introductory OCDO presentations to program areas. An external communications strategy would help clarify and manage stakeholder expectations surrounding the role of the OCDO.

Endnotes

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